RELATING THE PAST:

Sibelius, Aalto and the Profound Logos

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Sarah Clare Menin

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Faculty of Law, Environment and Social Sciences
University of Newcastle upon Tyne

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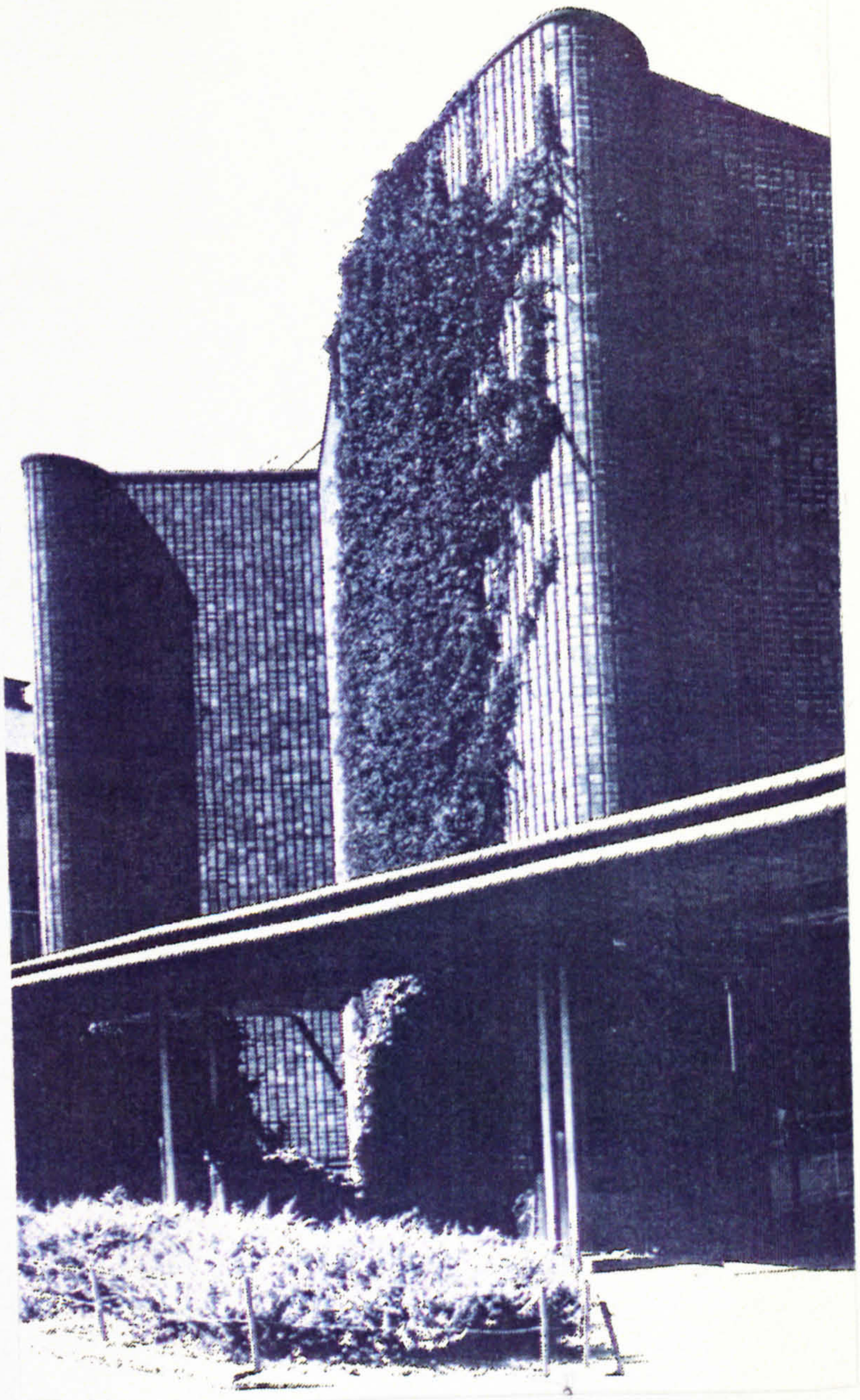

10.0

BUILDING KOSMOS

Fig.10.0 View of the *House of Culture*, Helsinki; Aalto, 1955-8

Chapter Ten



NATURE AND CHANGE :

The Antique New and Living

Fig.10.1 Sketch of an olive branch; Aalto, 1951

INTRODUCTION

"*The* [Ancient] *natural world was viewed in terms of life and mind, its order testified to plan or reason or divinity or to the idea of organic wholeness that is embodied in the concept of cosmos.*" (Lippman, 1964:1)

"*Proximity to nature can give fresh inspiration in both terms of form and construction*" (Aalto, 1953)

"*Greek Mythology is the limit of Western cultural memory. Our rationality cannot reach beyond it. But we must find traces in our subconscious of something still earlier, something that is common to man as a CONCEPT, irrespective of time and place.*" (Juhana Blomstedt, 1992:10)

Having gathered evidence of the inner lives of the two men, the character of creativity as a tool with which all people "strive" to relate inner and outer reality, and the nature of Transitional Phenomena which facilitate this, the current chapter will explore what culture of ideas may have inspired Sibelius and Aalto to be concerned with the formation of whole musical and architecture works.

The chapter will demonstrate that the 'seed' behind this, and indeed the 'seed' of content within the works, is motivational rather than being a motivic *élan* (Zuckerkandl, 1974; Bergson, 1911). In other words, while accepting their different media, it may be said that for Sibelius and Aalto the Potential Space of nature and particularly the forest, may have germinated the notion of growth towards wholeness and balance as the *élan* (or "fundamental law").[1] This was nurtured both by further experience of nature and ideas stimulated by classical thought. This is not reducible to a single motivic or formal germ, but rather a commitment (or even a drive) to undertake a process of relating disparate elements, creating *harmonia* and all that Heraclitus will be shown to have meant by that: i.e., systems in flux which are striving for *kosmos* (order). The discussion will also visit Schildt's notion of there being a "biological philosophy of life" behind Aalto's work (Schildt, 1986:194), and if this is so, whether this notion was common to both men, whether it sprang from classical ideals, and was it expressed in organic created form?

[1] This wording uses Zuckerkandl's assumed rigidity (1974).

A CLASSIC LOVE OF NATURE: REQUISITIONING *LOGOS*

"The relationship between man and nature was the decisive question which Aalto posed for himself and modern architecture to solve." (Mikkola, 1976:22)

"That wonderful logic, let us call it God, that governs a work of art is the forcing power" (Sibelius, 1918)[2]

"Accustomed to reflecting his image in his environment, the Greek moulded his own organically defined sense of life into architectonic relations and forms." (Strengell, 1928)

This section will outline Greek ideas of nature and order. It will then set out Goethe's requisitioning and translation of these notions, because such a concatenation had bearing on both Sibelius' and Aalto's thinking.

GOD IN NATURE AND NATURE IN GOD: THE ORGANISM OF LIFE

"[H]uman activities had to be patterned on godly activities, i.e., on the processes in nature; human art, especially, had to be an imitation of the gods, i.e., of reasonable nature." (Spitzer, 1963:9)

"The [Greek] constitution of works of art or of society was seen less as a contrivance of man than as a reflection of nature" (Lippman, 1964:1)

It is difficult to paint a true picture of the Greek attitude to nature since the Archaic and Ancient societies were separated by centuries, and consequently there is little scholarly agreement about their essence. At the outset it is necessary to understand that the Greeks saw "the world as an organism" (Collingwood, 1945:95).[3]

In *Naïve and Sentimental Poetry* (1795) Johann Friedrich Schiller sought to prove that the Greeks were accurate and faithful in their descriptions of nature, but through reliance upon Homer, whom others perceive as "the most naïve of all the poets" (Fairclough, 1930:4).[4] Greeks have also been understood not to "cling to nature with the emotion, spirituality or gentle melancholy of the moderns" (1930:4).[5] Like modern society they exhibited different tones of the feeling for nature at different times. A telling example of this is given by Plato in *Phaedrus*. After being reluctant to leave the city and sojourn beneath a tree, saying "I am a lover of knowledge, and the men who dwell in the city are my teachers, and not the trees, or the country" (*Phaedrus,* 1973: 227-230), Socrates accepts the bucolic surroundings, relaxes and pours forth his wisdom, as if facilitated in this by nature's setting.

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[2] Sibelius, letter to Carpelan, 20.5.1918. (Ekman, 1938:257)

[3] Collingwood explains that "nature was a living organism [...] the whole body was endowed with life, so that all its movements were vital movements; and all these movements were purposive, directed by intelligence" (Collingwood, 1945:111).

[4] Two images from Homer (an Ancient writer important to both Finns) which illustrate his use of nature are from the *Illiad* (VI:147); firstly liking the "generations of leaves" of a forest to men; "As for the leaves, the wind scattereth some upon the earth, but the forest, as it burgeons, puteth forth others when the season of spring is come"; and secondly the use of the image of waves to represent the trauma of the swathes of soldiers in war (IV:422).

[5] Fairclough (1930:4) also cites Friedländer's position that the Greek feeling for nature was sincere and deep, yet limited to sentiment conjured by visual experience. Yet, the relationship with nature was not merely aesthetic and mythical, being closely linked to agriculture, as illustrated in Boeotian Ascra's didactic epic, *Works and Days*, and the pastoral poetry of Theocritus, and the important *Idyll*, botanical writings of Theophrastus.

Natural or Divine Simplicity?

Other scholars venture to connect the Greek's specific love of nature with their belief system (Dickinson, 1951; Burckhardt, 1963). Countering ideas of Greek sentimentality scholars have favoured the notion of "the simplicity, honesty and clearness of vision" of the Ancients,[6] a notion which affirms Winckelmann's aesthetic doctrine of "noble simplicity and quiet grandeur" (1972:73) referred to in chapter two.

Greek religion, myth and art concerned the divinity of nature, using metaphor and symbolism in extensive and insightful ways, giving depth to what has been seen as forced symbolism (Carpenter, 1921). There was a continuous flow of metaphors from the human sphere to the divine, and back, as the Greek anthropo-(socio)-morphic conception of the laws of nature were imbued with spirits; a process infused with fear and awe in which human activity being seen as imitating the artistic orderliness and harmony of nature (Dickinson, 1951:3; Spitzer, 1963:9). Thus humans balanced antagonistic forces; the paired opposites which so characterise Greek life.

Greek gods held court in all aspects of nature and experience, with every area of the human mind, religion and politics being integrated through the advice and approval of the gods, but without engaging the conscious, the imagination or the intellect (Dickinson, 1951:16).[7] For instance, the regression from the macro- to micro-cosmic was a result of identification of the "world soul and the world harmony" (Spitzer, 1963:14-15). Not surprisingly this mirrors patterns of behaviour relating to the forest, discussed in part two, and is held herein, to mirror the pattern (παραδειγμα, *paradeigma*) in which nature, through experience of the forest, was used as a Transitional Phenomenon by Sibelius and Aalto, making *kosmos* (κοσμος) in their art.

Captivating Kosmos

Worldly order was fully integrated with the Greek view of nature and the divine: the *kosmos*. The translation or relation continued in the dualism of the Titanic and the Dionysian aspects of the human personality (i.e., representing the elements of self for ever struggling and needing divine deliverance); an external mechanism of relation or *logos* (λοχος).[8]

In this regard Collingwood explains that (in Aristotle's language) the Greek view of the soul as "vital activities of the body" was the *logos*; "To hear a ringing bell, then, is to receive into

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[6] Heinrich Motz cited by Fairclough, (1930:6).

[7] The alien was drawn "from its dark retreat", presented to the mind as divine and conscious agents; "a translation" of manifestations of energy in nature.

[8] Collingwood explains that "nature was saturated [...] by mind" and mind was seen as a ruler, imposing order upon itself" (1945:3).

one's own organism the logos of the ringing bell" (1945:86). This offers an important angle on the nature of both organism and logos to which the discussion will return.

Aristotle continued pre-Socratic ideas about analogies between nature and balanced order in design through categorising living organisms and works of art as "schemata, definite after their kinds which Nature and Man respectively form by qualifying matter." (Stewart, 1892:194). This nature-order analogy has two interrelated interpretations; i.e., that of appearance or composition, and that of function. Both of these offer a sense of 'organic' wholeness or coherence to form, offering an explanation of Aristotle's distinction between fine art (appearance) and practical art (function).[9] Aristotle in the *Poetics*, Plato in *Phaedrus*, and later Shakespeare, Goethe, Schlegel, Schiller and Schelling all called for, or used what is described as 'organic' form, which was "not so much [...] static balance as something which grows and develops out of the material" (Steadman, 1979:10), with no part being dispensable, therein being the inherent economy discussed in part one. The Ancient attitude to nature and divinity thus informed the development of art through the concept of *kosmos*, and has been translated into the modern term "balance of nature" (Egerton, 1968).

Reinvigorating Kosmos

In a search for clarification of life issues (i.e., those concerning order), Sibelius and Aalto explored Ancient thought. In their ideas Aristotelian teleology and Platonic providential ecology, with its associated balance of nature, mingled with notions of the struggle ("strife") for existence and balance of the pre-Socratics; concepts with which the men were deeply familiar in the practice of the personal lives. It should be pointed out that Schildt interpreted Aalto as a man determined to defend civilisation and man's consequent conquest of nature (GS3:275). However, the aesthetic of created 'ruin' in both Aalto's and Sibelius' work (to be examined in chapter fourteen) attests to the recognition of the perpetuity of life through decay and death, and indeed, whether or not they faced such realities psychologically, Sibelius and Aalto found an aesthetic mechanism for its recognition: the model of *Sterben und Werden* (dying and becoming) in nature.[10] This study seeks to expose the nature of this mechanism; i.e., the way of relating often disparate phenomena: *logos*.

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[9] In Aristotle's notion of the four causes (material, formal, efficient and final) underpin his definition of Practical art (as opposed to fine art for its own sake), in which virtue and function are related in the final form which meets all requirements (*Physics*, III:II, and Poetics).

[10] The old imperative form was *Stirb und Werde*.



10.2

Fig.10.2 Detail of colonnade, *Muurame Church*; Aalto, 1927



10.3

Fig.10.3 Ice cracking, Helsinki

NATURE, STRIFE AND THE *URPHÄNOMEN*

"The truth is that we change without ceasing, and that the state itself is nothing but change." (Bergson, 1911:2)

"To sever the conjoined, to unite the severed, that is the life of nature; that is the eternal drawing together and relaxing, the eternal syncrisis and diacrisis" (Goethe, *Zur Farbenlehre*)[11]

"The more we occupy ourselves with the purely theoretical games in the wide blue yonder the more we forget Mother Earth, where man, after all, has his habit and where happiness - in any case the temporal - is to be created." (Aalto, 1957c)

From the latter glimpse of the Ancient's attitude to nature the discussion will move to the source to which Sibelius and Aalto turned for an intermediate account of these Greek preoccupations; namely the work of Johann Wolfgang von Goethe (1749-1832).

REVEREND NATURE

"[something] spiritual-organic" (Goethe, HA:XII:42)

"[...] making known the unknown" (Wetzels, 1990:84)

Goethe's appreciation of the Greek closeness to nature is said to have arisen from Johann Gottfried Herder's demonstration of reverence for nature (Trevelyan, 1941:73). Like Sibelius, Goethe came from a zealous Lutheran family, and similarly developed what might be called paganism and pantheism to satisfy his spiritual needs. As the Ancients had, so Goethe continued to humanise nature. However, unlike both Finns he could not tell a sparrow from a lark, yet he was nonetheless an impassioned lover of nature, oscillating between experiences of nature's gentle beauty and affection, and her hostility (Sherrington, 1949:36): God and nature were inseparable (*Natur*, 1782).

Dying and Becoming: Sterben und Werden

Goethe believed that Greek 'perfect harmony' was achieved through a "balanced co-ordination of all human faculties" (Trevelyan, 1941:256), that which he recognised that, divided within himself, modern man could never attain. Thus stumped by his Greek odyssey, Goethe made forays into the forces of nature, epistemology and science, attempting to find a philosophical basis for the flourishing sciences through anti-mathematical and anti-Newtonian means; what Goethe was to call "morphology".[12] The foundation of this was his notion of *Urphänomen*, ground phenomena or 'type' (*Zur Farbenlehre,* HA II:174-7),[13] to be revisited

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[11] *Zur Farbenlehre* :vol.XXVIII, abt.4:par.739.

[12] See William Pastille, Music and Morphology: Goethe's Influence on Schenker's Thought, in Siegal (1990: 29-44), and Timothy Lenoir, The Eternal Laws of Form: Morphotypes and the Conditions of Existence in Goethe's Biological Thought, in Amerine, et al., (1987:17-28). Goethe's morphology included two other principles in addition to the *Urphänomen.* First its perception through a synthesis of the physical senses with the inner, spiritual senses (WA, II:11:164), calling this elevated perception *Anshauung,* the experience and analysis, leading to the *aperçu*, the sudden flash of insight and deep digestion of the experience, and secondly the ontology (holism, polarity, intensification and metamorphosis).

[13] Goethe jotted down "ideal, real, symbolic, identical" next to *Urphänomen.* (HA, XII:366). It is significant that the cell-theory had not arrived in his time, and many of his botanical assertions were, his friend Schiller rightly pointed out, not experience but idea (*Annalen,*

later. Although it is recognised that Goethe distrusted theoretical systems for art and nature (Wetzels, 1987:71), some authors understand him to have believed in the unity of nature; a unity which encompasses *Sterben und Werden* (dying and becoming) which recalls the fragments of Archaic Greek thought (Sherrington, 1949; Meyer-Abich, 1987). Despite the weakness of some of his science, the growth of biological thinking substantiates *Sterben und Werden*; the continuous decay and regeneration, and the dynamic nature of living systems. This also touches on the process-like character of the flux of Heraclitus (c.a.540-480 BC.) and other fragments of, for example, Anaximander (c.a.610-546 BC.) and Miletus (c.a.560 BC.) which speculate that *phusis* (φυσις, nature or the lived world) is interchangeable with that of *genesis* (χενισις, emergence); a state in which there is no hierarchy between earth and beyond. The relation of flux to notions of "natural thematic fluctuation" (Aalto, 1938) in Sibelius' and Aalto's work will be addressed in chapter twelve.

With colleagues of the German *Naturphilosophie*,[14] Goethe used many metaphors in his explorations of nature and art, yet often with ambivalence. However, his terminology suggests a clear interest in organicism, rooted in biology (Wetzel, 1990:72),[15] due in part to the fact that nature was less illusive than the creative process as an explanation of art (van Eck, 1994:112). Nevertheless, while accepting the Greek notion of nature as an animated whole (e.g., an organic model), Goethe rejected speculation about nature's secrets, preferring to base knowledge of nature on "tender empiricism" (HA, XII:435); a position Aalto was to follow with great enthusiasm and determination (GS1).

Goethe was enthusiastic about Linnean taxonomy,[16] which newly comprised a representation of the natural order (*kosmos*) through a thoroughly empirical approach; a system which, incidentally, Sibelius and Aalto studied in depth at school.[17] Goethe went on to seek the forms which were the 'essence' of all plants, and in so doing sought "to proceed from the whole to the parts"; his notion of *Urpflanze*.[18]

1794:210). Goethe did not venture into notions of evolution; "in Nature as endless living, becoming and moving, and yet she gets no further" (WA, XXX:425). WA refers to *Goethe's Werke*, issued by the Grand Duchess Sophia of Saxony (Weimar, 1887-1918).

Goethe's notion was close to the *Formtrieb* (the urge to form) of his friend Schiller (1801), which derives from the absolute existence of man or his rational nature in which he strives for unity and permanence. *Stofftrieb* (sensuous urge) on the other hand derives from the physical nature of man or his sensual nature.

[14] Hegel's *Naturphilosophie* was organicist and anti-mechanistic, imbued with an "almost idolatrous" worship of ancient Greece. (Collingwood, 1945:128).

[15] The term biology was only introduced by Lamarck in 1802.

[16] Carl Linnaeus (1707-78), the Swedish naturalist introduced the general system of classifying plants and animals.

[17] See Doctoral Thesis by Riita Lassila, (1996), and school records of Sibelius (Hämeenlinnan Lyceum) and Aalto (Jyväskylän Lyceum).

[18] This was an empiricist process of comparing many individual cases, without a preconceived idea, and resulting in the essential form of the phenomena under study. Goethe, in Beutler, (1949:2:867).

> *"[...] something spiritual organic"* (Goethe, HA, XII:42)

Goethe's science and aesthetics, and his use of the organism analogy in particular, was tied to an interrelation of classical ideals and aesthetics (Wetzels, 1987:73). Indeed, since much of Sibelius' and Aalto's thinking was rooted in both Goethe's writing and that of the Ancients themselves (i.e., Homer, Horace etc.), and their childhood interest in nature predisposed them towards nature stimulation, it is not surprising that they too might have become fluent with the organic analogy in their writing and their creative forms.

The work of the Greek and Roman Atomists,[19] which determined the existence of elementary particles, was elaborated before the end of the fourth century BC. into a completely materialistic and deterministic doctrine (Grmek, 1972:181). By the later eighteenth century the two great models of order became 'mechanism' (promoted by René Descartes), and 'organism' (promoted by Goethe, Schelling (1775-1854), and Coleridge (1772-1834).[20] Indeed, by comparing how the part related to the whole in both models, Hegel found that in an organism there is total interdependence (HA, XIII:162-4),[21] in which internal and external reveal each other.[22]

In his search to translate metaphysical explanations into epistemology and art Goethe believed he was assisted by his study of nature "to see many things in nature and by the ancients as a whole" (HA, XI:386), in pursuit of "*etwas Geistig-Organisches*" (something "spiritual-organic", HA, XII:42); this was not the pursuit of art after nature (i.e., naturalism) (Wetzels, 1987:83; van Eck, 1994). Rather, the organic model means "to make reality transparent so that the unique interdependence of the part and the whole, the particular and the general, actually appears and can be perceived." (Wetzels, 1987:83).

Goethe dismisses imitation of natural objects, favouring style imbibed with an ability to imitate nature through study of the object, becoming an organism of art surpassing nature because it would reveal its essence. This was an attempt to make known the unknown (Wetzels, 1990:84) and to reveal those open secrets of nature.[23] Although neither sought to imitate nature, neither did Sibelius nor Aalto seek such an extensive modelling of nature in art to discover nature's secret. Rather they sought to make manifest something of the nature of their experience as beings-of-nature, all too familiar with fragmentation and discord, and in so doing seeking the nature of their potential wholeness through the mirror of *kosmos* in the

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[19] Democritus, (c.460-370.B.C), Epicurus, (341-271.B.C), and Lucretius, (95-55.B.C.).

[20] See also Coleridge, (1993:156).

[21] See also Hegel, (1973).

[22] Wetzels interprets this as meaning that by being part of a whole, members of a living whole retain their individual existence. (1987:82).

[23] Described in Hegel's *Simple Imitation of Nature, Manner, Style* of (1789).

Ancient world and in nature. This could be said to be projected into the form of the work, and there resolved into an, albeit precarious balance which the final chapter will examine.

Goethe offered them his ideas that,

> "everything we meet as a phenomena, must either mean an original division which is capable of union, or an original unit which can be split and in that manner exhibit itself. To sever the conjoined, to unite the severed, that is the life of nature; that is the eternal drawing together and relaxing, the eternal syncrisis and diacrisis" (Goethe, HA, XXVIII, abt.4:par.739).

It is also the nature of life, and as such was the *raison d'être* of, for example, Sibelius' search for symphonic unity and Aalto's all-enveloping built "harmony".

These notions' of Goethe's are important in unfolding the significance of the growth of creative forms in Sibelius and Aalto's work. Their mentor Goethe believed that the observation of nature must be accompanied by "*gegenständliches Denken*" (concrete thinking - HA XIII:37), allied to Carlson's cognitive model, in order that the essence of the object, not just the perception of it, enters the mind. In other words the pure phenomenon of nature can be experienced through careful, concentrated thinking, and thus be imbued into another practical application or creative form. Such a role for thinking unites with Cobb's notion of the ecology of the imagination, in which experience and knowledge of nature facilitates children, especially those with great deprivations, in "world-building" (1993), and thus offering the model of nature which Sibelius and Aalto knew so well.



10.4

Fig.10.4 Forest stream



10.4 cont

Fig.10.4 cont. Forest stream

FROM GENESIS TO KOSMOS: THE *OIKOS* OF *LOGOS*

"We cannot create new form where there is not new content." (Aalto, 1928)

"I plan to allow the musical thoughts and their development in my spirit determine the form of my music." (Sibelius, 20.5.1912; T2:187)[24]

" [...] the notion of physis *(nature, the lived world) was interchangeable with the notion of* genesis *(generation, emergence, being born); that* physis *is* genesis, *nature is emergence"* (McEwan, 1993:18)[25]

The unusual degree to which Sibelius' and Aalto's forms are content derived, rather than being generated from outside through the imposition of a method or module, may be explained by an underlying "biological philosophy of life" (GS2:194), in which ideas of death and becoming (*Sterben und Werden*) are intertwined. This section will explore such a philosophy, calling on pre-Socratic ideas which Indra Kagis McEwan offers in the foregoing citation.

FLUX AND *LOGOS*

"[T]he law of change must be recognised as the necessary and inevitable law of growth [...] Let the universities realise and teach that the law of organic change is the only thing that mankind can know as beneficent or as actual! We can only know that all things are in process of flowing in some continuous state of becoming. Heraclitus was stoned in the streets of Athens for a fool for making that declaration" (Frank Lloyd Wright, [1939] 1953:313)

"He will see the material world melt into a single flux, a continuity of flowing and becoming." (Bergson, 1911:391)

At the bidding of Frank Lloyd Wright (1867-1959), an author of organic form, this section will examine the notions of Heraclitus of Ephesus (540-480 BC.).[26] His surviving fragments (between eighty and ninety) indicate a belief that the sole actuality of nature resides in change. Importantly he also saw this as isomorphic with the development of the concept of harmony, making his ideas the first to possess a comprehensive unity.

Harmony derived from the Greek word αρμονια (*harmonia*, a structure), which in turn is rooted αρμος (*harmos*, joint) and αρμοζειν (*harmozein*, fitting together); as cited earlier, herein the spelling will be *'harmonia'* to be consistent with the translation of the Heraclitus fragment given below. In the Greek this came to refer to the development of the musical 'mode' which Sibelius was to adopt; a mode being a progression of musical intervals not to be confused with keys. It is helpful to be reminded of the dictionary definition of harmony, as "the combination or adaptations of part, elements or related things so as to form a consistent

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[24] Sibelius in letter to Carpelan.

[25] The period in which this notion was current was ca. 600-400 B.C, i.e., generally before Socrates (470-399 B.C.).

McEwan's *physis* denotes the Greek φυσις (*phusis*), used elsewhere herein. McEwan cites *Anaximander's Book, the Earliest Known Geographical Treatise*, by W.A.Heidel (1921). From this premise the notion of reciprocity, rather than hierarchy (which was to be Plato's notion), of the heavenly and the human, the spiritual and the temporal, could follow. (McEwen, 1993:41).

[26] The thinker (or philosopher) Heraclitus should not be confused with the poet, Heraclitus of Halicarnassus. Heraclitus and other pre-Socratics thinkers were resurrected, mainly by German scholars in the eighteenth and nineteenth centuries, bringing a more balanced view of ancient Greek thought. Both Kirk (1957:186) and Hussey (1972:152) indicate Plato's misleading exaggeration of Heraclitus' emphasis, which deterred subsequent philosophers.

and orderly whole." (Brown, 1993:1192). Through the remaining course of the study different aspects of this definition will be addressed.

Far from producing the immature "nonsense" which Winckelmann discerned (1972:73), Heraclitus opened important areas of wisdom which offer to balance the cerebral intent of the lovers of wisdom (philo-sophists) who followed him. For Heraclitus, all things happen according to *logos*, God, or universal reason which embraced the whole world: thus the philosophical home (an *oikos* of *logos*) is established. It is not clear quite how Heraclitus uses *logos* here (Hussey, 1972:39), although scholars recognise that his use is broader than its more recent meaning of 'word', 'story', or 'reckoning'. Rather, it is felt to indicate some cosmic or divine law; an analogy in the universe ("a unifying formula") (Kirk, et.al., 1957:187-8; Baldry, 1965:26). *Logos* meant a phenomenon exemplifying a reasonableness drawn from experience of "the unity of opposites" (Hussey, 1972:42; Van Hook, 1930:219). Thus Heraclitus' unity is comprehensive, rather than being in any way simplistic "nonsense" which Winckelmann perceives. Indeed, this may question Winckelmann's denotation of the Greek style as "noble simplicity and quiet grandeur" (1972:73).

BACK-TURNING HARMONIA

> *"[...] what is at variance is in agreement with itself: a back-turning* (palintropos harmonia)" (Heraclitus, frag:51)[27]
>
> *"This is something exhibited not only by the lyre in tune, but by all the handiwork of craftsmen, and by all that is 'put together' by art or nature. It is the 'compositeness of any composite whole'; and [...] implies a balance or attunement."* (D'Arcy Thompson, 1917; 1959:10)[28]

Both Heraclitus and the early twentieth century morphologist, D'Arcy Wentworth Thompson (1860-1948), used structure to translate their ideas about *harmonia*, thus including a vital notion of "mutual adjustment" without necessarily involving measurement. The Heraclitian fragment 51 ("what is at variance is in agreement with itself: a back-turning *[palintropos harmonia]* ") may also be translated as "that which differs with itself is in agreement: harmony consists of opposing tension, like that of the bow and the lyre." (fig.10.5) Indeed, in fragment 10 Heraclitus speaks of 'conjunction' being close to *harmonia.* Indeed, both the consonant and the dissonance together simultaneously demonstrate different aspects of God (frag.67). Neither for Heraclitus nor for any other Greeks were self-moving systems simple mechanisms, law-like in their behaviour (Hussey, 1972:47-8). On the contrary, *Kosmos* (natural order) was the scene of a constant struggle between opposed forces. However, for Heraclitus, as for Anaximander, the interrelation inherent in harmony is intimate (Lippman, 1964:10).

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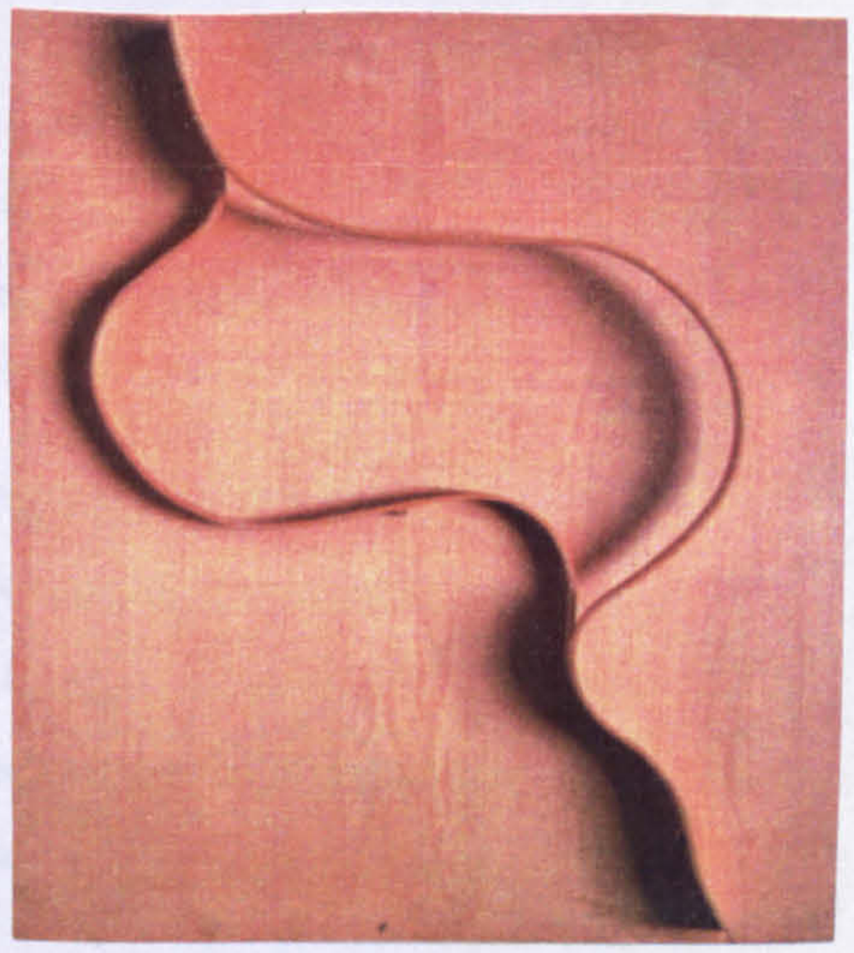
[27] References to harmony will use the spelling used in this translation of this Heraclitian citation; i.e., "*harmonia*".

[28] In this seminal treatise *On Growth and Form*, D'Arcy Thompson thus explored holism, from the Greek ολος (*holos*, whole).



10.5



10.6

Fig.10.5 Bow striking string

Fig.10.6 *Wood Experiment*; Aalto, 1940-47



10.7

Fig.10.7 *Rapids*; Victor Westerholm, 1902

Incidentally, in a position tangential to Heraclitus, Henri Bergson (1851-1941) believed that, "[c]hange must be reducible to an arrangement or rearrangement of parts" (1911a:18); parts already inherent in the whole (fig.10.6). This dynamic conception of harmony as ceaseless change in temporal and spatial phenomena is easily misunderstood.[29] It describes a process of the Divine *logos* in which *kosmos* (order) is omnipresent as change. Indeed, in their world, governed as it was by *logos,* all things are becoming and all things are flowing in a state of flux (fig.10.7). Yet this flux is 'governed' by the greater comprehensive unity of oppositions. Strife which accompanied flux was due to the opposition among changes, eventually resulting in a monism (Scott-Kakures, et.al., 1993:6).[30]

Indeed, in some quarters even Aristotle's philosophy of nature is shown to be the "inner principles of change and stasis" (Waterlow, 1982:1). However, Socrates, Plato and their followers are epitomised as having sought objectivity, definition and the nature of knowledge, as opposed to experience, as ways to fix the *logos* into what became a logic which forbade flux. Much later, however, Gallileo and Kepler found that change obeys rules. Not only can law and flux coexist, but law generates flux (Stewart, 1995:48). Indeed, the new physicists have observed that flux can actually generate law (Prigogine, 1985; Bohm, 1983 & 1989). The universe is neither fully ordered nor only in constant flux, but a complex, intimate and ever changing relationship of these two; a constant *palintropos harmonia* (back-turning) in agreement with something of Heraclitus' ideas.

DEATH AND BECOMING

"Life is like the ocean waves, sometimes one is on top - at others at the bottom. Ebb and flow. Full and empty." (Sibelius, 24.8.1896; T1:184)

The notion of the process-like character, the accretion of themes, and the development of disparate parts into a whole, and how *Sterben und Werden* (death and becoming) become united through change, will be examined in detail in chapter twelve. Nevertheless, at this juncture it is appropriate to offer an example of works by Sibelius and Aalto which are imbued with the intertwined phenomena of growth (or becoming) and death.

Reconciliation?

In the finale of the *Fourth Symphony* (1911) Sibelius creates an extraordinary tonal drama in which the joyful episode calms, becomes solemn, then is recapitulated, becoming quickly unbridled and even chaotic, leading to anguish. Throughout the symphony the development from A major to the main mode of the symphony, A minor, is experienced as inevitable, yet in the finale this progression is experienced as a surprise at the very end.

> "There is such a sensation of achieving something that has been longed for and finally achieved that this rapidly passing moment of joy",

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[29] See Plato, *Symposium*, 187a-b.

[30] Monism recognises a single ultimate principle, being, power. μονος (*onos* , single).

i.e., the attainment of C major as a moment of reconciliation

> "can be experienced even as a goal of the symphony as a whole. The unsuccessful C major of the first movement finally gets its revenge." (Murtomäki, 1993:129).

Yet, the eventual hopelessness of the coda comes as a surprise. *Sterben und Werden* (death and becoming) interleave. Such is the manipulation of the 'expected' to facilitate surprise. Amidst the apparent disorder of the finale there is a governing principle, a "tonal logic" (Murtomäki, 1993:133); indeed this is the moment when Sibelius is at his most modern.

Aalto's *Vuoksenniska Church* (1956-59) (fig.10.8) is imbued with the same process-like character of thematic development and interleaving. The drama here is the play of the themes of light against mass (fig.10.9). Architecture has no one temporal process and consequently, rarely are users regulated in the manner in which they may use space.[31] However, there is often a priority process (i.e., use) which is catered for, in this case the process of coming to the church for worship (fig.10.8), and social congregation (fig.10.10). The first, which involves the preparation of head and heart during the process of arrival and entrance, will be examined here.

The church lies in a spread out 'parish' area, which is largely forested; the church itself being set back from a main road. The approach to the 'alligator-like' humping mass (fig.10.11) gives no indication of the significance of the theme of light (which can be said to play an equivalent role to C major in Sibelius' *Fourth*). Rather, the absence of the theme is striking as one crosses the threshold into the very low, almost uninviting entrance lobby, which extends forwards, ahead of the entrant (fig.10.12);[32] a "procession from heaviness to lightness" which has an unmistakable religious dimension (Connah, 1993:39). Thus, the theme of light is established *in absentia*. Turning sharp right, through the doors into the main volume of the worship space (having so far only experienced 'being' in the mass, the wall-come-transition theme-element), the theme of light, transfused with the blood red stained glass opposite the entrance doors, is striking (fig.10.13). Light, as a symbol of truth and life, has been sought, but when it is presented, it is offered with an omen of its reality; mortality and even suffering. As in Sibelius' *Fourth*, the process-like revelation of the theme is infused with both a striving for resolution, the flux of uncertainty, and the reality that the goal may not satisfy as easily as the heart would wish. It can be said that the vanishing point of the aesthetic-emotional perspective of the place (or the piece) is beyond the place (or piece); the works themselves in isolation cannot offer the whole answer but therein *Sterben und Werden* (death and becoming) become united.

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[31] An obvious exception would be crowds filing past a coffin in a great State building.

[32] Connah describes this as the "stoop and squeeze" experience of moving from darkness to light (Connah, 1993:39).



10.8



10.9



10.10

Fig.10.8 Chancel of *Vuoksenniska Church,* Imatra; Aalto, 1956-9

Fig.10.9 Detail of top lighting above chancel, *Vuoksenniska Church*; Aalto, 1956-9

Fig.10.10 Third part of building in use as congregation room, *Vuoksenniska Church*; Aalto, 1956-9



10.11



10.12

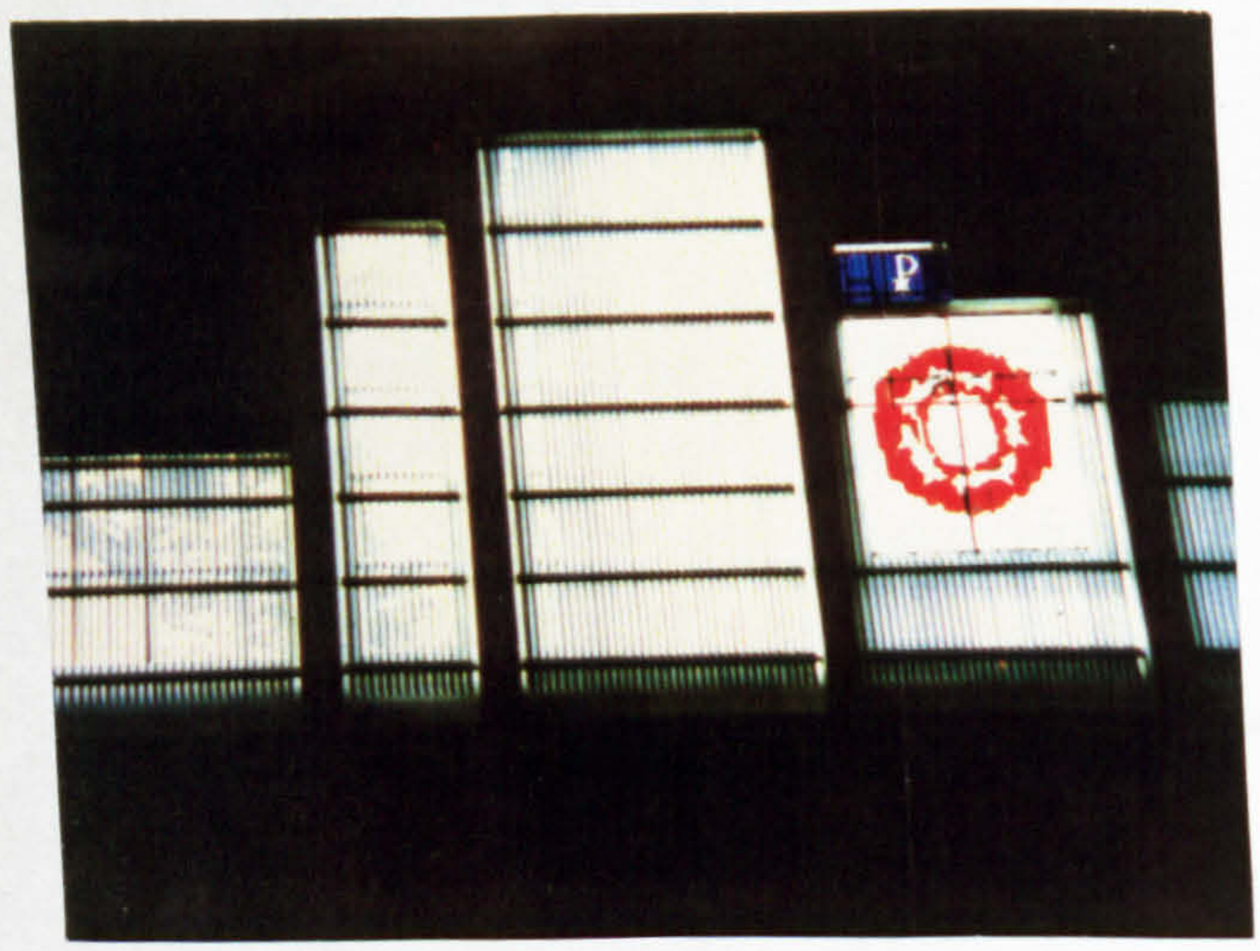

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Fig.10.11 Exterior of the three volumes of *Vuoksenniska Church*; Aalto, 1956-9

Fig.10.12 Low entrance canopy, *Vuoksenniska Church*; Aalto, 1956-9

Fig.10.13 Stained glass window opposite entrance, *Vuoksenniska Church*; Aalto 1956-9

RECREATING GREEK IDEALS: INVESTING IN CHANGE AND FLUX

"Nature [...] always means something within, or intimately belonging to, a thing, which is the source of its behaviour [...] the internal source of a thing's behaviour" (Collingwood, 1945:44-45)

"In the fine arts [...] all genuine forms are organic." (Schlegel, 1809-11)[33]

"The basis of deep beauty could be found beneath the sensory surface, in the unfolding of events and processes." (Reino Kalliola, in Sepänmaa, 1994:65)

In the 1940's Reino Kalliola, the first Finnish conservationist, stated that durable love for nature requires familiarity with its object, encouraging people to engage their intelligence with the processes of the environment as the Greeks had sought to do, and in line with Carlson's cognitive model addressed in chapter seven. There is a deep congruence between Sibelius' and Aalto's interest in certain (particularly Greek and Renaissance) ideas about *genesis*, balance and *harmonia*, and their vital need of the psychological prerequisites of homeostasis.

In the exploration of this, the present section will examine the ways in which their work is imbued with notions of growth and change. Following a short statement about 'organicism' the discussion will move towards an assessment of Aalto's place in the "Other" tradition of Modernism, extracting the notion of *Leistungsform* with which to define the compositional parallel between Sibelius' and Aalto's work before moving to examine the notion of organicism in relation to Sibelius' music.

THE ONTOLOGY OF SIBELIUS' AND AALTO'S ORGANICISM

"It is necessary that the parts of the action be put together in such way that if any part is transposed or removed, the whole will be disordered and disunified [...] it is necessary to construct [a] whole [...] like a single integrated organism" (Aristotle, *Poetics* :16-42)

"Nature, not the machine is the most important model for architecture." (Aalto, 1932b)

This section will seek to inform the discussion of Sibelius' and Aalto's creative solutions through an exploration of the bearing of natural processes (of growth and order) upon art, and the significance of their personal responses. This involves an exploration of the modernisation of the Greek notion of life as an organism, imported into the realms of their creativity through Goethe's notions of the organic model, and subsequent nineteenth and early twentieth century thinking to which Sibelius and Aalto may be connected directly or indirectly.

[33] Unsourced citation, in Meyer, (1989:190).

"Depend on it, whatever is grand, what ever is truly organic and living, the whole is prior to the parts". (Coleridge, Philosophical Lectures, 1949)[34]

Chapter four indicated that, early in his career, Aalto had unequivocally stated the distance between himself and his Modernist colleagues, yet sought to remain in their social clique. This stand-off is informed by the biology which confronts issues of teleology (or goal oriented design) in nature. The remaining chapters will indicate that Aalto was not completely alone in Modernist circles in believing that "wholeness"[35] in art may be modelled on natural organisms. However, that his position was distinct from the mainstream, and that it was markedly different from the small number of Modern dissidents is important, and mirrors Sibelius' position, as chapter four indicated.

> " [...] the ideas of 'wholeness', 'coherence', 'correlation' and 'integration', used to express the organised relationship between parts of the biological organism can be applied to describe similar qualities in the well-designed artefact." (Steadman, 1979:4)

The Organic

The word 'organic' refers to something which contains atoms of carbon, deriving from the Greek οργανικος (*organikos*) pertaining to an organ (οργανον, *organon*); a part of a living being adapted to a particular function (Sugden, 1992:11). Function, or generating content, is integral here, and it is therefore appropriate to return to a definition which the morphologist Heinrich Driesch offers;

> "The organism is a specific body, built up by a typical combination of specific and different parts [...] (it) is not always the same in its individual life [...] it has its development, leading from simpler to more complicated forms of combinations of parts" (Driesch, 1908:25)

Although it has come to mean a whole consisting of dependent and independent parts "resembling" a living being (Curtis, 1992:40; Brown, 1993:2019), an organism is actually any living thing which can grow and reproduce. Full integration (complete organic unity) exists where every detail calls for every other; i.e., nothing can be removed without destroying the whole (Pepper, 1946:79).[36] Indeed, it is appropriate to cite Collingwood's description of living organism which accords with the examination of the translation of philosophy to biology and art of the nature of the organic herein.

> "Living organisms [...] are patterns whose elements are bits of matter [which are] inorganic; it is only the whole pattern which they compose that is alive, and its life is the time-aspect or rhythmic process of its material parts Thus life is the time aspect of the organism [...] a peculiar kind of activity or process" (Collingwood, 1945:160)[37]

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[34] Unsourced citation, in Abrams, (1953:171).

[36] As cited in part two, Aalto's ideas about wholeness were inspired in part by Strengell.

[36] Steadman offers a comprehensive analysis of the organic analogy in design (1979). See also Whittkower, (1962) and Toy, (1993).

[37] This is taken from Collingwood's exploration of *The Idea of Nature* (1945), which tracing notions from Archaic Greece to Whitehead philosophy.

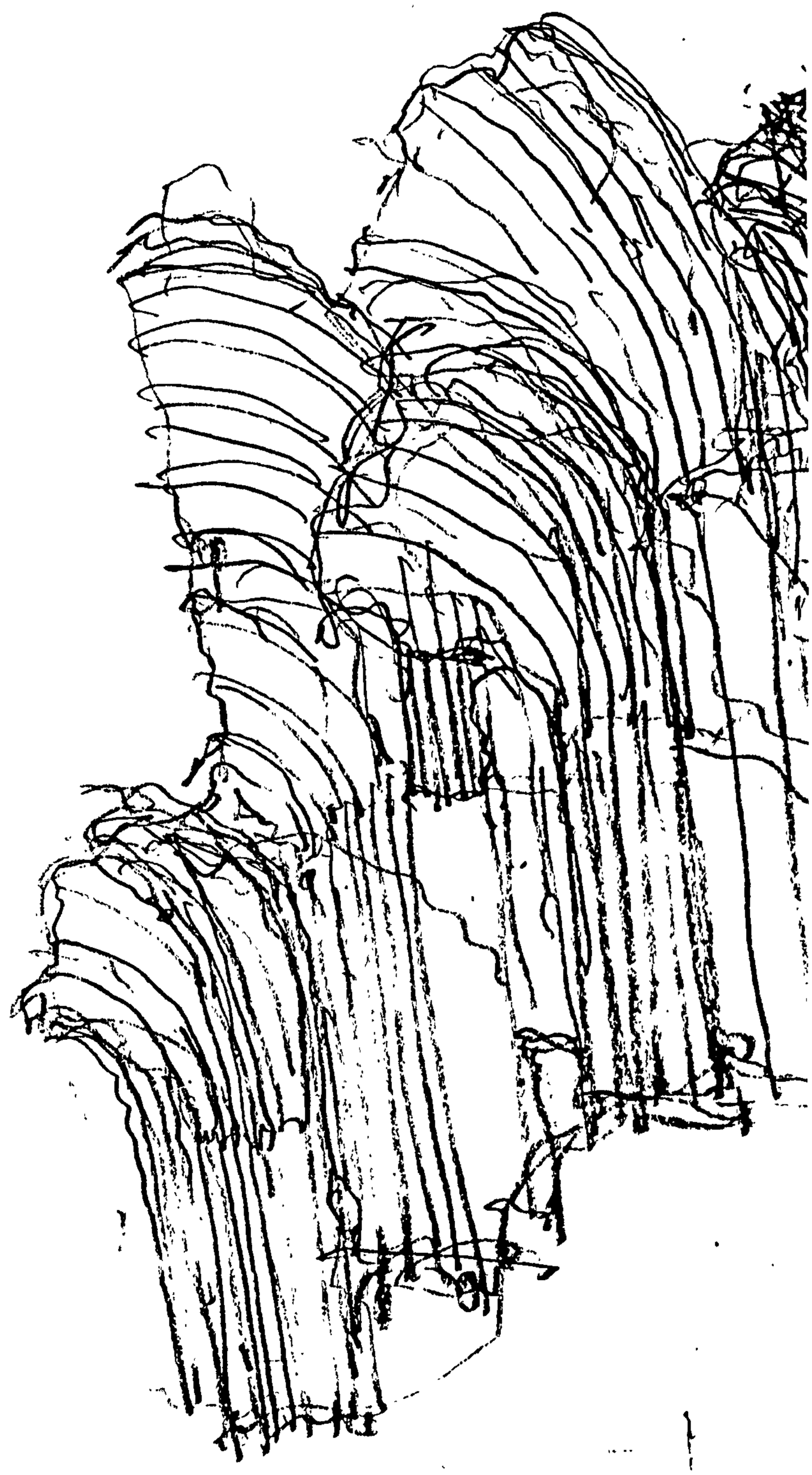

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Fig.10.14 Sketch of interior sculpture for *Essen Opera House*, Aalto, 1959-61 (completed 1991)



10.15

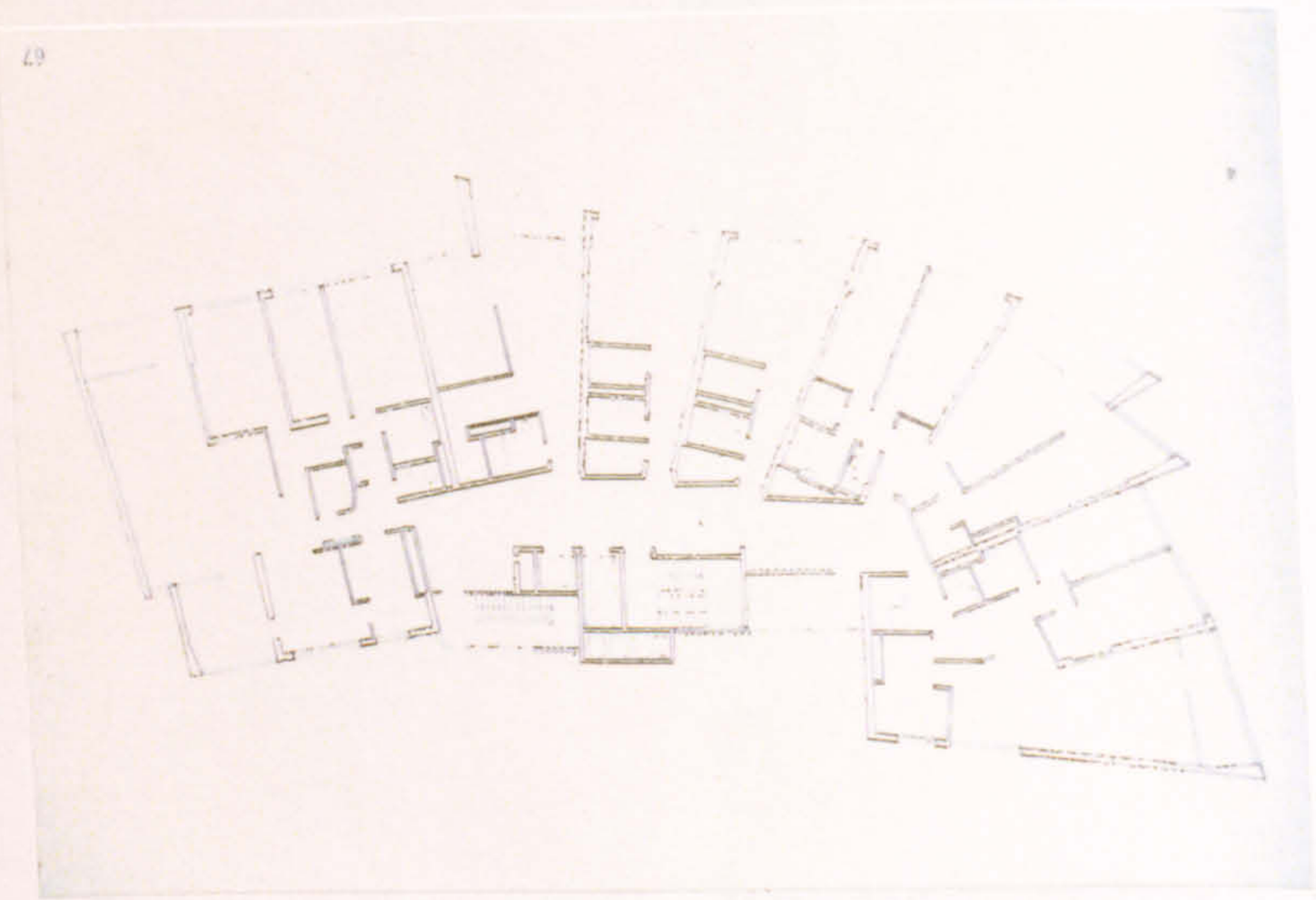

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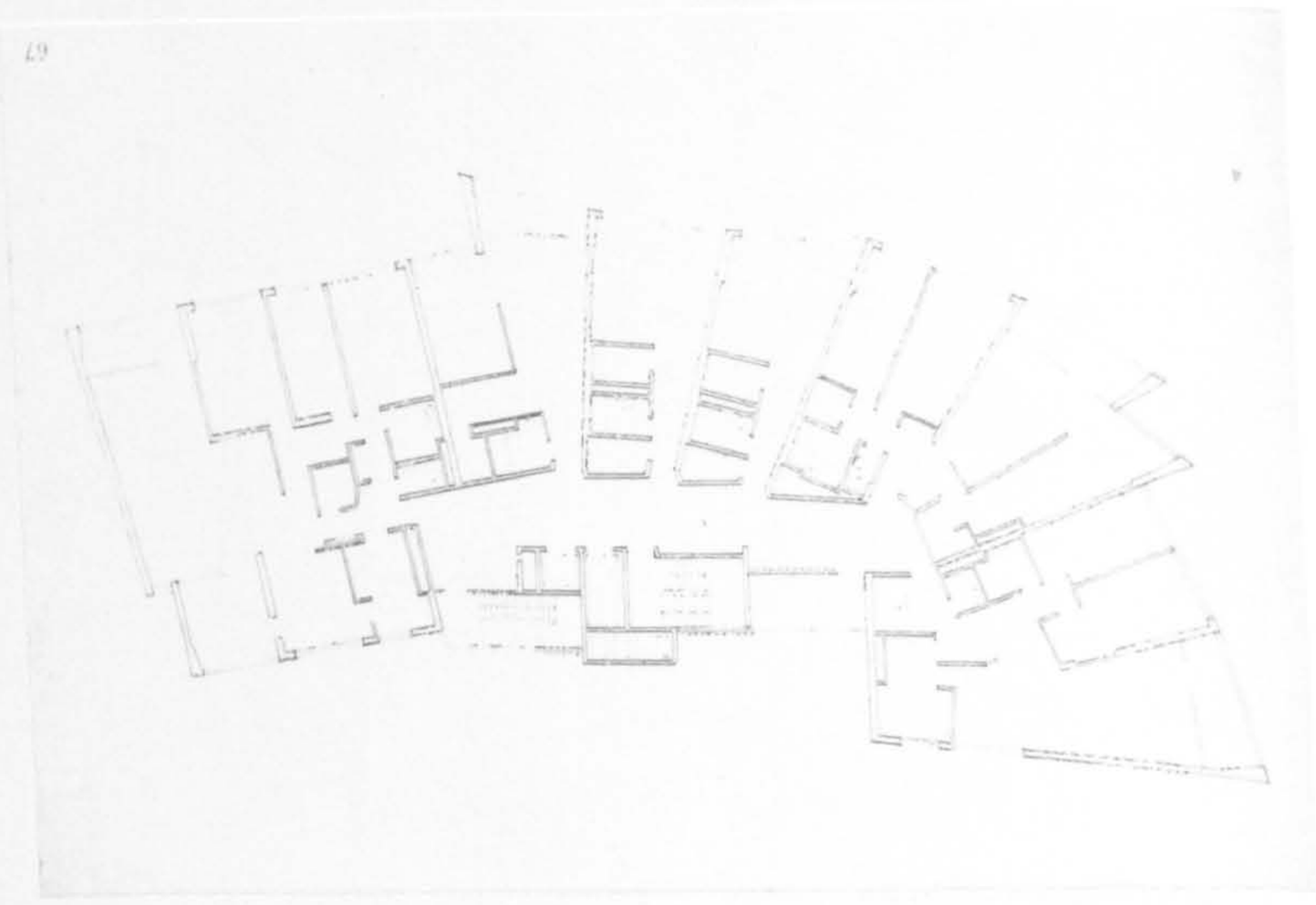
Fig.10.15 Enclosure of *Experimental House* , Muuratsalo (Aalto's summer cottage); Aalto, 1953

Fig.10.16 Plan of *Schönbühl Apartments*, Lucerne; Aalto, 1965-8



10.15



10.16

Fig.10.15 Enclosure of *Experimental House* , Muuratsalo (Aalto's summer cottage); Aalto, 1953

Fig.10.16 Plan of *Schönbühl Apartments*, Lucerne; Aalto, 1965-8

To give context to the discussion, it is helpful to recall Sibelius' desire to let the 'bits' (i.e., content) forge their own form, and thereby be fully related to the whole; i.e., "the motives [...] are the things that must create the form" (Sibelius, 23.4.1912; Tammaro, 1982:139). Indeed, if "nature" means that which makes a thing behave as it does (Collingwood, 1945:46), then the nature of Sibelius' art may be argued to be found in such 'motives'; a notion to be explored in chapter twelve.

"[...] harmony of the organic whole" (Goethe, AA, XVI:418).

The philosophical delta which runs between Ancient Greece and the Vitalist-informed late nineteenth century ideas of organicism which imbued art creation and criticism, cannot be navigated here. However, Goethe is commissioned to act as the intellectual pilot herein as he did for Sibelius and Aalto, drawing together Ancient and modern ideas of organicism applied to art.

The Nineteenth Century Organic Whole

In the eighteenth and into the nineteenth century notions of polarity and intensification (*Steigerung*) had led to a manifestation of growth, development, evolution and epigenesis[38] in the phenomenal world (Pastille, 1990:33; van Eck, 1994).[39] With Coleridge and others, Goethe had sought balance between disparate qualities, and reciprocal relationship between part and whole, and thus the maintenance of creative tension (e.g., Coleridge, 1993:172; see also van Eck, 1994:184).[40] Goethe's translation of the Greek occupation with nature and harmony sought to root ideas of art and life in the reality of living organisms, developing the notion of organic holism which was close to the Greek "harmony of the organic whole" (AA, XVI:418).[41] This notion comprised the continual generation of new forms as metamorphosis, held in check by the organic whole - the unifying power of which was a *Spezificationstrieb* (specification force) (AA, XVIII:177). Indeed, Goethe believed "the whole is prior to the parts".[42] That fact that this whole is complex is vital, since concomitant intensification

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[38] Epigenesis means the historical notion of the development of an organism by the differentiation of a previously undifferentiated whole.

[39] This was before the fashion of separating natural scientists and philosophers into separate professional bodies (Collingwood, 1945:3).

[40] Indeed, that living organisms have a simultaneous capacity for simplicity and complexity was explored in Coleridge's aesthetics theory considered the work of art to be a living being, evaluated in terms of multiplicity-and-unity, in which a "multeity" of sharply contrasted traits was more profound than a simple whole (1993:156,174).Thus, Coleridge represented a move from the pre-Romantic notions of a part-to-whole construction to a concern in which the complex whole is primary, and its parts derive therefrom. (1993). Bringing his argument to the arts, Bergson believed that the same lack of division of the real whole continues to hover over the growing entity, seeing a multiplicity (Coleridge's 'multeity') of symbolic elements into which the scattering of the attention has decomposed it (1911a:221).

[41] AA refers to Goethe's work in *Gedenkenausgabe der Werke, Briefe, und Gespräche* (Zurich, 1949-)

[42] Goethe, in Abrahms, (1953:171). No source given.

prevented stagnation of repetition within the form, making them strive for higher levels of organisation (AA, XVI:864);[43] indeed, such complexity and striving for organisation mirrors that which was demonstrated to have fuelled Sibelius' and Aalto's work.

Thus, for Goethe, holism, polarity and metamorphosis produced an appearance of balanced harmony, without the characteristic 'classical stasis', but rather like Heraclitus' *harmonia* infused with the interplay of opposites.[44]

Therefore, having been used as metaphors in art since Plato and Aristotle,[45] the notions of organism and life remained a central part of philosophy and aesthetics, coming to the fore in the late eighteenth century (e.g., in the writings of Goethe and Coleridge), through the nineteenth century natural philosophers, to the vitalists and morphologists at the start of the twentieth century.[46]

PERTAINING TO GROWTH IN THE NINETEENTH CENTURY

> *"[Architecture] develops and progresses as nature does in the creation of beings; starting from a very simple principle which it then modifies, which it perfects, which it makes more complicated, but without ever destroying the original essence"* (Viollet-le-Duc, 1854-68:v.8:495)
>
> *"[...] a new theory [...] which is the secret of their birth and growth, the theory of organic structure"* (Schenker, 1956:1)

In both music and architecture, nineteenth century creators and commentators used the analogy with organisms, and the growth of form to a whole from an original impulse or essence.[47] In her studies of nineteenth century organicism in music, Ruth Solie (1980) finds both reductionism (the layer analysis of Heinrich Schenker, 1868-1935) and ideas of thematic unity (i.e., the theory of Rudolf Réti) to be rooted in these notions of organic unity; i.e., a work of art should possess unity in the same way, and to the same extent, as a living organism.[48]

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[43] However, to philosophers the application of the term 'organic' was to elevate a work to the transcendental, to express the *Geist* (soul), rather than to describe the relation of parts in its composition. Diverse elements of the material world could be united and transcended, entering a higher unified reality.

[44] This calls to mind the interplay of waving elements with the steadiness of the base lines in both Sibelius and Aalto (see chapter thirteen) and indeed friction (see chapter fourteen).

[45] There was a certain biological orientation in Greek, and particularly Aristotelian thought. As cited above, for Aristotle 'form' was the actuating principle of 'being'. It was the constitutive element in things; a union of matter (υλε,*hyle*) and form (ειδος*eidos*) in art and nature. However, he saw a distinction between natural and artistic, organic form; "Natural genesis is that in which the agent and the resultant are physical beings such as man and plant [...] All other genesis is called ergon (making); it proceeds from art, faculty and thought." (*Metaphysics*, 1032a12:15). 'Form' is a Latin translation of the Greek *Idea* and *eidos*. In Greek *Idea* could mean look, semblance, form, idea, nature, kind and model. (Brown, 1993:1303; Woodhouse, 1954:413; Liddell, 1961:816). *Eidos*, means that which is seen, form, shape, or kind. (Liddell, 1961: 482). To pre-Socratic thinkers 'form' was a principle of being; without form there is only potential.

[46] Collingwood (1945) believes this culminated in the work of Whitehead (i.e., 1920).

Jencks contradicts Coleridge "multeity" (1993:156) by suggesting that the preoccupation with the organic analogies did not override the classical and romantic theories of the 'unified whole' being "one or a few types of form, a single geometry, [...] rather than multivalence, of relatedness" (Jencks, 1985:130).

[47] For example, on seeing Strasbourg Cathedral, in the 1770's, Goethe was compelled to translate his feeling into organic terminology; it was "whole and growing like the Lord's tree [...] living and undivided, not patched and pieced together" (1772). To Viollet-le-Duc, too, saw architecture as a whole organism, "which develops and progresses [...] modifies [...] perfects [...] but without ever destroying the original essence" (1854-68:v.8:495).

[48] Clearly this depends on the degree of integration and the amount of material integrated.

Music historian Carl Dalhaus wrote that nineteenth century music "was more than a vehicle for the text than vice versa; the text was [...] part of the 'music itself,' which, in accordance with the teachings of antiquity, was thought to consist not only of αρμονια (*harmonia*, a structure) and ρυθμος (*rythmos*, rhythm) but also of λογος (*logos*, language." (1989:6). He goes on to explain that "musical depiction of nature is almost always defined negatively," (i.e., by sounding outside the harmonic logic) "by being excluded from the imperative of organic development which [...] dominated the thematic and motivic structure of nineteenth century music as well as its harmonic schemes." (1989:307). This is important since Sibelius did not seek mimetic rendition of nature, yet, significantly (as will be demonstrated) his work is defined as both modern and profoundly organic by Dalhaus (1989:367).[49] Thus nineteenth century musical nature depiction (i.e., Greig's *Norske fjeldmelodier*) is distinct from musical organicism (e.g., Sibelius' *Tapiola*), which involved "thematic-motivic manipulation", and Dalhaus believes, was teleological (1989:307).

In her analysis of organicism in nineteenth century architecture Caroline Van Eck describes the way in which organicism was both a "strategy of invention" for new creative solutions, and a "strategy of interpretation" through which the meaning of architecture (past and present) can be formulated (1994). Van Eck cites John Ruskin, Viollet-le-Duc, Gottfried Semper and Louis Sullivan amongst others. For example, like the aforementioned musicologists, the French architect and philosopher Viollet-le-Duc believed the Laws of Nature were imperative to both the objective and the subjective world, and that they ensured a wholeness and flexibility in building (Colquhoun, 1994:66; van Eck, 1994:214-5). He sought to follow the logic of both the organic and inorganic order in nature (Viollet-le-Duc, 1854;v.8:481),[50] from which he deduced that "creation is unity; chaos, the absence of unity" (1854;v.9:341); an opinion which is questioned in the following chapters.

Regularising Growth and Form

The late nineteenth century morphologists, such as D'Arcy Thompson,[51] continued the work of Aristotle in searching for mathematics implicated in natural form (and in so doing contradicting Goethe's distrust of mathematics).[52] Regularisation of the organic was thus offered as a match for the classical agenda of incremental growth patterns which make up, for instance, the golden section, the 'gem' of ancient geometry (Thompson, 1959; Cook, 1903 & 1914;

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[49] Dalhaus goes as far as to state that "In music, nature is the negation of the musical logic so ardently championed by Schoenberg" (1989:308).

[50] He also pursued an anatomical analogy, writing; "Just as when seeing the leaf of a plant, one deduces from it the whole plant [...] so from seeing a cross-section one deduces the architectural members; and from the members, the monument" (Viollet-le-Duc, 1854-68:v.8:482).

[51] For example Thompson's *On Growth and Form* ([1917] 1959).

[52] The geometrical analogy between art and nature was the source of much of the classical preoccupation with mathematical laws of harmony and proportion, inspiring art, architecture and music alike. Wittkower (1962) explores architecture's relationship to Pythagorean and Platonic thinking. In this realm architecture and music have their most widely documented relationship, but, Steadman believes (1979:17) may thus be colluding in a profound fallacy, which Scott (1980) uncovers. The translation of organic beauty in form was dependent on patterning which shared certain mathematical principles. Van Eck also addresses these fallacies (1994).

Steadman, 1979).[53] Many of these 'proportionalist' studies utilised symmetrical growth concepts which were so abstracted from nature as to be unrecognisably 'organic', unless organic is taken to mean simply regular, incremental accretion inherent in any pattern; "then the specific analogy of artwork with organism becomes irrelevant" (Steadman, 1979:21). There is no appeal to biological form as an expression of its functional application, nor indeed its inherent growth from a kernel of intent, which might be comparable to genetic information or a final cause.[54]

Cautious Growth

The 'organic' in Sibelius and Aalto cannot be recognised in this regularisation, which post-rationalises classical ideas about nature. The approach is deterministic in the extreme, regularising incremental growth regardless of the content and leading away from the concept of growth towards wholeness or the relation of all parts in their contribution to the whole. Neither are the "picture-book" analogies between music or architecture and biology relevant to Sibelius' and Aalto's work (i.e., Stevens, 1974).[55] However, with care, biological analogies "can be a most fertile source of new ideas and knowledge" (Steadman, 1979:5-6).[56]

The nineteenth century musicologist, Eduard Hanslick sought to prove that music can have no subject, (i.e., "nothing extraneous to the musical motes" - [1885] 1974:162), believing that, "Nature has provided no model as far as music is concerned." (1974:154). Yet, he freely uses the terms organic, growth etc., in his descriptions of composition, admitting that "in music, no distinction can be made between substance and form, as no form is independent of the substance" (1885:167). These do not pose a serious challenge to the ideas of Victor Zuckerkandl regarding organicism of music (1974) because Hanslick does not address the same issue, rather seeking to defy nature as a possible subject for music, while accepting that there is an active, generating energy behind composition, be it a programme, or 'pure' inspiration. That such a force is acknowledged in his use of terms like 'organic' is significant, indicating acceptance of the infinite variety which such a phenomenon assures. It is this which Zuckerkandl seeks to explore; i.e., the growth process inherent in the musical process.

Signifying without Representing

Part two indicated that both Aalto and Sibelius were deeply influenced by nature, and indeed, there are moments when, for example, the Cor Anglais might be thought to signify the coming

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[53] This is what has become known as the Fibonacci series. The conductor, Jussi Jalas (1955), Sibelius son in law, believed the *Seventh Symphony* is based on such a model. For an explanation see Murtomäki, (1993:246) and Parmet, (1957:132-33).

[54] The biological notion that ontogeny follows phylogeny (the individuals development follows the species development) may help organic art to be identified with nature, if it is generated by a 'style' of naturalism, for example. There may then be an evolution of design.

[55] In respect of the functional analogy, Peter Collins (1965) distinguished biological and mechanical analogies (chapters 14 and 15), those questioned by Geoffrey Scott, in 1914, as biological and mechanical fallacies in *The Architecture of Humanism* (1980, ch. 4 & 6).

[56] Steadman points out the central fallacy in analogies between architecture and biology which he sees as "the improper equation of the Darwinian mechanisms of organic evolution with the Lamarckian characteristics of the transmission of culture and the inheritance of material property." (Steadman, 1979:5-6).

of the *Swan of Tuonela* (tape e.g., 32), or that lengths of white painted wood signify birch trees (fig.10.15), however, generally the works of Aalto and Sibelius do not to seek such literal, bucolic descriptions of nature, yet do manifest something of the processes of generation and development in nature, at which level the correlation of their work will be examined.

PARTS OF CHANGE

> *"[...] what is sought is the cause (and this is the form) of the matter's being some definite thing; and this [=cause=form] is the substance (of the thing)"* (Aristotle, *Metaphysics* Z:17:1041b7-9)
>
> *"To acknowledge the limits of rationality, objectivity and determinism is not to relinquish a belief in reason, a respect for reality or a search for order."* (Polkinghorne, 1986:5)

In the modern view, "process, activity and change are the matter of fact" (Whitehead, 1934:47-8). Experience of art which unfolds as it is used or heard, may thus offer what (following the Ancient muses) Bergson and Whitehead explored as the constant becoming of continual creation and change in nature; notions which are concatenate with Winnicott's primary human creativity. Similarly the premise of Aalto's friend, the artist Moholy-Nagy, was that all humans are inherently creative; "From the first inarticulate experience, the whole of life is one continual growth" (1947:23) (fig.10.16). These notions were a philosophical domicile for Aalto's repeated assertions about seeking harmony and unity inspired by nature's pattern of growth.[57]

Just as the Greeks had held that "nothing is knowable unless it's changing" (Collingwood, 1945:11), so in *Creative Evolution* Bergson suggested that experience confronts us with "becoming"; i.e., with sensible reality (1911a:331). Through analysis of the Greek notion of ιδ ειν, *idein* (idea, form) Bergson indicated the general desire to find stable views of our life of instability,[58] seeing Greek philosophy as a real vision of the universe "becoming" through the continual change of forms.[59] He saw form as a snap-shot view of a transition (1911a:319; 1911b) taken at intervals of its flowing, more in a movement than successive positions of object.[60] It will become apparent in the following chapters that such an affiliation of form and transition is well suited to Sibelius and Aalto's work which is rooted in the continual process of growth and renewal. It will also be evident that such growth of form imbues the work with an unusual degree of such instability or precariousness. Indeed, trying to distance himself from

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[57] Another such source from which Aalto's ideas spring is the German vitalist, Hans Driesch (1867-1941). For example, Aalto's (1941) ideas of a biological "standardisation" which he saw as "the real nature of architecture", is close to Driesch's ideas of biotechnics which, "follow biology on its own path; let us study its transition from a "naïve" science to a real branch of the philosophy of nature" (1908:5). Bergson refers favourably to Driesch's vitalism in *Creative Evolution* ([1911a] 1959:44-5).

[58] Bergson cites the three meanings of the Greek word ιδειν (*ideln*, idea, form), denoting quality (movement of becoming), essence or form (moment of evolution), and end (the design intention of an act being performed), believing that this indicated the tendency to seek to find a stable view of the instability of things, and to reduce things to ideas - to resolve becoming into its principle moments.

[59] Such a transition or relation was also explained in *Matter and Memory* ([1896] 1911b). What Collingwood describes as "cutting this flux into rigid chunks and thus manipulating it" (1945:137).

[60] Thus, Bergson recognised form as offering precedence for his notion of "duration" (1911a:333).

Heraclitus, for what have been described as insubstantial reasons (Lacey, 1989:106),[61] Bergson stated a belief in 'things' and in their perpetual 'change', and therefore their inconsistency (1946:222). Yet, inherent in both Sibelius' and Aalto's work can be found strong (ego-like) grounding phenomenon (the *Pedal* ; see chapter thirteen) which counters this precariousness (fig.10.16).

Indeed, it is also important that for Bergson, as for Heraclitus, flux is related to *kosmos* (natural order) and *logos* (relation, "a unifying formula").[62] It is crucial that they are related through the nature of change (i.e., "process") a characteristic of which is *strife*. The work of Sibelius and Aalto was informed by such ideas, but their source is not primarily intellectual; rather being driven by their psychological requisite of balance. The search for the *logos*, the relating mechanism or the unifying phenomenon, may have resulted in the inseparability of form and process in Sibelius' and Aalto's work.[63] This will be examined further.

THE "URGE" TO CHANGE FROM *PHUSIS* TO FORM

> *"[T]he 'vital position' may indeed not explain much but it is at least a sort of label affixed to our ignorance, so as to remind us of this occasionally, while mechanism invites us to forget this."* (Bergson, 1911:44)

By the 'nature' of something, reference is made to its formal properties and that which makes it behave as it does.[64] Teleological philosophy is rooted in the Greek words *telos,* meaning goal, end, or a final cause, and *logos,* meaning, in this case, the study of something (i.e., a definition which post dates that of the pre-Socratic sophists).[65] For Aristotle the purpose of all change is to realise the essence of each thing, the Final Cause.[66]

> "Nature, for the Greeks, was characterised not merely by change but by effort or nissus or tendency, a tendency to change in certain definite ways" (Collingwood, 1945:83).

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[61] Lacey (1989:106) wonders what Bergson understood Heraclitus to mean, since he seems to ignore the role of *logos* in the Greek's ideas. This may be due to his desire not to seem to dismiss Aristotle's notion of categories, and preferring an idea of moderate flux in which "everything is changing in certain respects" (1989:110).

[62] Lacey believes Bergson overstated the perpetual changing of Heraclitian flux, coming to rest his theory in "a more moderate flux doctrine that everything is always changing in certain respects" (1989:110).

[63] To a degree this manifests Aristotle's notion of potentiality and actuality. In seeking the cause and thus the form, of matter, in *Metaphysics* Aristotle sought the *thing* as a unity, form and matter together. These *things*, or entities (each with their own *ousia*) make up the whole of Aristotle's universe. Being *formed* and being *unified* have a deep underlying connection. Indeed, Montgomery Furth (1986:84) expresses the heretical belief that Aristotle ventured into the process of becoming, and that form may be responsible for each individuals' essential nature, and for its unity. This is significant because Aristotle, determined as he was to seek the cause of *things*, may have actually been seeking it in a process of becoming.

[64] In the Renaissance nature was viewed as divine and self-creative. (Collingwood, 1945:94). Indeed, the Pantheism of the Renaissance was attractive to both Sibelius and Aalto, being congruent with something of the relationship to nature in Finland explored in part two.

[65] Teleology is the branch of philosophy which deals with final causes, exploring cosmic or divine design, purpose and intent. (Brown, 1993:3239). Form is the *telos* (goal) which governs the *phusis* of natural substances; where *phusis* is the movement of things into their natural forms (Harrison, 1992:28). Finalism is the doctrine that natural processes (such as evolutionary change) are directed towards some end or goal.

[66] For Aristotle all natural primary substances (υλε, *hyle*, matter) are for making their form (μορπε,*morphe*) 'fully actual'; hence *Hylomorphism* (matter/form) analysis. To recall, the root of *hyle* is wood, timber, material, having come to mean matter. Aristotle's thinking came from the observation of embryonic growth, the interlocking but apparently independent events which participate in the process that seems part of a global plan. Later, Leibniz sought to take teleology further, the Final Cause being divine, and the goal, the fulfilment of preordained harmony in which everything is given. Leibniz cites Aristotle in *Théodicée*; (Nic.Eth.1099b;23) et al.

Relating the Past

The thesis that Aalto and Sibelius sought to relate the past (theirs and civilisation's) suggests a 'goal'. Many accept that Darwin has discredited the notion of *telos* applied to biology, and Newton and Galileo in application to physics, leaving only the conceptual level (Evans, 1987:94).[67] However, the notion of goal-directedness is not quite appropriate in this context, given the evidence of drivenness in chapters five and six. In other words, Sibelius and Aalto were compelled to relate the past in order to maintain their grip on present reality; a literally vital process of inner maintenance through psychological integration. Nevertheless, it is significant that recent Sibelius scholarship has introduced the notion of teleology to explain the processes in Sibelius' work (Hepakoski, 1990; 1993; 1995); this will be addressed later.

In the late nineteenth and early twentieth century Bergson, however, feared that Finalism in teleology "annihilates *time*" (Kolakowski, 1985:56), seeking, rather, to invest *intuition* and *duration* into the process, and thus allowing for *transformation.* Bergson saw *transformation* accompany time at the centre of evolution, and sought to establish and maintain a position in which both Darwin's mechanistic evolution and its antithesis, teleological Finalism, were taken from their polarity by Vitalism. Incidentally, Schildt seeks such a synthesis for Aalto in his chapter *Between Darwin and Goethe* (GS1:194-213). The "urge" which Sibelius repeatedly described and the drivenness which is demonstrated in both his and Aalto's lives in chapters five and six evinces this middle way between mechanistic process and Finalism; between evolution of themselves and goal-directedness.

CHANGE ITSELF

> *"[Change]...the actualising of a potentiality as such."* (Aristotle, *Physics* :3)

By following Kant and Hegel, and by representing Vitalism,[68] Bergson opened up the realm of uncertainty. In many ways he was thus closer to the pre-Socratic thinkers than to the 'classical' scientists of the seventeenth and eighteenth centuries.[69] His ideas also represent attempts to end the dichotomy between philosophy (the noumenal) and science (the phenomenal), offering a unifying organicism and notions leading to the complexity. These ideas are relevant to Aalto and Sibelius urge to "forge" form from content (to expose the inherent), and which, it will be argued, symbolise the need to relate inner and outer reality. Bergson's Vitalism was energised by a vital force (an *élan vital*) to provide a *harmonia*, a

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[67] Collingwood, nevertheless, suggested that Darwin began to write in teleological terms; explaining that nature was improving forms from within (1945:10-11, 134-5).

[68] Vitalism is a system of thought in which life is believed to be due to a vital principle (i.e., not purely chemical or physical); "[...] the process of change is a creative process" (Collingwood, 1945:137). It is often contrasted with Mechanism; a system of thought in which all natural phenomena are produced by mechanical forces.

[69] The preoccupation of the late nineteenth and early twentieth century philosophy was an "emphatic repudiation of the body of deterministic thought" and classical, Newtonian science (Kern, 1983:100). For Alfred North Whitehead (1861-1947) the task of science was to reconcile permanence and change, and to conceive of things as processes - a philosophy of relation, which is appropriate to this study (1920; 1969). There is no evidence that Sibelius and Aalto had any contact with his ideas.

unity even, that random variation lacks, by over-arching the potential chaos of change's flux.[70] The cause of the *élan vital* was psychological, and was thus beyond science and moral 'law' (Lacey, 1989:181). In a letter, in 1908, Bergson admits that his work, *Creative Evolution,* makes God the *source* (his emphasis) of '*élans*' (plural) (1972:766-7), stating elsewhere that God is "unceasing life, action, freedom" (1911a:262); i.e., that which Sibelius and Aalto found in nature, "a symbol of freedom" (Aalto, 1949). Indeed, Mikkola believes that the *élan vital* encompasses the relationship of nature and development inherent in Aalto's work (1976:23);[71] augmenting ideas from of the Bergsonian scientist Alexis Carrel (1873-1944),[72] often cited by both Aalto (e.g., 1949) and Moholy-Nagy, who believed that all art strives for "timeless biological fundamentals of expression which are meaningful to everyone" ([1930] 1947:13);[73] i.e., the basics of art are the basics of life.[74]

The Seeds of Growth and Change

Being psychological the *élan* was also extra-spatial, and in terms of creativity, has elements in common with Goethe's *Urphänomen* (primal form). The *élan* is an impulse, a 'seed' (Lacey, 1989:182), which provided a unity that random variation (of natural selection) lacked; a unity which was unpredictable, but intelligible in retrospect (Lindsey, 1911:240).[75] Some believed that Bergson's vitalist notions identified him to be, like Heraclitus, an anti-intellectual irrationalist (Richardson, 1971:121; Lewis, 1927), as Giedion believed of Aalto (1950) and Adorno of Sibelius (1966).

Bergson's place of compromise (between philosophy and science) relates to both Heraclitus' flux and Aristotle's Finalism. Therein he united 'process' and the rigorous nature of 'change', which is clearly a force (the "inner urge") behind Sibelius' and Aalto's forms.[76] Bergson,

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[70] In this Bergson resisted the polar opposition of mechanistic and Finalistic explanations of evolution, although this also invites the accusation that Bergson promotes Finalism, yet falls short of deliberate teleology. In other words he suggests there is a final end, but declines to describe its nature. The *élan*, for instance, explained variation, which in Darwinism was understood as pure chance, and which Teilhard de Chardin (1965:261) believed, was a tool to explain, "the dynamic rigour of a situation".

[71] Mikkola also believes that Aalto's use of time is similar to Bergson's continuation and duration (*durée*). In *An Introduction to Metaphysics* (1903) Bergson introduced the notion of the fluidity of time through experiences of knowing; relative and absolute. He sought to highlight real existence, *durée*, as opposed to the relative time, represented by a clock face.

[72] In *Man the Unknown* (1935) Carrel, the Nobel-prize winning French-American scientist wrote, "We must listen to Bergson" (1935:155), while setting out to explore *Man the Unknown* in terms of both objective science, physiology, psychology, aspects of time intuition and intelligence (largely repeating Bergson), extolling the rise of the gifted individual, all towards the goal of 'the remaking of man': "The restoration of man to the harmony of his physiological and metal self will transform his universe." (1935:291). Durkin particularly finds Carrel's extensive writing about intuition to be inspired by Bergson (1965:24). Carrel continues Kaila's line of linking biological issues with those of quality of life and progress of society. His work is, however, disturbingly Eugenic, and some of his ideas written during the rise of fascism are indigestible (see appendix three).

[73] Moholy-Nagy had formulated *The New Vision* ([1930] 1947), a copy of which he sent to Aalto after a visit to Finland in 1931.

[74] Moholy-Nagy believed that the term 'biological' stood for "the laws which guarantee organic development", which, if conscious, would protect against damaging influences (1947:16), and promote the goal of "man's organic function". Children, Moholy-Nagy points out (1947:17), usually (i.e.,. if they are not damaged psychologically) act in accordance with biological laws, avoiding what is damaging.

[75] This direction-giving tendency (or life drive) can, however, only proceed through constant diversification, generating species and individuals who constantly struggle in multiplicity, as opposed to the unity of the universe. This multiplicity comes close to Coleridge's "multeity" (1993:156), and the sort of variation described in chapter three, and to be evinced in chapter twelve.

[76] Bergson's acceptance of a role for radical Finalism (1911:42) and an ultimate truth, condoned the notion of perfect order in infinite complexity (referring to Peirce's Radical Finalism, the theory of final causation in which things are broken down into tiny pieces; 1911:42). Although not purposive, the *élan* attempts to elucidate *transformation,* accepting a degree of internal purposefulness, yet rejecting the internal Finalism (the inference that everything is guided by its own internal ends). In favouring some degree of external finality (wherein parts transcend parts within a whole, i.e., a bodies defensive system) Bergson envisaged a process in which parts act with purpose but without the sort of goal associated with human action; conceptual teleology.

however, fails to address Heraclitus' explanation of *harmonia* as a constant "*palintropos harmonia* (back-turning)" or a conjoining of changes towards an idea of a comprehensive unity. This study asserts that there is just such a unity in Sibelius' and Aalto's work which defies the nomenclature of illogicality by requisitioning '*logos*' from its beginning; rather being "life's ungraspable, difficult unity" (Aalto, 1958a).[77] Such a challenge to charges of irrationality will accumulate throughout the final chapters. In short, it is exceptionally sensible (literally 'vital') that mechanisms exist by which 'balance' is "forged", being achieved through the profound logos in Sibelius' and Aalto's case; the urge to relate difficult realities into a whole.

The Vital Force

Thus, despite the problems with the *élan vital,*[78] it will be used in this context because it comes close to that vital force which urges the search for the '*logos*' ("call it God"; Sibelius, 20.5.1918),[79] that 'other' which stimulates relations and offers "freedom" to the often tortured souls demonstrated in part one. The *élan* will also signify the vital impulse behind Sibelius' and Aalto's "urge" (i.e., drivenness) to seek balance, *harmonia* and organic unity; both psychologically and concomitantly in that which fuelled the nature of their creative form.

This is not to suggest that Aalto and Sibelius foresaw a definitive, divine *harmonia,* which became the determinate for their form (despite Sibelius' comments about sensing the divine in art), but rather to infer that the (inner) need for *harmonia* may have repeatedly inspired the formal conjoining of the disparate. The search for a realistic (rather than a simplistic) *harmonia* through a created *kosmos* (be it a symphony or, for instance a multi-purpose civic building) which comprised the diversity and even divergence of constituent parts, is neither static nor formulaic, but rather something inherently dynamic informed by its own process of growth and becoming. This direction of thought is close to the classical idea of unity which Spitzer elucidates (1963), and which will be examined in detail in chapter fourteen.

Artistic Fecundity

It is apparent that art only grows metaphorically (Langer, 1953), yet, as such may represent a deliberate rendition of a natural (and therefore human) growth process, especially if there is a strong impulse ("strife", or an "inner urge") to enhance this sense of growth.

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[77] The apparent chaos inherent in many natural patterns has been discovered to be deterministic (Stewart, 1995:3). Chaos theory teaches that obeying simple laws can be complicated. Art which addresses life may be similarly complicated.

[78] For example, Bergson's limitations such as 'intuition' as an alternative path to a knowledge whose significance parallels science. Clearly Whitehead's pre-Kantian philosophy informed his challenged to scientific materialism. See Prigogine, (1985:80, 94) & Diderot, (1976).

While praising his emphasis on Life, Collingwood also addressed Bergson's refusal to integrate the problem of matter with that of mind and life (Collingwood, 1945:136-139). Bergson's argument is challenged by those opposing the notion that teleological finality steers evolution, who find an occult quality in the *élan.* However, Kolakowski argues that the *élan* implies "a kind of intentionality, however vaguely defined, in the evolutionary process", or to supplement Bergson's notion, the process of *transformation* (1985:57). Questions also arise as to how it can be studied scientifically, and how it avoids the Platonic Descartean 'two worlds' argument (Collingwood, 1945).

[79] Sibelius, letter to Carpelan, (Ekman, 1938:254).

"If we examine architecture [...] as part of the struggle between man and nature, we discover its clearest inner character, its systematic, constant variability" (Aalto, 1938)

In nature form is determined by forces inside the object (and arguably from the ultimate *telos*, God), in art the force comes from the creator. Such a force can be imbued into the art as its very essence. In this sense it may be agreed, with Aristotle, that art mimics nature; nature being not just created objects but the productive principles of life. Although this is not the place to unfold the whole history of the organic analogy in architecture or music,[80] it is appropriate to reiterate that, in their work, both Aalto and Sibelius purposefully sought to let the force or energy of the content literally inform the whole. How this is done will be demonstrated in the following chapters.

[80] For a detailed study of the analogy in architecture see Steadman, (1979) and van Eck, (1994), and in music see Solie, (1980).

AALTO BUILDING THE ESSENCE OF FORM AS PROCESS

"By giving our technical general plans a solid base in nature we can redirect the thrust of development" (Aalto, 1949)

"In general it was under the sign of the biological rather than the mechanical that [Aalto's] *formal sensibility was modelled"* (St. John Wilson, 1992:85)

"Architecture's inner nature is a fluctuation and a development suggestive of natural organic life. I would like to maintain that this is finally the only true living architecture." (Aalto, 1938)

The history of modern architecture indicates that common terminology, such as 'organic' is insufficient to guarantee real similitude. If Gropius' stated desire for "clear, organic architecture whose inner logic is radiant [...] adapted to the world of machines" (1923)[81] is held up to his tired, mechanistic, rationalist buildings such as the *Harkness Dormitory* at Harvard (1949, fig.10.18), and Aalto's motivation for bringing dwellings into "immediate contact with nature" (1946), "building cell by cell", following "biology's and culture's own method" (1949), is set against his vibrant *Baker House Dormitory* along Massachusetts Avenue at M.I.T. (1949, fig.10.19), organic architecture requires redefinition.[82] It is not the intention to undertake this here, but rather to indicate the different uses of the notion 'organic' by Aalto and his contemporaries by comparing his organicism with that of Frank Lloyd Wright (1867-1959) and Hugo Häring (1992-1958).

GROWING ORGANIC: HÄRING AND *ORGANHAFTES BAUEN*

"[...] 'organhaftes Bauen' (organic architecture) according to which the house should be an organ for its user and its final form should result from neither aesthetic nor constructive speculation; instead it should derive from the purpose for which it is intended ('Leistungform')" (Šlapeta, of Häring, 1981:119)

"[...] the form arising out of work performance, the Leistungsform, leads to every object receiving and retaining its own essential shape." (Häring, 1932)

History books do not all adequately record Häring's critical role in the development of notions of Modernism (i.e., Giedion, 1941;[83] Curtis, 1983; Zevi, 1950). Nevertheless, in the twenties Häring shared an office with Mies van der Rohe (1886-1969) in Berlin, participating in a group known as *Der Ring,*[84] and endlessly debating antithetical doctrines. Häring regarded form as a result of a new understanding of purpose, while Mies subordinated purpose entirely to the effect of structure and form. Needless to say their union was short-lived. The pure geometry and Modernist *Existenzminimum* of Mies and Le Corbusier was diametrically opposed to

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[81] Cited, without full source, in Jencks, (1985:109).

[82] Doremus (1992) has recently sought such a redefinition to bridge the chasm between Häring and Mies. In so doing he demonstrates a desperation to find a unity which can embrace the fundamental differences which underlay the different approaches to architectural form and philosophy.

[83] This refers to the first edition of *Space, Time and Architecture.*

[84] The group included Scharoun, Mendlesohn and Taut.

Häring's undogmatic enquiry into what buildings "wanted to be"; i.e., his *Leistungsform* (1927).[85] Indeed, even before participating in the inception of the International Congress of Modern Architecture (CIAM) in 1928 Häring had begun, virtually unnoticed, to elaborate an idea of "*organhaftes Bauen*" (organic architecture), in which the house should be an organ for its user and its final form should result from the *Leistungsform* ; the purpose for which it is intended (fig.10.20 & 10.21).[86]

> **" [...] we want to examine things and allow them to discover their own images. It goes against the grain with us to bestow a form on them from outside" (Häring, 1925)**

The Socio-Cultural Resistance

After the June 1928 CIAM meeting at Hélène de Mandrot's castle, La Sarraz, Häring was ostracised in the congress by its leadership (namely Le Corbusier and Giedion), who were to become Aalto's particular friends, and who believed Häring had failed in his duty to 'march together' in the congress' dogmatic line.[87] There were other architects who did not fit in the pure white camp, such as Hans Scharoun, Heinrich Lauterbach and Adolf Rading (all from the *organhaftes Bauen* school formed the Berlin-Breslau Group with Häring),[88] who had abandoned the rectilinear canon and who were promoting unity between landscape and architecture. This group is part of what St. John Wilson has recently called a "Resistance" within Modernism. He includes Aalto as "pre-eminent" among this humanitarian vanguard (1995:23), although the Finn had little or no personal contact with other dissenters. Unlike such comrades-in-opposition who turned their backs on the 'masters' of Modernism, Aalto was to flirt with Le Corbusier, Gropius and Giedion for some years, enjoying the role of friend to esteemed Modern masters, while simultaneously both taking in any wisdom he perceived and undermining their five point dogma with built form. Characteristically Aalto resisted anything which demanded conformity, or the simplification of complex problems into facile formulae. This thesis seeks to demonstrate that Aalto's 'unity' was quite different from the dogmatic, Purist 'unity' Le Corbusier sought.

The distinction between Aalto, who remained as an iconoclast within the CIAM fellowship, and Häring, whose ideas were largely rejected is important (fig.10.22). Nevertheless, as Sibelius had done with his music, Aalto, like Häring, sought to let the purpose of building literally *inform* the

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[85] At the beginning of this century *Dynamism* was an increasingly common feature of Central European architecture, manifest in the call for design to be, "*Von Innen nach Aussen*" (from inside to outside), with the required interrelationship of form and function, as demonstrated by Eric Mendlesohn's lecture *Dynamics and Function*, in 1923. Both Goethe's pursuit of "*etwas Geistig- Organisches*" (something "spiritual -organic") (HA:XII:42) and dynamic organicism (rooted in notions of the *Urphänomenen*) appear in these notions.

[86] He discerned three stages of architecture. The first two being; a pre-geometrical period finding structure arising from the forms of the materials nature offered; a pure geometrical period, for instance in Egyptian, Greek, Roman and Renaissance buildings, in which, he believed, the absolute unity of the geometric forms forces man into a subordinate position. Importantly, the third of which was a synthesis in which *organhaftes Bauen* would flourish in a correct and true understanding of the nature of the task (Šlapeta, 1980:121; Joedicke, 1965.59-60) .

[87] Häring had sought to form a congress to coincide with the Stuttgart Weissenhofsiedlung Housing Exhibition, 1927, in which he was opposed by Le Corbusier. Nevertheless, he continued to expound how organic structure may differentiate architecture and building in an article, *The House as an Organic Structure*, in 1932.

[88] There was also a so-called Alpine Architecture group at work at this time, inspired by the legacy of Theodore Fischer. At the opening of an exhibition of Aalto's work in Berlin, in 1963, Scharoun and Lauterbach praised his work, finding it to be the most important contemporary development which was to influence Germany's architecture. A letter from the two German's opened the exhibition catalogue.

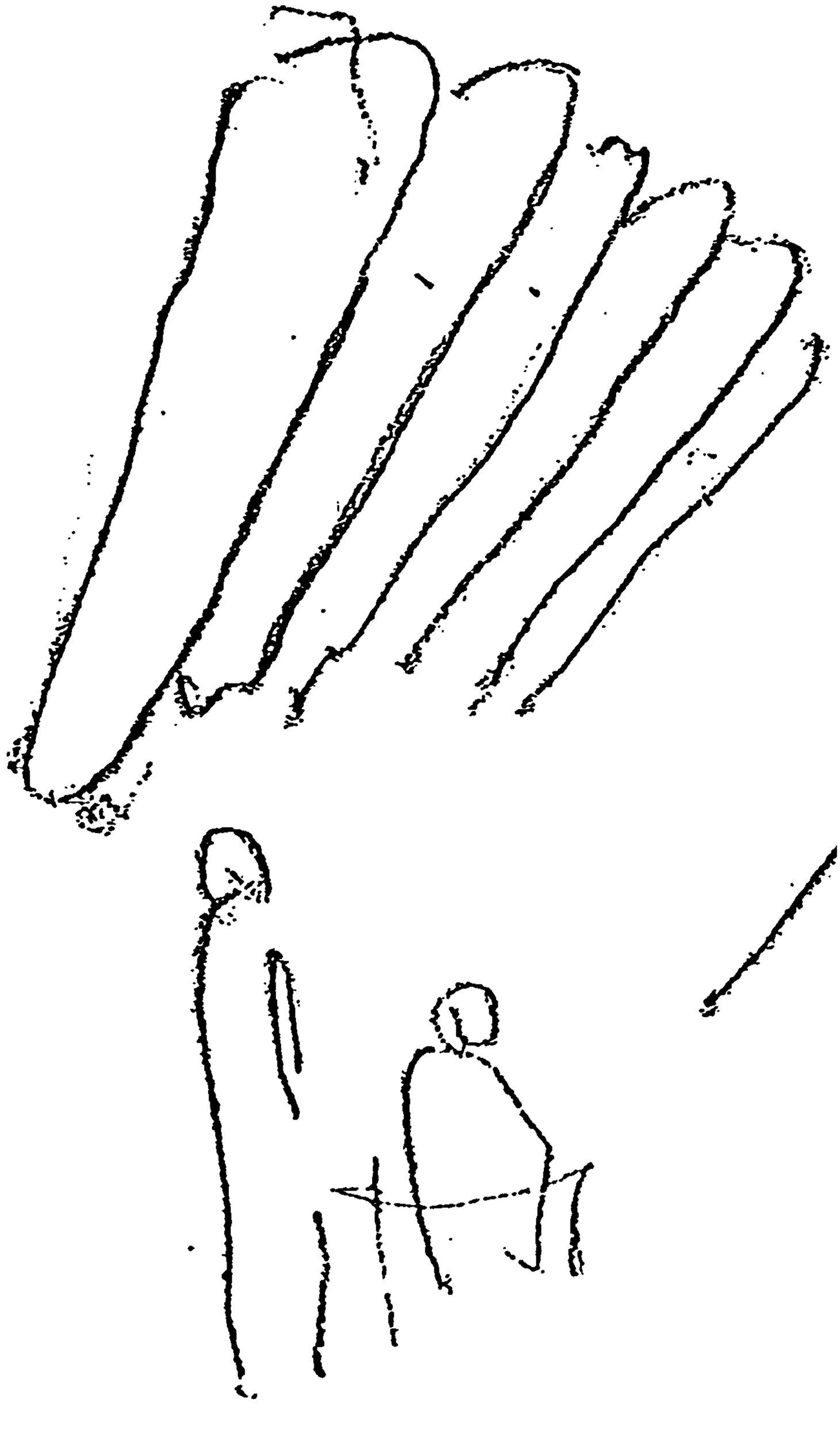
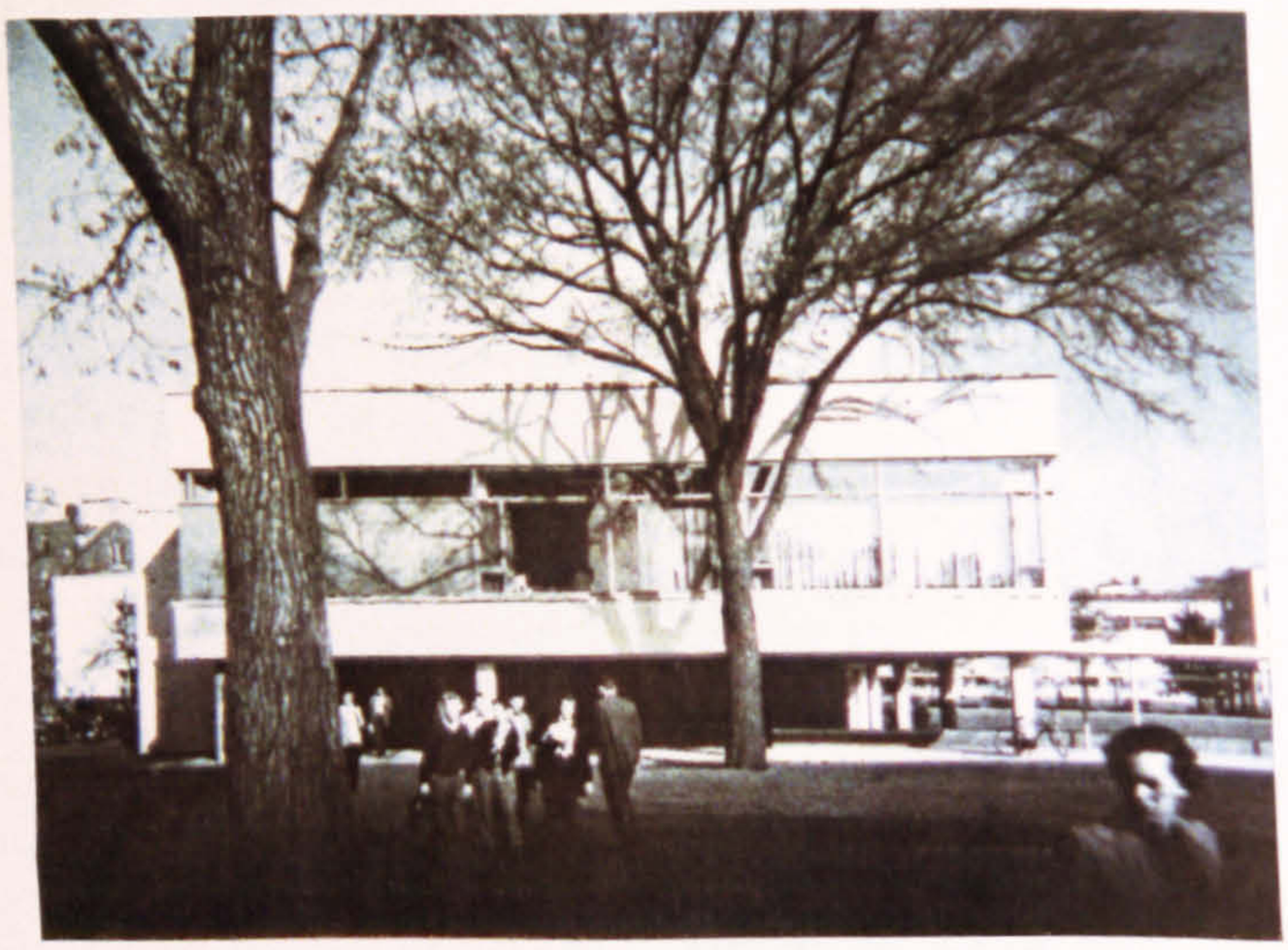


Fig.10.17 Design sketch of clerestory lighting, *Vuoksenniska Church*; Aalto, 1956-9



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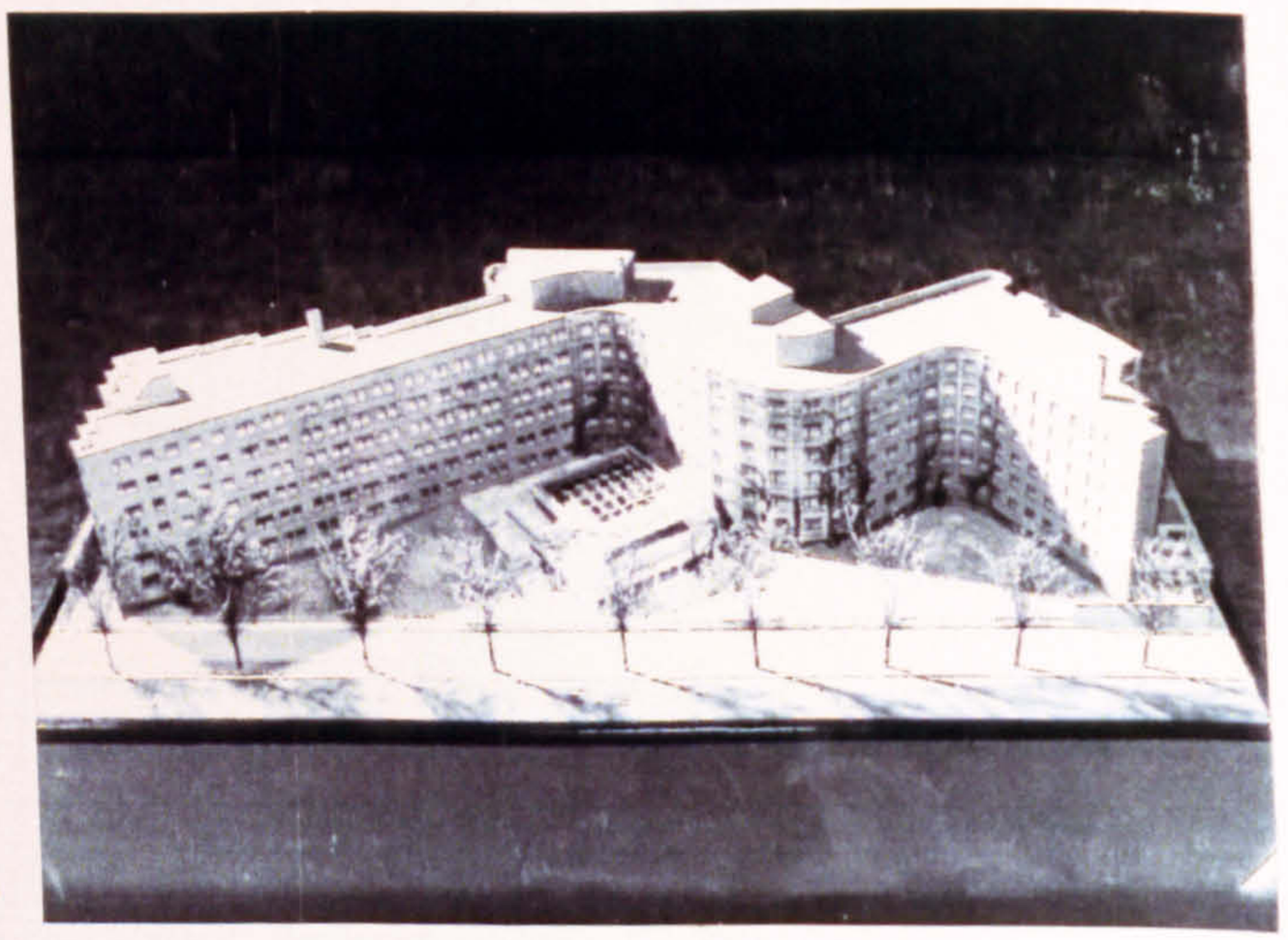
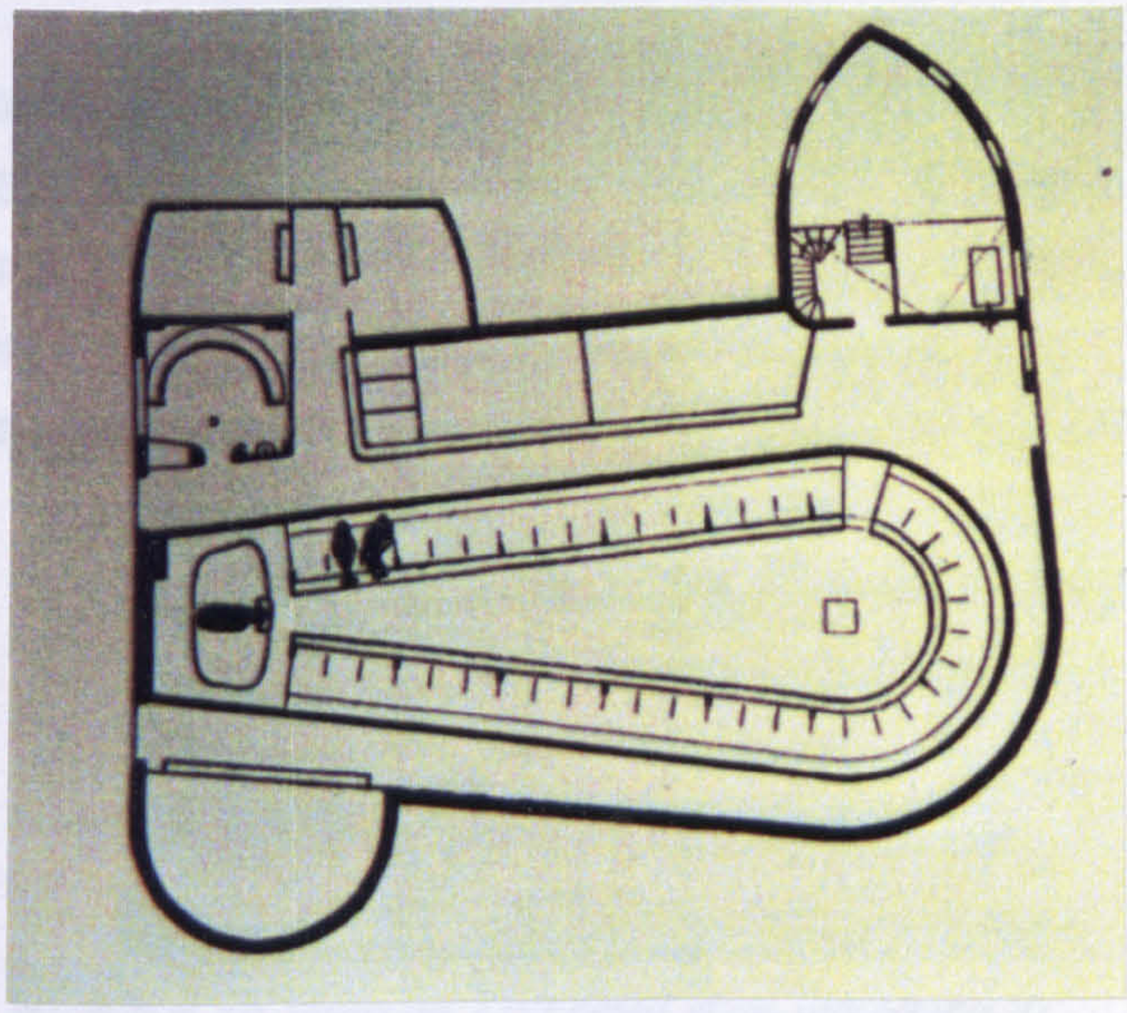


10.19

Fig.10.18 *Harvard Graduate Centre*, Cambridge, MA; Walter Gropius (TAC), 1949-50

Fig.10.19 Model of *Baker House Dormitory*, M.I.T., Cambridge, MA; Aalto, 1946-9



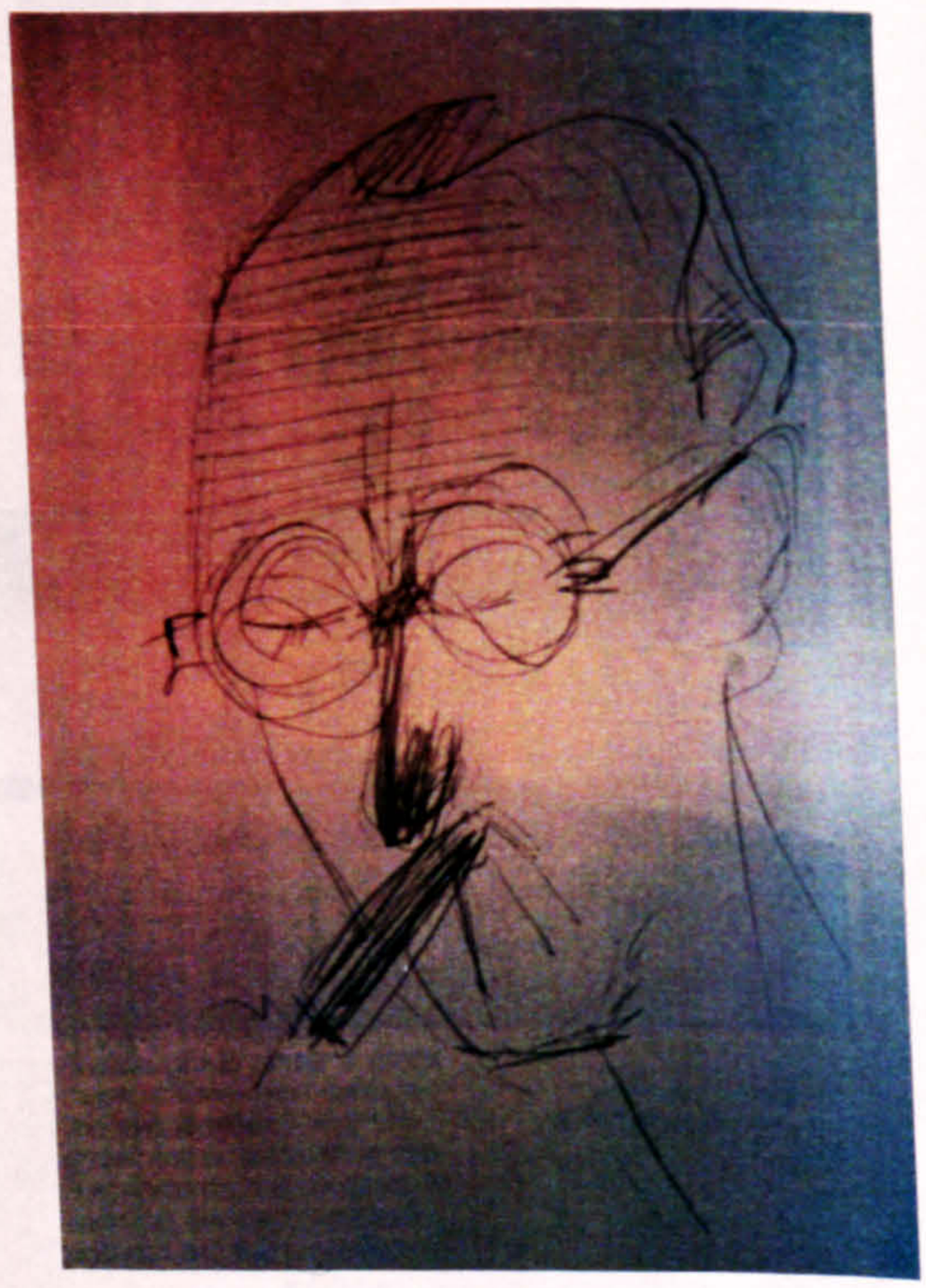
10.20



10.21

Fig.10.20 Plan of *Gut Garkau Farm* cow shed, Lübeck; Hugo Häring, 1924-5

Fig.10.21 Exterior of *Gut Garkau Farm* cow shed; Hugo Häring, 1924-5



10.22

Fig.10.22 Sketch of Le Corbusier; Aalto, 1933

design (Häring's *Leistungsform* - 1932). In this way the Kantian aesthetic of 'purposelessness' was challenged in favour of the Aristotelian angle on the pursuit of purpose.[89] The utility would inform the beauty, in what Aalto described (in Hegelian terms) as a "synthesis" (1940).

While unjustifiably ignoring Häring, Zevi attempted to usher architects' ideas towards an organic architecture (1950), believing that the word 'organic' can only be applied in the strictest sense to details of architecture, but giving neither sufficient etymology nor explanation of this.[90] He demonstrates the difference between organicism in the nineteenth century which was theoretical and that in this century, which is stylistic. Van Eck suggests that the notion of 'organic architecture' was used in opposition to Modernism (1994:258), yet Aalto's work (which is inherently both 'Modern' and organic) questions this notion. In a wider sense, however, Zevi accepts that the notion of organic may be applied to work rooted in an "increased attention to life and human comfort", being at the same time "opposed to the theoretical and the geometrical, to artificial standard" (1950:72). This study contends that Zevi's definition which excludes the geometric, the biological and naturalistic "fallacies", and which therefore cuts him of from the organicist tradition, is too confined, since the capacity to discern what resources to expend on what elements of a scheme is central to the 'organic' tradition, at the heart of which may be the utilisation of the geometric for the sake of economy (or even comfort) in one context. For example in the *House of Culture* expressive priority is given to the concert hall rather than the administration block, in order to direct resources towards a spacial inflection in another context which demands expression (fig.10.23 & 10.24). Such discernment is indeed common in Aalto's work.

Häring's article of 1932 inspires St. John Wilson to find a fundamental difference between understanding the building as an object and "a framework for the actions", and interactions "of men [...] a theatre that makes action possible (*methexis*)" (1995:56).[91] He moves on to applaud architecture (including Aalto's) which seeks "the gratification of some living purpose" (1995:63): i.e., those activities which are "allowed to unfold themselves" in favour of the nature of the human functioning and thereby in favour of life, and as such may be considered to be organic. Pallasmaa, too, finds that "[t]he widening of the notion of functionalism to biological, psychological and symbolic dimensions by Aalto and other Functionalists, or the organic inclination, invites us to review the origins of the interdependence of form and function" (1992:17).

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[89] Kant valued art less than nature, and music least of all the arts ("since it plays merely with the sensations", 1928:195), accepting that architecture appears to demand a different treatment from the other arts (1928:1, mvt.2, para.10), yet there are significant elements which it shares in common with other media, not least the outworking of what might be identified as an *élan vital* (or a *Urphänomen*) in purposive, even artistic form.

[90] Zevi gives the examples of door handles moulded to the shape of the hand (1950:72), such, perhaps, as those in *Baker House* (fig.10.19). Le Corbusier's pessimism regarding such 'organic' work is clear from the following citation: "People try to escape the real issue [of harmony]... to lose themselves in the profound study of a door-handle or a kitchen drawer." Le Corbusier, preface to Elements of Functional Architecture by Satoris, (1931). Zevi, (1950:161).

[91] The Greek word μεπεξις (methexis) refers to participation in something.

Apart from his attractive, if chameleon-like character, it may have been the anchor of the rectilinear which rendered Aalto's buildings acceptable to his dogma-drenched colleagues. Despite St. John Wilson's suggestion, although Aalto did not practise their puritanical ideal geometry, his participation in CIAM was by no means merely "to disagree" (1995:23), but rather was a source of stimulation (both emotional and aesthetic), bringing him into contact with influences, such as Moholy-Nagy, who were quickly to become 'vital' to his architectural *élan*, and through whom Aalto accessed Vitalist thinkers such as Alexis Carrel (1935). Indeed, Aalto's preoccupation with humanising technology, flexible standardisation, urban planning, and economy were among the issues which had been highlighted in the first manifesto from La Sarraz (CIAM, 1928).

AALTO AND THE WRIGHT WAY?

> *"Inspiration [...] seems to us a mysterious element. But it is of the "from within outward" and it is a qualification that gives finality to the whole structure as creative. To give life to the whole is "creative" and only that. We imply the structure of that life when we say form and function are one, or organic."* (Wright, 1939:320)
>
> *"[...] the urge to the organic could be felt. On another level and by other ways than Wright's"* (Giedion)[92]

Tawaststjerna finds that Frank Lloyd Wright's "free-flowing space", Freud's ideas about the subconscious and Bergson's notion of intuition all offer "parallel trends" in the development of what is Sibelius' organicism; i.e., his "freer organic metamorphosis" (T2:17; T3:ch.5). Before visiting Wright during his visits to the States in December 1945, Aalto was aware of and expressed favour for some of the work of Wright, although he denied this.[93] This section will offer a short comparison of the essence of what differentiates Aalto's organicism from that of Frank Lloyd Wright.

Like Aalto, Wright's writing is not intellectually critical, indeed being somewhat repetitive. Nevertheless, it expresses his passion for form and its ability to inspire life (e.g., 1939); i.e., his buildings mediate between the different environments of life, fulfilling functional requirements of each. Similarly, Aalto sought to create built environments which "correspond to the variable and biologically beautiful variability intrinsic in humans" (1958b).

Expressing himself in clichés, Wright wrote; "Modern architecture - let us now say organic architecture - is a natural architecture - the architecture of nature for nature" (1939:245).[94] By organic Wright meant architecture which "should grow naturally out of the society which produced it" (Steadman, 1979:66). He believed architecture should comprise (a) an understanding and sensitivity to nature in every aspect, (b) concern for the whole organic

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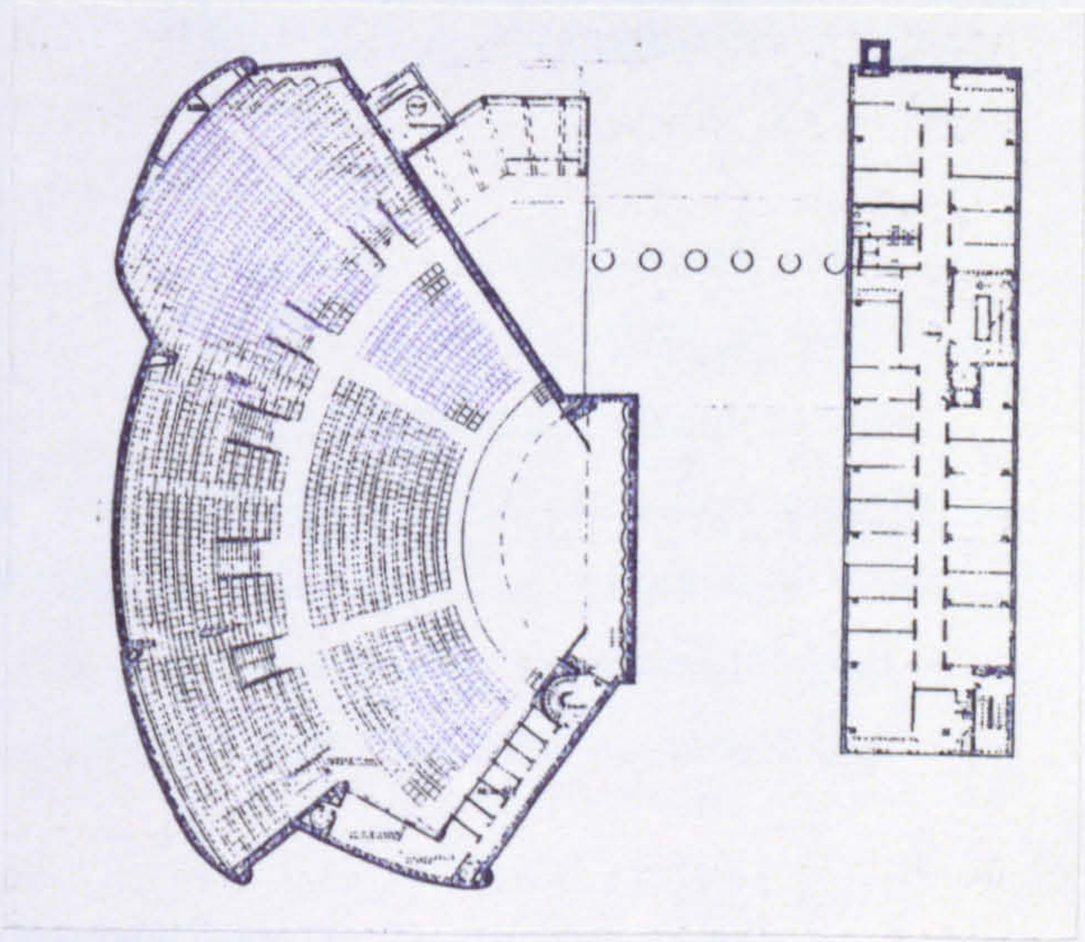
[92] Cited, without source, in Zevi, (1950:138).

[93] Later Aalto gave the impression that he did not know Wright's work before they met in the States (Aalto, 1967). Design sketches of *Villa Mairea* tell a different story, including ideas taken directly from *Falling Water* (fig.10.31).

[94] Wright felt modern architecture, organic architecture and natural architecture to be synonymous (1939:244); i.e., relevant to "the whole of life" (1939:246).



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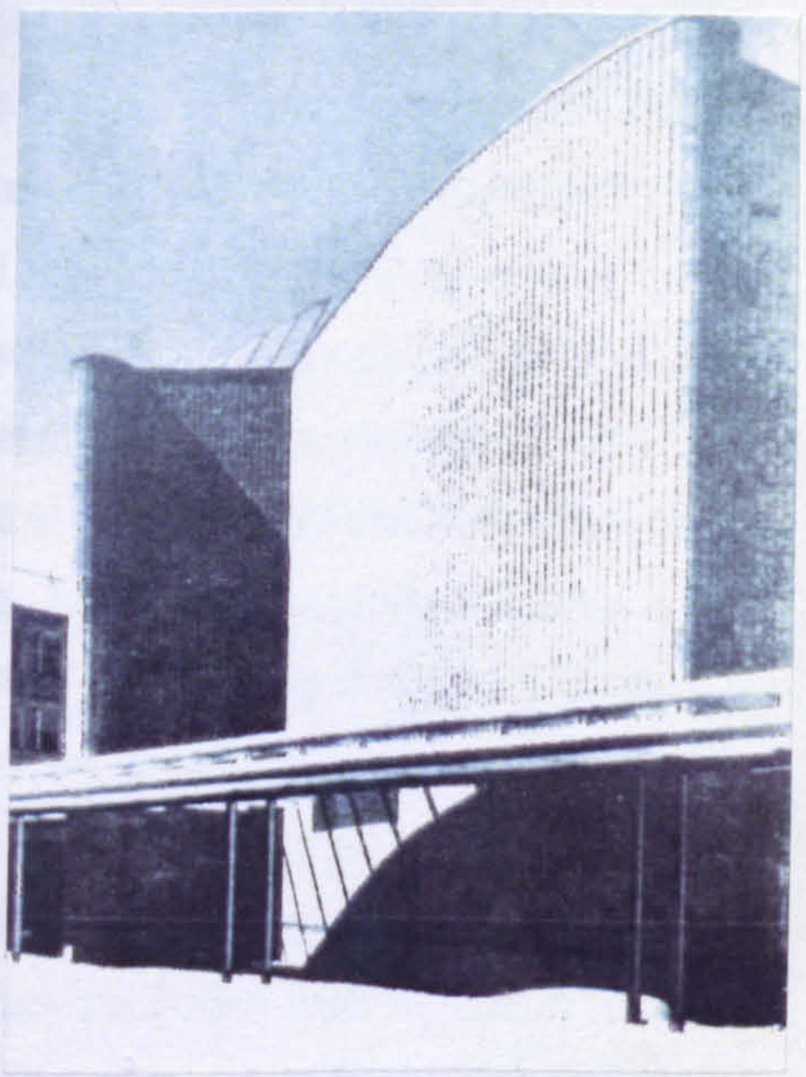

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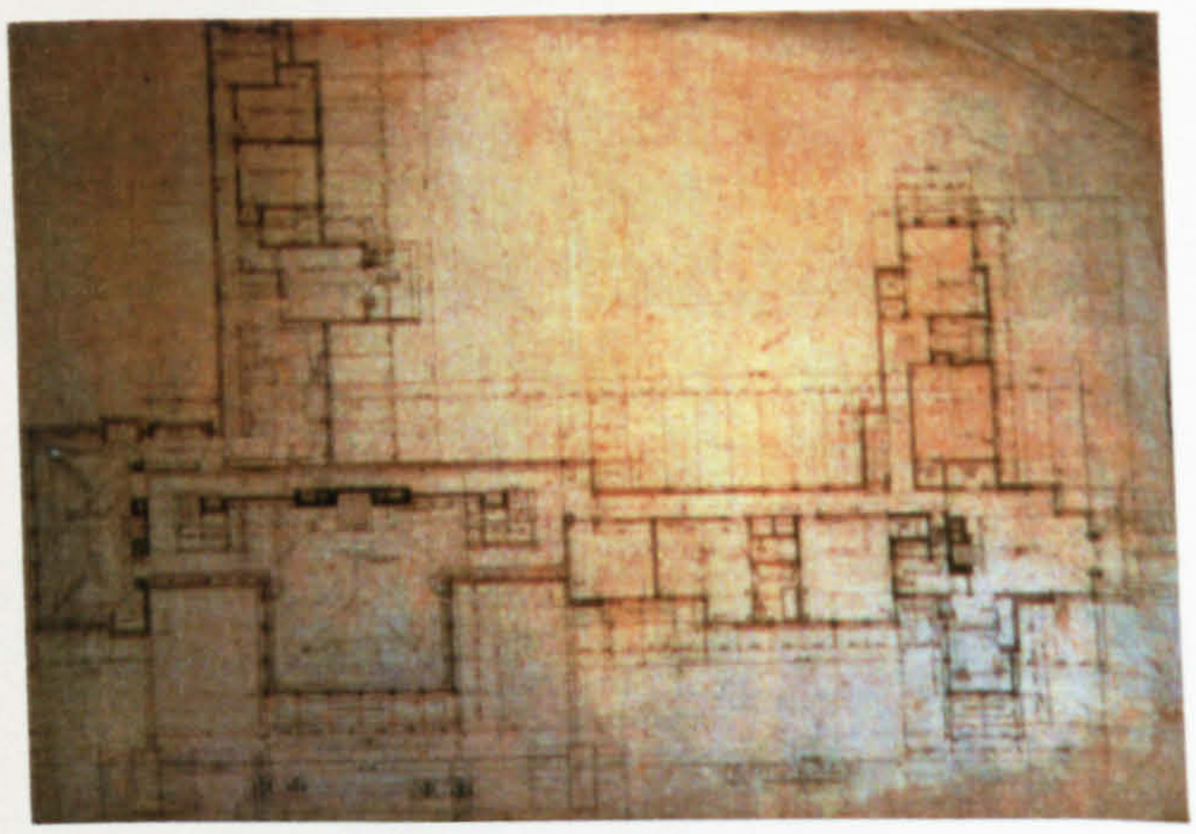
Fig.10.23 Plan of the *House of Culture*, Helsinki; Aalto, 1955-8

Fig.10.24 View of *House of Culture*, Helsinki; Aalto, 1955-8



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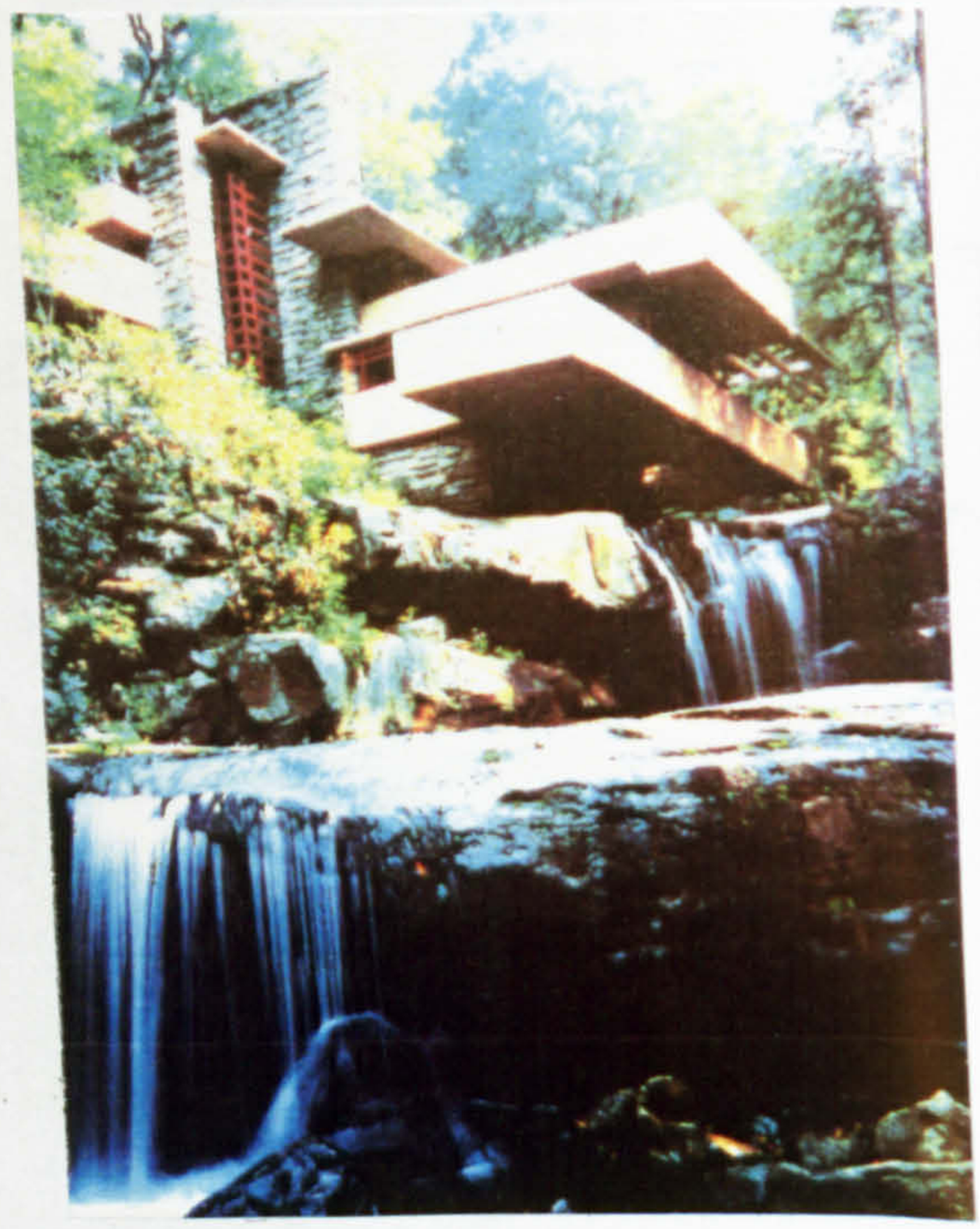

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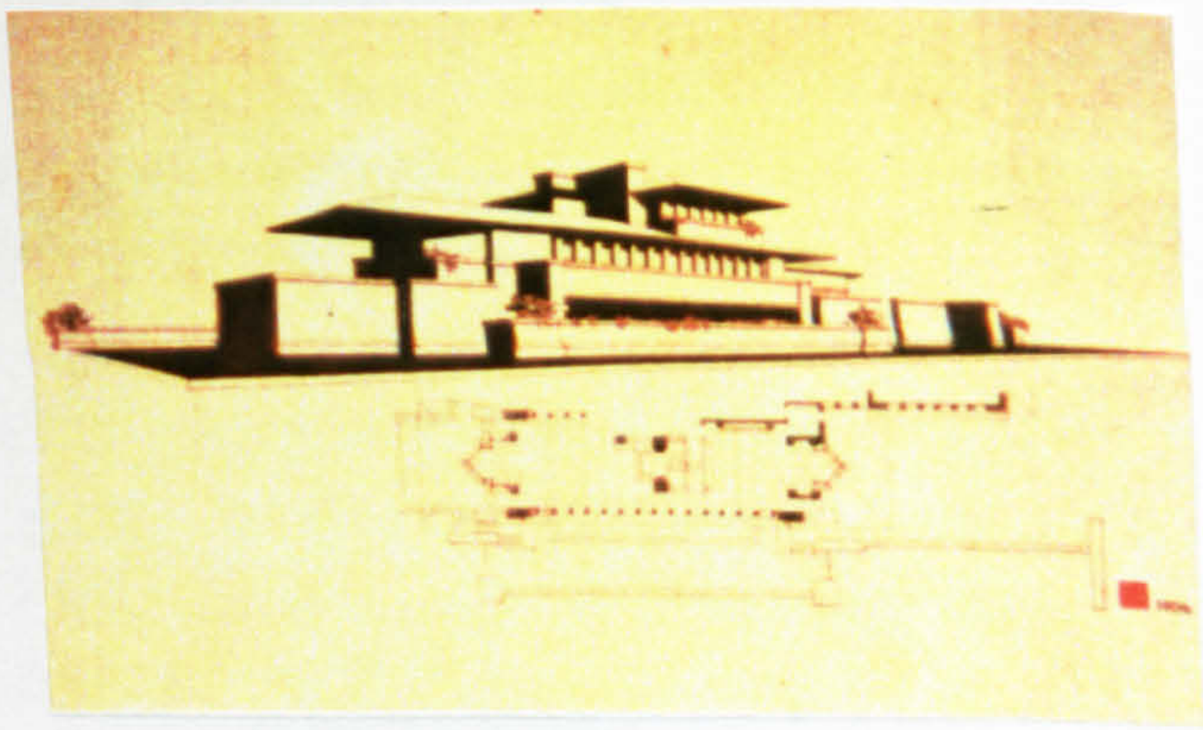

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Fig.10.25 Plan of *Avery Coonly House*, Riverside, Ill; Frank Lloyd Wright, 1907-8

Fig.10.26 View of *Falling Water*, Bear Run, Penn; Frank Lloyd Wright, 1935-9

Fig.10.27 Persperctive of *Robie House*, Chicago, Ill; Frank Lloyd Wirght, 1906-9

entity and its intrinsic integrity, (c) awareness that form follows function, (d) romance which should head off over mechanisation, (e) spirit which should grow up from within the 'thing', (f) form with depth and integrity, and (g) space which should be continually 'becoming' (1939:247). Again, Aalto concurred in considering "how the building complex forms a living, constantly changing, and unlimited architectural totality" (1941).

The words of Aalto and Wright are riddled with correspondences, meeting in their interaction of the mind with the natural world in other than a mechanistic way (Elder, 1991:ix), and their recognition of the real nature of architecture as being a recognition of its "human nature" (Wright, 1939:244; Aalto, 1930c, 1940b etc.).[95] Nevertheless, one study of Wright's nature inspiration demonstrates that this is largely decorative, being something of the 'picture-book' organicism cited above (Hoffman, 1985),[96] and thus fails to cite or analyse Wright's geometry or his compositional exploration, in which the significant difference between Aalto's and Wright's organicism is to be found.

Froebel Organicism and the Search for Undifferentiated Unity

Between 1904-6 Wright developed the tartan plan form, with its grid articulation around two axes, in which he raids classicism for its axiality (Curtis, 1982:77; Brooks, 1979). Thus, Wright began to seek the creation of "undifferentiated unity" of the whole environment (Jencks, 1985:125). His Prairie style, however, oscillated between rambling and symmetrical genres, epitomised in the *Avery Coonly* (1908, fig.10.25) and the *Robie* (1908-9, fig.10.27) houses respectively. It was at this time that Wright first used the word 'organic'; meaning the use of a cantilever as if it were a natural protrusion. This demonstrated his close affiliation with Louis Sullivan (1856-1924), and indeed is borrowed from Sullivan's vitalist metaphor of a 'seed germ', but extended it to include the whole structure, not mere decoration. Some believe that Wright was, "absorbed into this essential vision of the building itself as a living, growing thing" (Doremus, 1992:110).

To survey a few examples, Frampton believes that the "concrete mushrooms" of the *Johnson Wax Administration Building* (1936, fig.10.28), which incidentally post date Aalto's *Turun Sanomat* columns of 1927-29 (fig.10.29 & 10.30), demonstrate the expressive destiny of Usonia, Wright's notion of the ideal egalitarian American society, associating the 'seed' of a free and fair society with the allusion to nature (Frampton, 1982:188). Frampton also understands *Falling Water* (1936, fig.10.26) to signify the ideal place of living in "fusion" with nature (1982:189); a solution which Aalto nearly plagiarised late into the design of *Villa Mairea* (1937-39, fig.10.31). What Wright called the "quiet unbroken wave"[97] of the *Guggenheim*

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[95] Wright appears to have been more comfortable with openly spiritual allusions, articulating the inspiration from the nature walking of Thoreau ([1862] 1991) and Emerson ([1863] 1991) in the way Aalto was enlivened by the forest.

[96] Donald Hoffman's (1985) examination of Wright's architecture and nature illustrates the depth of this integration; from nature as ornament (the Hollyhock House details), as indicator of structural techniques (cantilevers), as material (stone and wood), as a living being (the cycles of growth and life), small scale symmetries (glass and wood details), and the organic plan.

[97] Cited, without source, in Curtis, (1982:268).

Museum (1943-59, fig.10.32 & 10.34) is sometimes understood as the ultimate expression of his organic architecture, representing the continual process of life (use of the building) and creation (of the form).[98] This predetermined form with an organic accent was quite different to Aalto's (fig.10.33), and indeed Häring's (fig.10.20).

In defining Wright's organicism as "the economic creation of built form and space in accordance with the latent principles of nature", as revealed, "through reinforced-concrete construction" (1982:190), Frampton misses the essential romantic contradiction in the work. Charles Jencks addresses this contradiction, suggesting that the freedom sought (in organicism) would be usurped by the very method proposed (1985:130). Wright continued to use unifying geometry to reconcile various meanings in his buildings until the *Price Tower* design of 1955 (fig.10.35 & 10.36), after which point he abandoned this line, retreating to the notion of the unified whole which was represented in a single geometrical solution seen, for example in the circularity of the *Guggenheim* (1945).

Wright oscillated, from project to project, between a classical authority and asymmetrical vitality (Frampton, 1985:57) demonstrating his urge to handle and yet veer away from 'order'. This was to be approached quite differently in Aalto's work, which comprised both a rectilinear order and an asymmetrical 'nudge' at the level of either whole forms (fig.10.33) or smaller details (for instance, of the waving ceiling; fig.10.36). Later, when the gesture of the wave became a full blown compositional undulation in *Baker House* (1945-9, fig.10.19), there was never the need to control the whole through manipulation of a single, unified geometry, since the whole form had grown from the functions and character of the parts it comprises. This will be demonstrated in detail in the following chapters.

Thus, Wright did not evolve the simultaneity which is central to Aalto's organicism; i.e., that in which the often curving 'heart' of the buildings is dependent upon its more rectilinear back-bone (fig.10.37, 10.38 & 10.39).[99] Indeed, unlike Coleridge's 'multeity' of sharply contrasted traits which sought powerful unification through division, Wright's symbolic tree (with its metaphor of rootedness and growth) was often expressed uniformly through the tight control of a single geometry.[100] Therefore, with Coleridge, and Sibelius, Aalto can be seen to inform (literally to make form from) the essence of the whole; an echo of the Greek notion of "making concordant of the discordant" (Spitzer, 1963:9).

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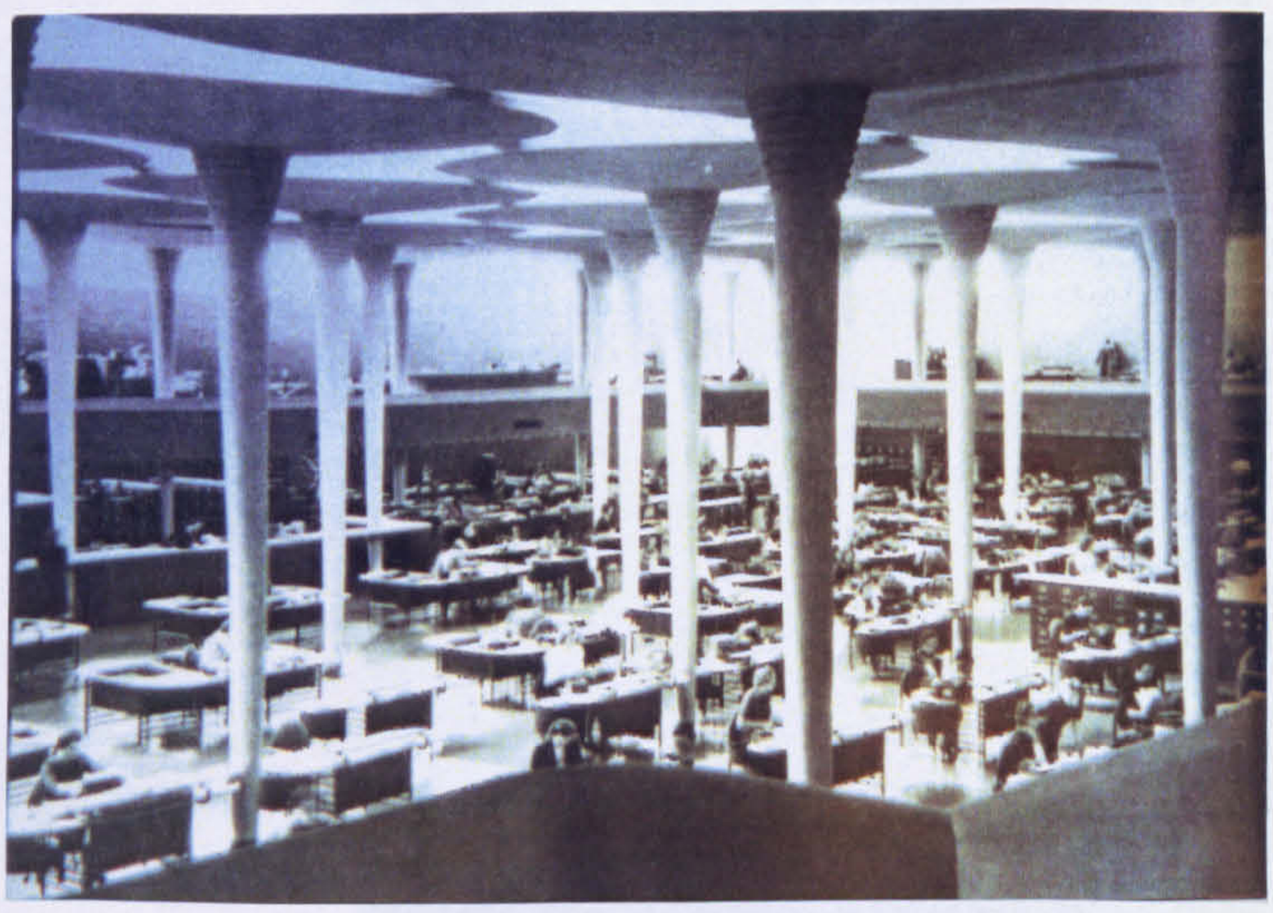
[98] The building combines the top-lighting of the *Johnson Wax Building* and the cantilever of *Falling Water*, yet also including something of the "romance and sentiment" of the Usonian dream (Wright, 1928). Cited, without full source, Frampton, (1982:189).

[99] For instance, that which agrees with the Sibelian technique of rooting the free-flowing melody in the consistent pedal 'base', to be explored in chapter thirteen.

[100] Pietilä challenges those who "considered the right angle as the preference of advanced man." (Price, 1983:17). Price agreed, responding that "what appeared to be irrational form in terms of Euclidean order alone, was on the contrary a more rational solution because of the nature of the site." (Price, 1983:17).



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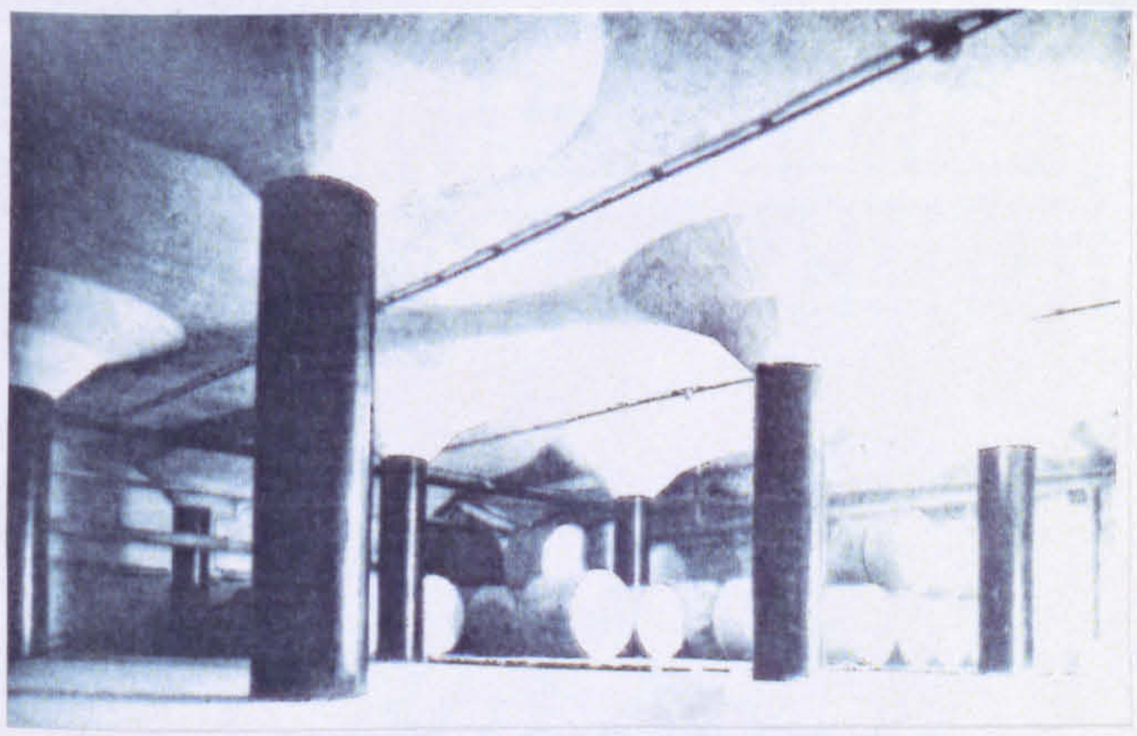

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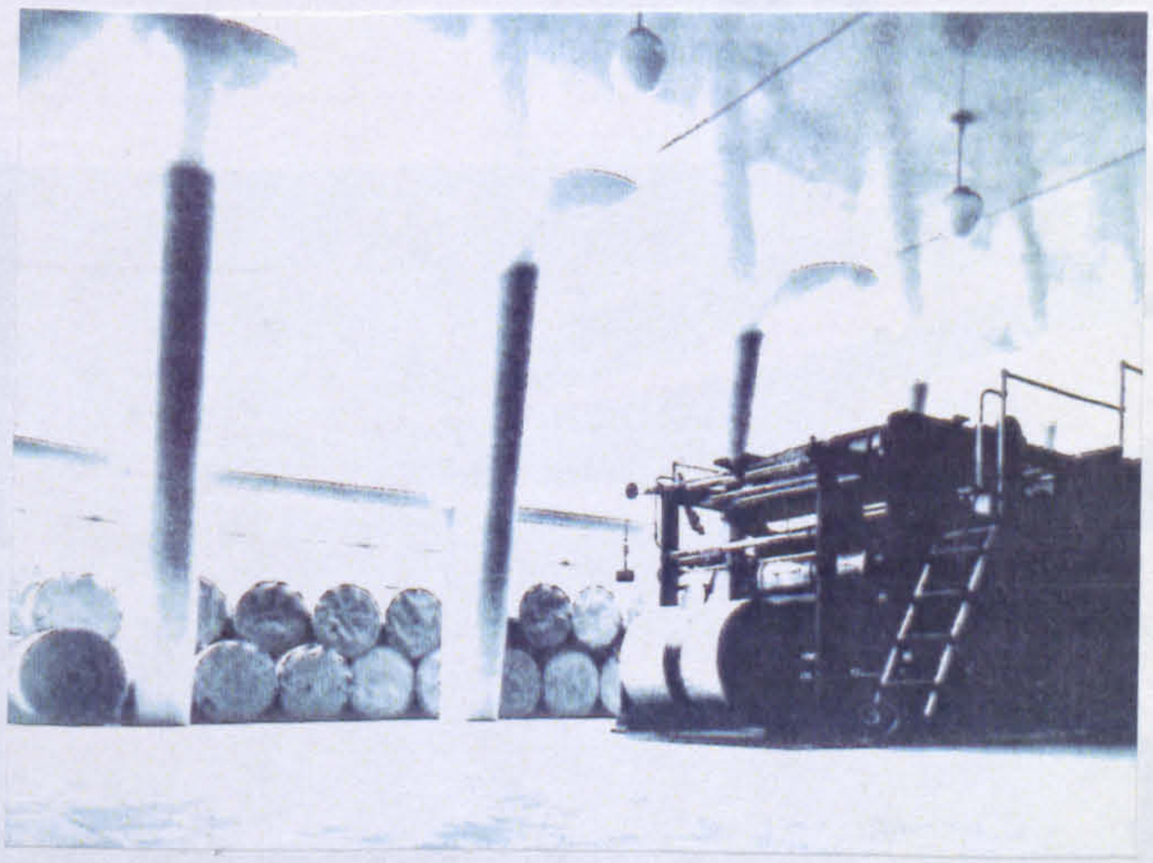

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Fig.10.28 Columns in the *Johnson Wax Factory*, Administrative building, WI; Frank Lloyd Wright, 1936-9

Fig.10.29 Columns in storage shed, *Turun Sanomat,* Turku; Aalto, 1927-9

Fig.10.30 Columns in entrance bay, *Turun Sanomat*, Turku; Aalto, 1927-9

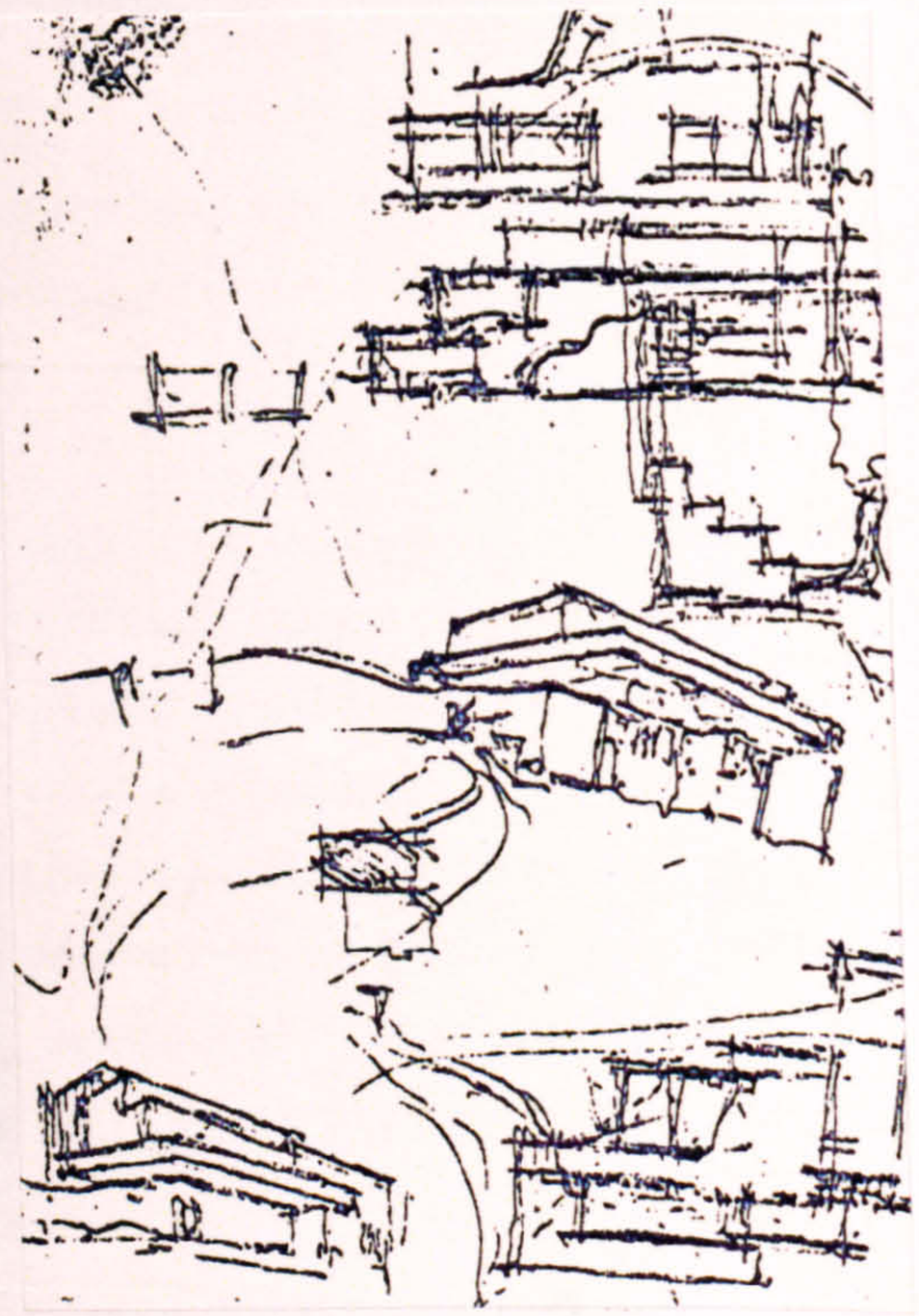

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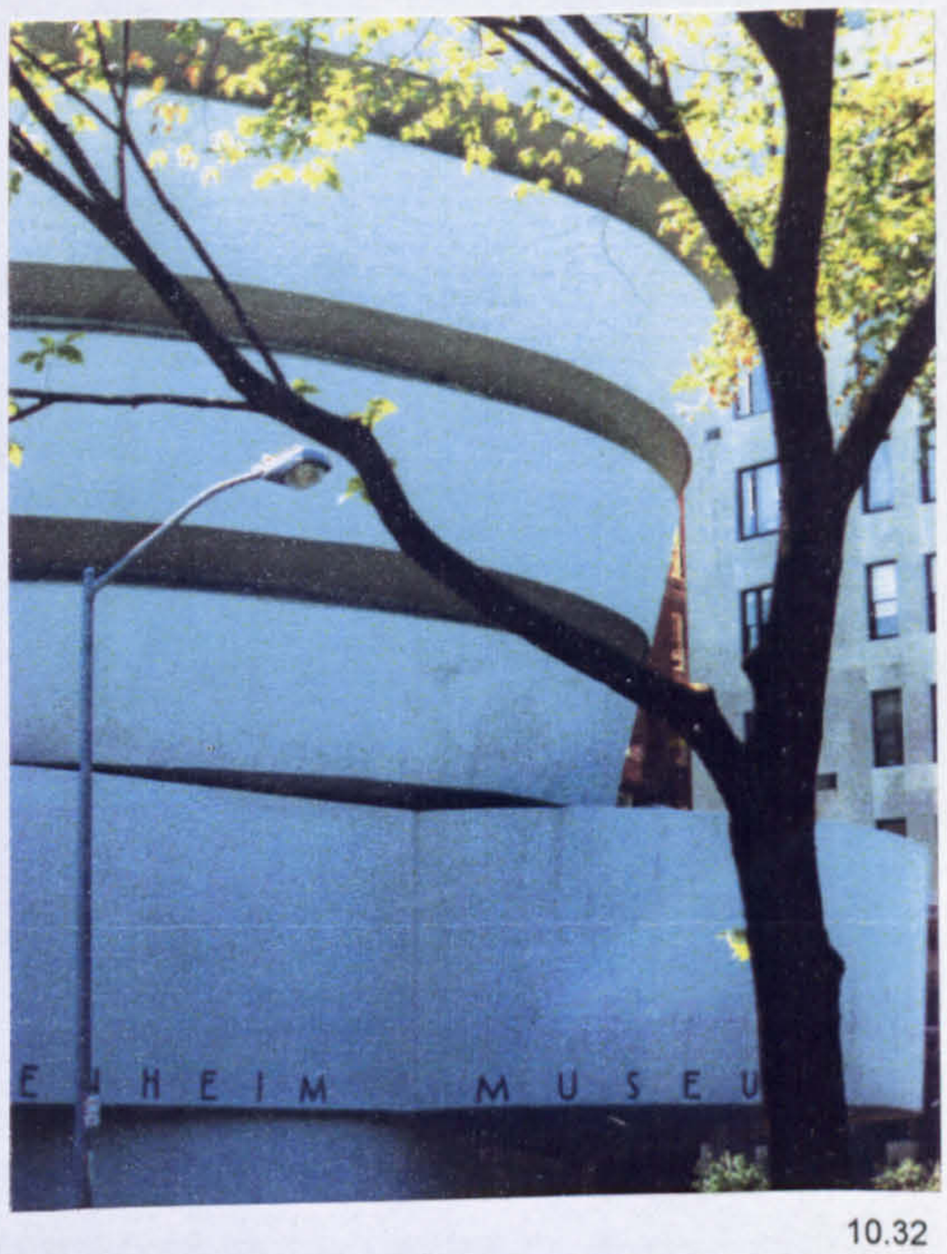
Fig.10.31 Late sketch designs for *Villa Mairea*, drawn on seeing pictures of Wright's *Falling Water* (fig.10.26); Aalto, 1938



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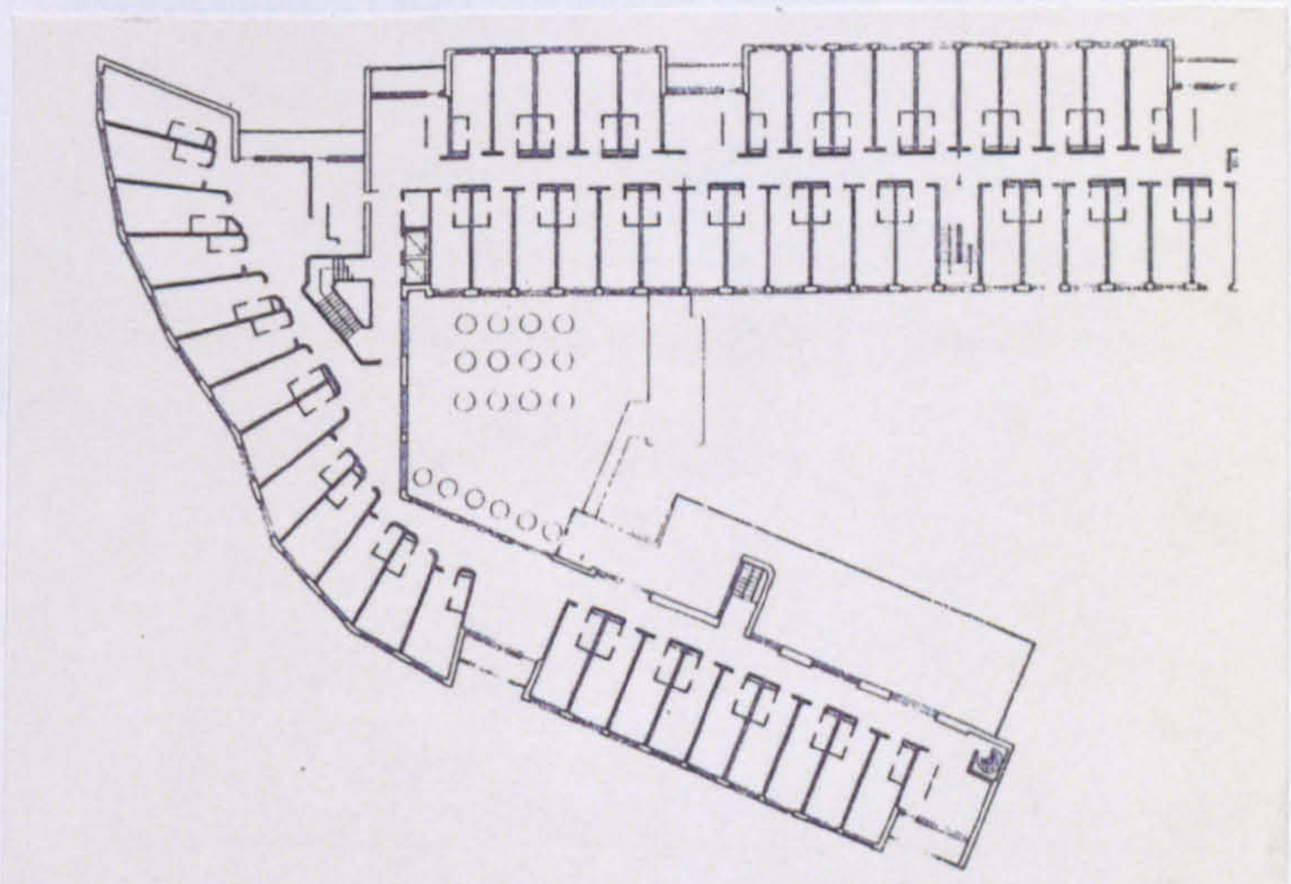

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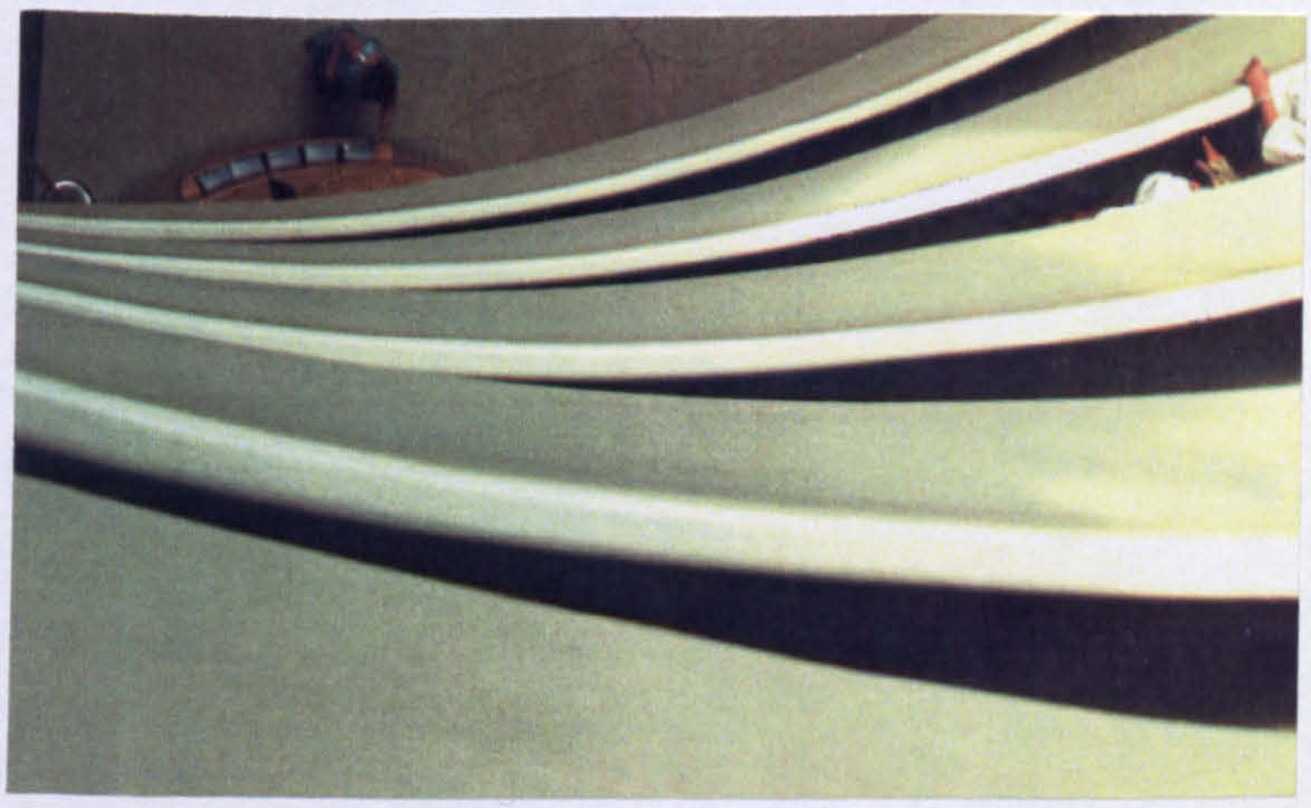

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Fig.10.32 View of the *Guggenheim Museum*, New York; Frank Lloyd Wright, 1943-6, 1956-9

Fig.10.33 Plan of TKY2 dormitories of *Helsinki University of Technology*, Otaniemi; Aalto, 1962-6

Fig.10.34 Interior ramp of *Guggenheim Museum*, New York; Frank Lloyd Wright, 1943-6, 1956-9



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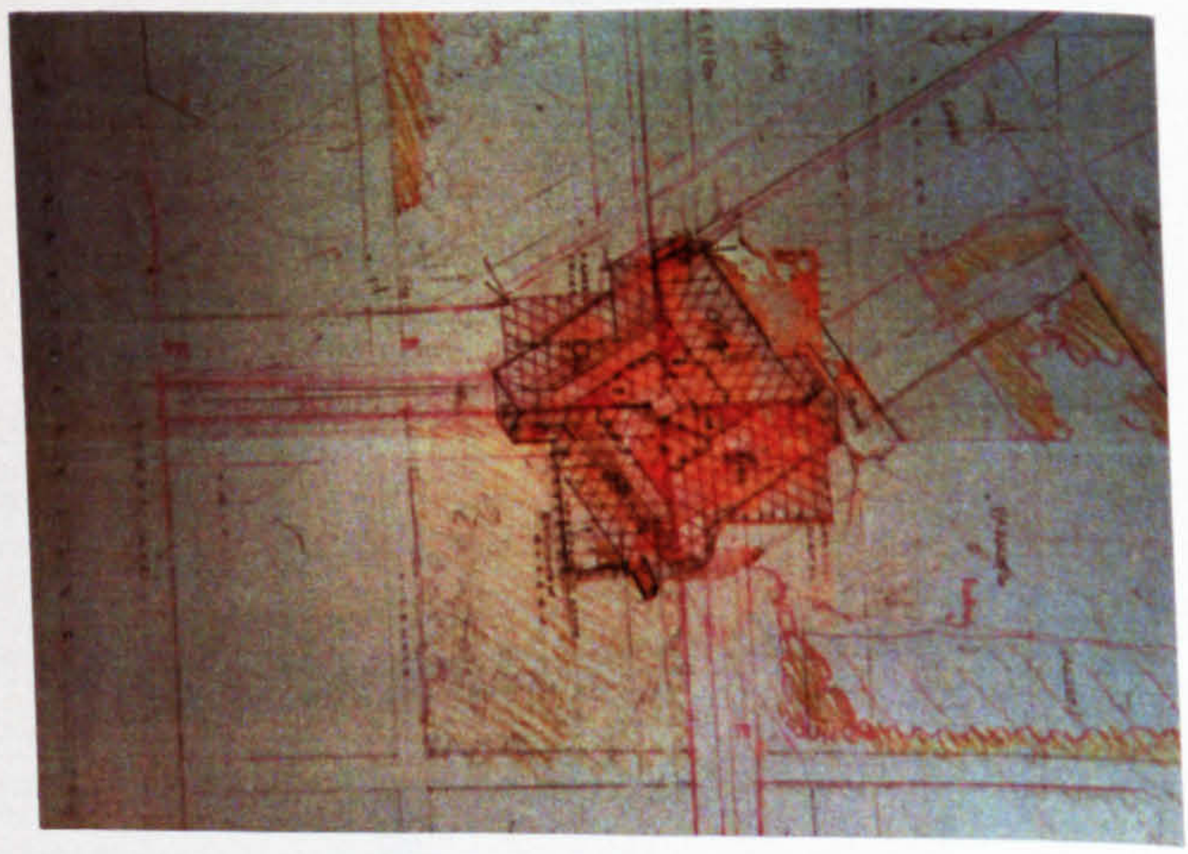

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Fig.10.35 View of the *Price Tower*, Okla; Frank Lloyd Wright, 1953-6

Fig.10.36 Plan of *Price Tower*, Okla; Frank Lloyd Wright, 1953-6

Summary

Wright's organicism was metaphorical (1953), seeking buildings for life but without bending walls around functions, even if they called for it. Häring's organicism was material. He sought buildings that live and move to accommodate, for instance, the milking of a cow (e.g., his cow shed at *Gut Garkau* estate, 1923. fig.10.20). Yet Häring dismissed the geometrical and rectilinear as mere expression, believing that "in nature the organs are not there because of their appearance but simply because of their function" (1931:15). However, it was here that Aalto was to find a reason, other than that of friendship and prestige, for remaining in contact with protagonists of the Modern Movement. Aalto's organicism was both metaphorical and material, integrating both the economy and standardisation of Modernism with the flexibility of response to the ineffable functions of living, relating and communing,[101] and in this his work is somewhere between the ordered organicism of Wright and the completely non-aesthetic *Leistungsform* of Häring. Indeed, Porphyrios identifies Aalto's "determination to compose circumstantially" (1982:48);[102] a notion which relates closely to that of Häring's *Leistungsform*. This *Leistungsform* will now be shown to have been central to Sibelius' work too. As Aalto's forms were different from Häring's, so Sibelius' were different to Schoenberg's, Webern's and Busoni's. The compositional technique which facilitated this "content-based form" (Hepakoski, 1993:21) in both Sibelius' and Aalto's work will be demonstrated in chapter thirteen as the 'Pedal' and the 'Wave'.

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[101] The pull of two formalistic conventions, of spatial fluidity (be it generated by National Romanticism, the Baroque, or the twentieth century organic tradition) and of rectilinearity (generated by classical plan forms - although it should be noted that Classical columns were far from regular in their section. See Vitruvius Book VII - or Modern modules), acted to tighten any anarchy of the amorphous in his organicism, and to loosen the strictures of the rectilinear. Griffiths (1995) has shown that even in a building widely understood to be based on a module, the *Enzo Gutzeit Building* (1959-62) is peppered with deflections and denials of rigidity.

[102] He is relating Aalto's composition to metaphoric typology, which is not relevant here.

SIBELIUS COMPOSING THE ESSENCE OF FORM AS PROCESS

"In music, the law by which [man] knows himself to be alive is realised in its purest form." (Zuckerkandl, 1974:350)

"I here present a new concept, one inherent in the works of the great master; indeed, it is the very secret and source of their being: the concept of organic coherence." (Schenker, 1979:xxi)

"The musical thoughts - the motives that is - are the things that must create the form and stabilise my path" (Sibelius, 23.4.1912; T2:218)

The nineteenth century Romantic notions of "organic coherence" underlying all of life had travelled the intellectual path from the Greek notions of the unity of life, via Goethe's muses. Perhaps surprisingly, the Schenkerian and Schoenbergian schools were actually closely related, as chapter four indicated, and Salmenhaara recognises the structural similarity between Schoenberg and late Sibelius (1970:124). Undoubtedly, however, there is a musical development process in Sibelius' work which is unusual, and may be described as organic, as later chapters of musical analysis will demonstrate.

RELATING TO GOETHE: GENERATING ART, GENERATING LIFE ?

"Every theme carries within it its own predestined fully-matured form" (Busoni, T3:ch.2)

"[...] the principles of life are reflected in the principles of art, but the principles of creation in art are not those of generation and development in nature." (Langer, 1988:67)

In *Man the Musician* (1974) Victor Zuckerkandl finds two ways in which musical works can be compared to organisms; how parts relate to the whole and to one another, and how they grow from a single seed (e.g., Goethe's *Urphänomen*) by successive transformations (1974:184).[103] If the *élan vital* implies a vaguely defined "intentionality" in the transformation process, there is a suggestion that what something will be is already present in what it is (Bergson, 1911:9; Kolakowski, 1985:57).

In the field of music, Schenker's analysis sought to render the details of musical sound and the 'deep structure' of the tonal works, their organic coherence, or unity, intelligible (*Anshauung*), so that the essence of the work[104] (i.e., the *Urphänomen*) may be perceived (*aperçu*) (1954). This correlates with both Häring's *Leistungform* and Bergson's (limited)

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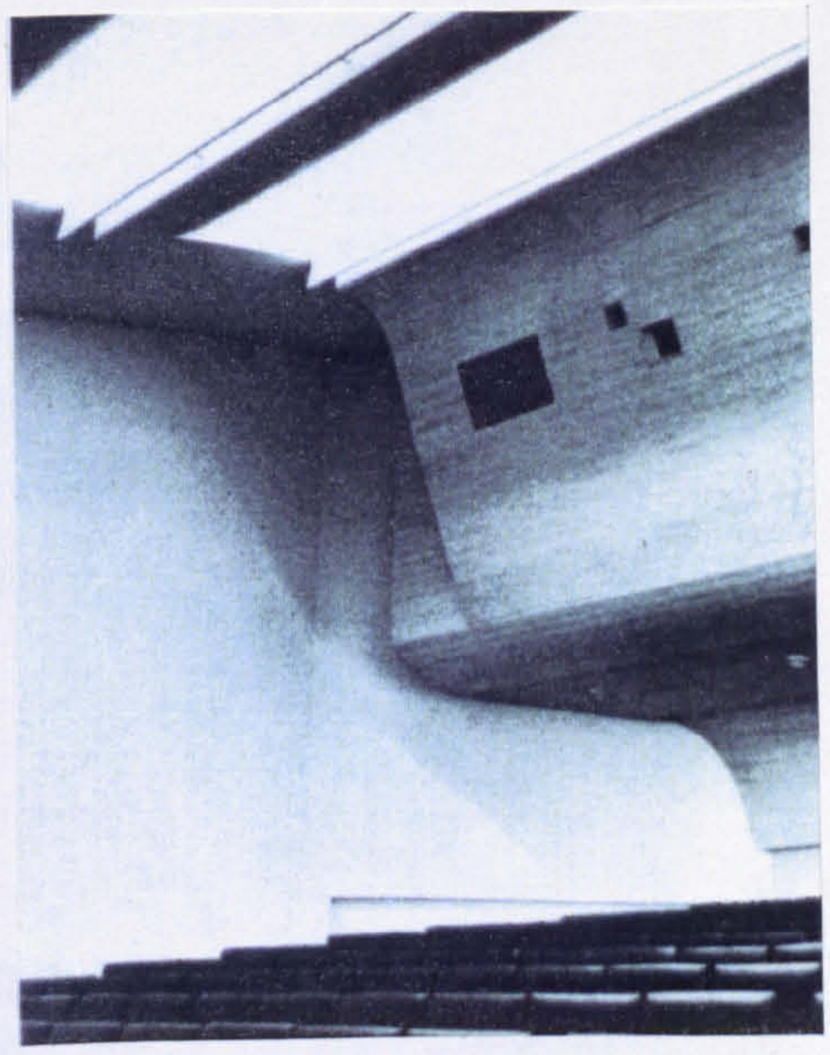
[103] Zuckerkandl finds that the deep structure of music is organic in the exact biological sense of the term; "To hear a composition is therefore directly to perceive organic structure; the act of hearing is organic." (1974:195). However, he admits that this cannot be proved logically for the very reason that music does not belong to the world of concepts, and that the foregoing evidence is meaningless if the listener does not hear the process of the tones in the music, yet he also defends subjective experience of the growth of musical form, claiming that these ideas are valid, but not universal. Subjective validity can be established through the logical or psychological laws of all normal individuals, or as a matter of convention - "based upon a consensus of habit or usage" (1974:199). In verbal language validity is coextensive with the convention, yet tonal relations are inherent and are not arbitrary like the links made through convention. Though not provable, nor even valid, statements about music can still be true, Zuckerkandl believes (1974:201), and therefore the task of theory, after all, is to raise thinking to the level of what can be heard. However, in this context it is the isomorphism of the work's generation with the perception of it which is significant.

[104] Many argue that Schenker's analysis demands a level of trained 'hearing' of music which renders it inaccessible to most professional listeners. Schenker was criticised for the complex, horizontal nature of his analysis, and the supposed ignoring of vertical harmony, yet believed the vertical and the horizontal to unravel the whole together.



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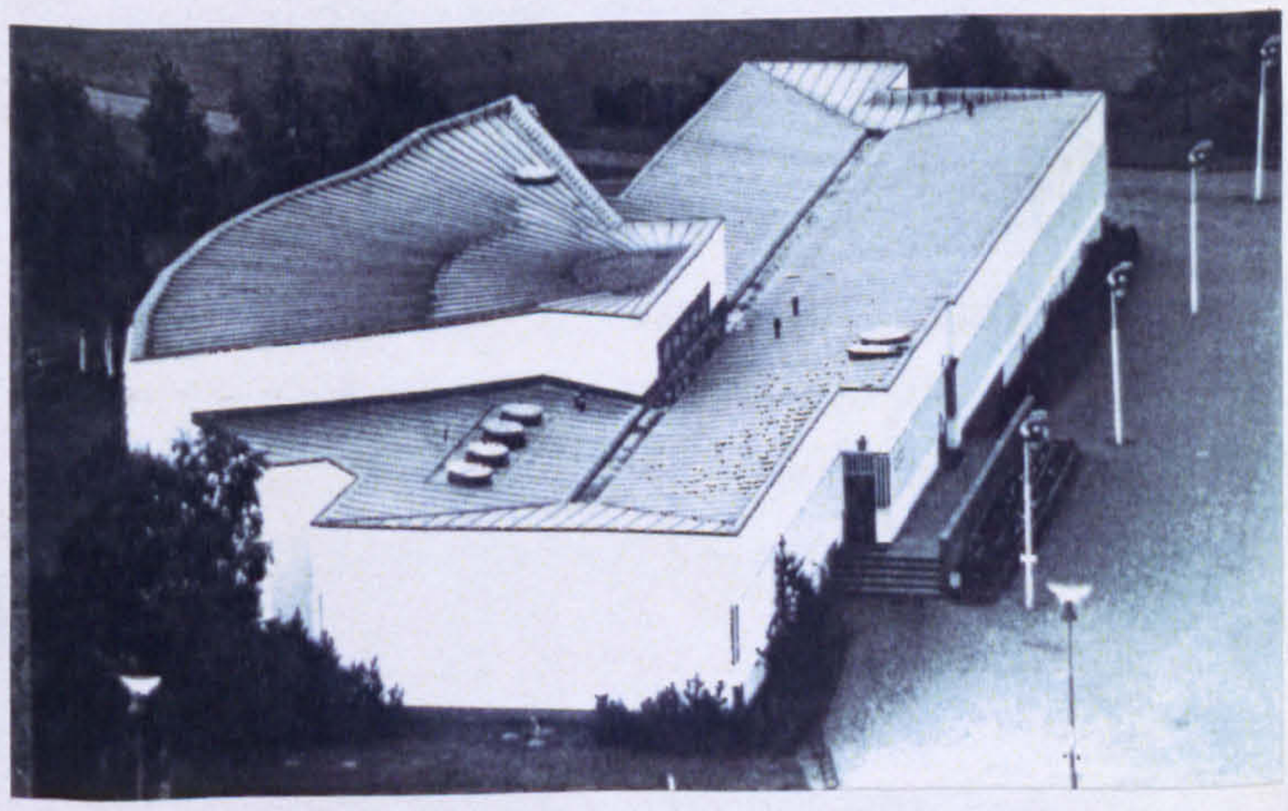

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Fig.10.37 Ceiling detail of auditoria in *Wolfsburg Cultural Centre*; Aalto, 1958-62

Fig.10.38 Undulating mass of dormitories,*Helsinki University of Technology*, Otaniemi; Aalto, 1962-6

Fig.10.39 Aerial view of *Seinäjoki Library*; Aalto, 1963-5

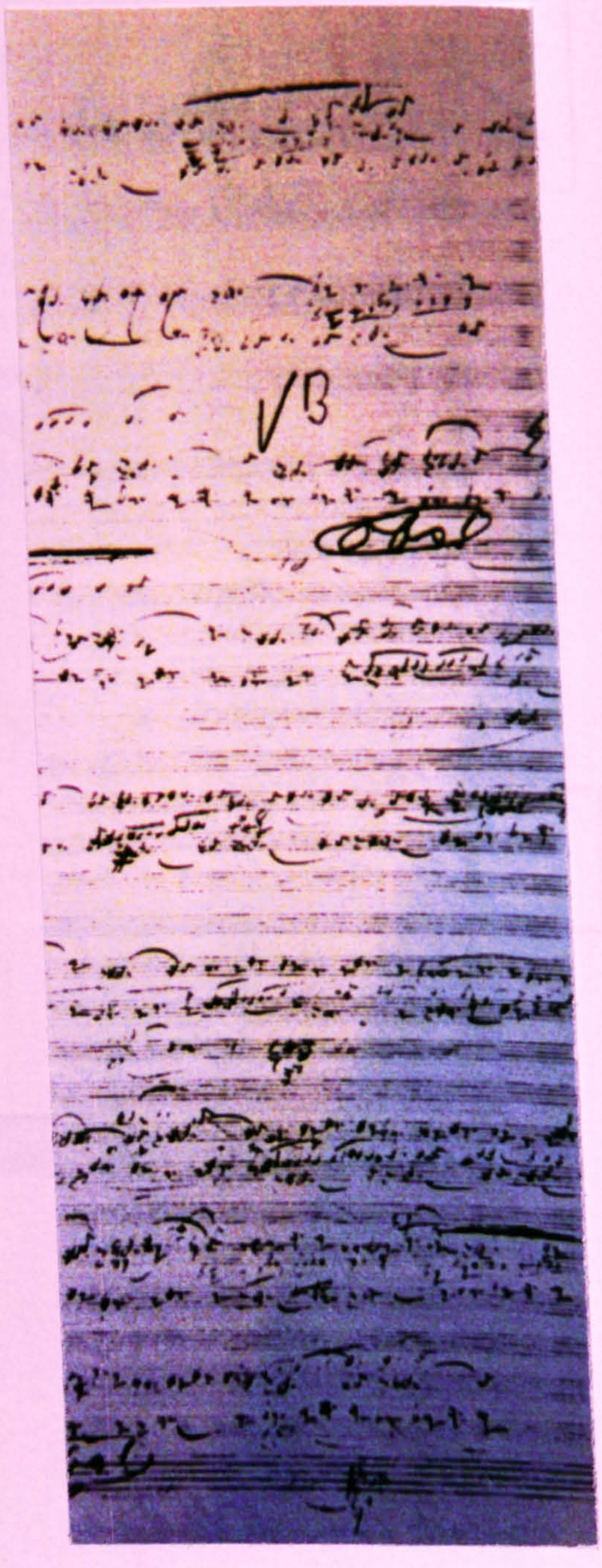

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Fig.10.40 Sketches for the *Fourth Symphony*; Sibelius, 1910

radical Finalism (1911:42) which sought an ultimate truth concerned with perfect order in infinite complexity. Indeed, Schenker borrowed Goethe's *Urphänomen* as the fundamental law governing the organisation of living things to define that which his analysis sought; i.e., to treat the musical composition as a whole (his *Naturklang*) (Pastille, 1990:29).[105] He sought to, "put forward a new theory [...] which is the secret of their birth and growth, the theory of organic structure", the essence, or seed from which all is derived (1956:1).

New Arrangements

Bergson believed that,

> "What gives you the impression of an original state resolves upon analysis, into elementary facts, each of which is the repetition of a fact already known. What you call an unforeseeable form is only a new arrangement of old elements." (Bergson, 1911:32)

These ideas are in accord with much of Schenker's thinking, offering something of the same sense of 'what is' being inherent in 'what has been'; which will be demonstrated in Sibelius' work in the following chapters and, indeed, revisits the notion that "[t]he way to look forward, ironically, seemed to be to look back" (Howell, 1985:74) demonstrated in part one. For Schenker, wholeness stemmed from the generative force to which everything else is subordinate (i.e., the work's *élan vital*).

Organisms, musical work (and arguably architecture) may be understood to be built from some inherent and inseparable plan, coming into being through,

> "a process of growth, beginning with a germ or seed of a musical idea and continuing with a process of development, self-duplication, and successive transformation until the work has been fully realised" (Zuckerkandl, 1974:189)

That which directs the process, and that by which it is made, determine the interrelationships of parts and whole, as genetics determines organic life.[106] Sibelius admitted that, "As usual, I am a slave to my themes and submit to their demands." (Ekman, 1938:254). Häring's notion of organic form "evolving out of the immanent purpose of a given building" (Šlapeta, 1981:119), demonstrates a purpose which predates the actualisation of the built form. For Häring, as for Sibelius, "[i]t goes against the grain with us to bestow a form on them from outside" (Häring, 1925); a notion with which Aalto concurred; "We cannot create new form where there is no new content" (Aalto, 1928).

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[105] Schenker uses the term *Urphänomen* particularly extensively in *Counterpoint* (1987: 1:214). He considered Goethe to be unmusical, yet found in Goethe's epistemological and scientific works an essence which became the root of his theory.

[106] Indeed, in *Axel* Bo Carpelan explores such a process in Sibelius' work (1991:276); "Janne is not interested in Leitmotifs; the forming process must follow its own laws which are not, and can never be, laid down in advance."

Schenker's Urlinie

Schenker's reductionism is ultimately Finalistic, seeking to reduce the final whole piece of music to discover a generating germ. Indeed, in *Free Composition* (1979) he cited Leibnizian transcendentalism, and skewed aside Coleridge's unity-in-variety (1993:156). This form of analysis has its vehement critics.[107] Howell recently challenged his own prize-winning Schenkerian analysis of *Tapiola*, arguing that such a method fails to disclose the fundamental nature of the piece, which is not a single germ but an organic process form (1995); the discussion will return to this argument in chapter twelve.

Goethe's *Urphänomen* (primal form) became absorbed into musical analysis because it elucidated something fundamental about the growth of form in art as in life. Indeed, early in his career Schenker believed that a piece becomes, as men beget men and trees beget trees. Later, however, his metaphor changed. The growth direction does not mirror the perception of the piece in time, but rather in progress from foreground to background through a process of reductionist analysis of the score. This reveals the *Urlinie* (source line) which is the *Keim* (seed) from which the piece grows. The *Urlinie* is the Chord of Nature, like Hegel's *Idea*; i.e., the ultimate source of content.

Canadian musicologist, Edward Laufer, has concentrated on Schenkerian analysis of Sibelius' symphonies, finding that reductions of the *Seventh* (1924) help to reveal the concealed processes of organic transformation, modal inflections and emergent growth of motivic components (1990) (tape e.g.,33). Indeed, he finds an explanation in Sibelius' own words; "When a work of art which is intuitively created is scientifically analysed it reveals amazing requirements, that wonderful artistic logic that I seldom notice as I compose but can recognise afterwards." (Sibelius; Levas, 1972:83; Laufer, 1990)

SIBELIAN *LEISTUNGSFORM*

> *"Every musical work [...] grows out of a seed that lies hidden and yet reveals itself in the pattern, which constantly leaves it behind and at the same time carries it forward."* (Zuckerkandl, 1974:171)
>
> *"Can one really talk of form in music at all, when it is forever a forming process, the way nature forms [...] with open eyes you enter an occurrence which constantly changes you"* (Bo Carpelan, In *Axel*, 1991:138)

Zuckerkandl relates the "seed" (i.e., the *élan* or *Urphänomen*) to growth. The seed is dissolved in the pattern, yet is the "fundamental law" which governs the pattern (its 'background' in Schenker's reductionist terms).

> "Not tonal motion alone, not the fact that it is motion, but the manner, the 'how' of this motion, its internal, organic structure, identifies music as high art". (Zuckerkandl, 1974:163)[108]

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[107] There was much anti-Schenker debate in 1930's Germany for political-racial reasons. For example, Hans Jenkner, Can we still listen to music, *Allgemeine Musik Zeitung*, Dec, 1936, cited by Oswald Jonas, in the introduction to Schenker's *Harmony*, (1954:vii).

[108] Here Zuckerkandl espouses his belief that in hearing music we hear tonal relations, tonal motion and internal structure. In the three inter-related layers, borrowed from Schenker (1954) (i.e., the sequence of tones in the foreground; a succession of main stations in the background; and a middle ground which serves as a bridge), Zuckerkandl believes we recognise the genuineness of a melody, because it is "grown, not fabricated" (1974:163). Langer believes that nothing has actually moved, so musical motion is "a direct and very pure abstraction of a feeling of pure temporal change" (1988:95). This temporal change is, nevertheless, experienced, i.e., music is experienced in time.

As cited above, Sibelius was certainly unusual in his determination to let the content grow the form; his version of a *Leistungsform*. Chapter twelve will demonstrate that his late music is unusually riddled with change in terms of the outgrowth of the creative potential of sound kernels. Langer finds such abstraction and that of musical change (or pure transmutation) to be examples of "simultaneous harmony", whereby the art symbol may reflect the "many dimensional and incalculable character of experience" (1988:96), uniting the symbolic and the experiential. In *Feeling and Form,* Langer seems to concur with Zuckerkandl, expressing the belief that the essence of all compositions,

> "is the semblance of organic movement, the illusion of an indivisible whole. Vital organisation is the frame of all feeling, because feeling exists only in living organisms; and the logic of all symbols that can express feeling is the logic of organic processes." (Langer, 1953:126)

Indeed, if this facilitates homeostasis in emotional terms it is thus facilitating human (i.e., natural) balance from which life and growth is possible "given half a chance" , as Winnicott put it.[109] It is appropriate to cite Aristotle again, who offers an important angle on the nature of both organism and *logos*; "To hear a ringing bell, then, is to receive into one's own organism the logos of the ringing bell" (Collingwood, 1945:86).

GROWING A THEMATIC PROCESS

"[...] transformation towards a goal" (Réti , 1961:136).

Rather than continue Schenker's complex reductionist analysis of musical organisms, Rudolph Réti's analysis diverged, concentrating on "thematic process", or the growth, development and evolution of a piece. Réti believed that the composer "strives towards homogeneity in the inner essence but at the same time toward variety in the outer appearance" (1961:13). Therein a work becomes what Soley describes as "genetically coded" (1980:152), and what Réti heard as "one great expression of its basic motif" (1961:223). This is teleological; "An organism [...] grows, and it grows in a teleological or goal-oriented manner" (Solie, 1980:152). In a Bergsonian tone, Réti believed a work to move "by transformation towards a goal", motivated by an "inner force" (1961:136).

Réti is closer to Schenker's earlier notion of the musical cells and a piece's linearity, than to the German's later concentration on a piece's hierarchy. Réti's approach seeks to understand the essence of a work as it is tied to the nature of the creator (a genetic code), yet which

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background; and a middle ground which serves as a bridge), Zuckerkandl believes we recognise the genuineness of a melody, because it is "grown, not fabricated" (1974:163). Langer believes that nothing has actually moved, so musical motion is "a direct and very pure abstraction of a feeling of pure temporal change" (1988.95) This temporal change is, nevertheless, experienced, i.e., music is experienced in time.

[109] Sense is offered through music, which in *Feeling and Form* Langer describes as, "a symbolic presentation of the highest organic response, the emotional life of human beings [...] The great office of music is to organise our conception of feeling into more than an occasional awareness of emotional storm...and this it does by the same principle that organises physical existence into biological design - rhythm." (1953:126)

cannot be separated from the media in which it finds form. Sibelius himself comes close to Réti's ideas, challenging the idea of formulaic composition;

> "It is often thought that the essence of symphony lies in its form, but this is certainly not the case. The content is always the primary factor, while form is secondary, the music itself determining the outer form. If sonata form has anything that is lasting it must come from within." (Sibelius to Levas, 1972:82)

TOWARDS UNIQUE STRUCTURES: FROM *FORMENLEHRE* TO *LEISTUNGSFORM*

> *"I intend to let the musical thoughts and their development determine their own form in my soul"* Sibelius, 8.4.1912; T2:218)

Moving away from *Formenlehre* (standard textbook structures), Sibelius created ad-hoc musical structures in response to the "idiosyncratic, quasi-intuitive inner logic of selected musical materials" (Hepakoski, 1993:21), evincing what Solie believes to be organicist theory's assistance to musical theory to challenge simple, low level mechanistic and structural analysis, instead conceiving music as growth process (1980:156). This is not distinct from the "deformation" of traditional forms in the New music of Schoenberg and Webern, since, as cited in chapter four, there was congruence between the ideas of these figures and Sibelius.

Sibelius himself suggested the notion of "content-based forms" (Hepakoski, 1993:21) by repeatedly referring to the "musical themes" or "thoughts", the "motives that is" which he felt "must create the form" (Sibelius, 22, 23.4.1912: Tammaro, 1982:139). Again this accords with Häring's *Leistungsform* which will be demonstrated in Aalto's work at a later stage. Otto Klemperer described the content of Sibelius' music as "living, life-enhancing material" (T3:ch.22); a suggestion of which Murtomäki offered by suggesting that scholars' need for security may explain vivisectionist analysis;

> "Is it really impossible to think that a symphony might simply have the form it has, that it is a unique creation in which the material - tonal, thematic, textural, temporal - and its development determine a logical whole which follows its own laws? Is it not possible that the form grows from inside rather than is imposed from outside, that a symphony is a unique organism of tones rather than a scheme that can be described with a few words of a formula?" (Murtomäki, 1993:278).

Concurring with this thesis, Hepakoski offers the appellation of 'modern classicism' to this central aspect of Sibelius' work (1993:21). For example, in Sibelius' *Seventh* it can be strongly argued that the whole is generated by an "inner urge" (be it a Goethean *Urphänomen,* Bergsonian *élan vital,* Schenkerian *Urlinie*, or Rétian "inner force") which is inherent in, or to use Murtomäki's term "organically tied" (1993:280) to the attempt to hold to a strong tonic centre, the prolongation of C (Jordon, 1984), which evinces a deeper consonance and "composure" which is in line with the classical world view of harmony demonstrated above (tape e.g.,34).

Questioning the Motives

The nineteenth century development of the science of biology (from structure to process and functional interrelationships of parts) called for a change from cause-and-effect models. Some argue that to analyse (i.e., to divide into parts) a work which is metaphorically a whole organism "annihilates the work" (Croce, 1929:20), threatening its very nature: "One observes living organisms; one dissects dead bodies" (Hutchinson, 1962:339). This left only the monistic path of investigation, Soley believes, in which a single, ultimate being or force unites the musical matter and the mind of the creator (1980:151).

Much of both the nineteenth classical-romantic and twentieth century modern musical work has attempted to achieve a unity according to the organism model (Murtomäki, 1993:27). This has led to the popularity of thematic-motivic analysis, often offering "shallow" discoveries of illusory connections seeking to demonstrate genuine relationships.[110] The fragmented motivic elements in Beethoven, which Réti discerned,[111] have been said to have been developed and surpassed by Sibelius, with the addition of other methods by which to create a sense of unity, such as tonal devices (Pike, 1978:6).[112] Indeed, one scholar believes that all aspects of Sibelius' artistic thought were indissolubly connected and interrelated, all arising from his "striving for harmony with himself and with his surrounding world" (Kozhenova, 1995:99), his classical world view, which may be seen to be reflected in his handling of growth and development in architectural-musical thought on a large scale, and in his fusion/condensation of the symphonic cycle.[113] This all evinces the "logic of interdependency" (1995:101), which chapter thirteen will demonstrate to be the nature of the symphony:[114] i.e., that which is "deeply organic" (T2:191). Nevertheless, it must be acknowledged that Adorno (1966) and Johnson (1960) were prepared to air the view that Sibelius was not a master, and that his form was not new, but rather indicated a lack of understanding of musical complexity.

Summary

Later, chapter twelve will show that many scholars identify Sibelius' simultaneous treatment of the "organic entity" which grows, "but is subjected to a strong inner discipline." (Tawaststjerna, T1:173).[115] It is appropriate to leave the discussion at this juncture, having cited ideas which

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[110] Dalhaus believed unity and integration must be complimented by "richness of *Beziehungsreichtum* (relationship) and (*Differenzierung*) differentiation" (1970:346-54), then mutual balance (*Ausgleich*) may emerge in analysis and interpretation, even if not heard in the notes (Murtömaki, 1993:27).

[111] Vaughan-Williams put it a different way, suggesting that "Writers on Sibelius", and he probably is referring to Cecil Gray (1931), "point out how he is apt to gather together the scattered fragments of his earlier themes into one great paragraph. This is just what Beethoven did here", in the allegro of the Choral Symphony, "one hundred years previously" (1963:99). But, as indicated, Gray's understanding of the fragmentation was incorrect. This will be analysed in chapter twelve.

[112] For instance the prolongation of C in the *Seventh Symphony* (1924); to be demonstrated in chapter thirteen.

[113] Kozhenova (1995:9) believes that this found form in symphonism of the twentieth century in Myaskovsky and Schnittke. Indeed, Myaskovsky was familiar with Sibelius work.

[114] Indeed, Tawaststjerna repeatedly describes Sibelius work in organic terms, even as early as the *Second* (1901-2, T1:245) and *Third Symphony* (1904-7,T2:75). He discerns, "organic cohesion", picking up on Ernest Newman's expression regarding *Tapiola* (1926, T1:117). In *Scènes Historiques* (1912) too, Tawaststjerna finds Sibelius blending organic unity, melodic growth and continuity with a character of improvisation. (T2:225).

[115] For example, Tawaststjerna finds that in *Lemminkäinen's Return* (1895, 1897, 1900) the clarity of the classical rondo pattern is challenged as "each section grows organically out of its predecessor" (T1:176). In reference to *The Four Legends*, (1895-1900).

justify the use of the notion of the organic in relation to music, having hinted at the inherent nature of such in Sibelius' work, and having rooted these ideas in the Ancient world to which Sibelius aspired.



10.42



10.43

Fig.10.42 Aalto in old age

Fig.10.43 Painting; Aalto, 1946-7



10.41

Fig.10.41 Detail of *Moonlit Landscape*; Hugo Simberg, circa 1890

CONCLUSION:
CREATING TO FILL THE '*GAP*'

> *"[...] certain aspects of childhood experience remain in memory as a psychophysical force - an élan that produces the pressure to perceive creatively and inventively, that is, imaginatively."* (Cobb, 1993:89)
>
> *"[...] logic of interdependency"* (Kozhenova, 1995:101)
>
> *"[...] building cell by cell [and following] biology's and culture's own method"* (Aalto, 1949)

In order to discern what is meant by the 'organic' and the reasons for interest in this model, this chapter has explored the interaction of ideas of classical culture, nature, and vitalism. For Sibelius and Aalto these influences were both rooted and, indeed, manifest in quite different phenomena from Wright's *undifferentiated unity*. In line with Häring, Aalto encouraged the emergence of purposive form (*Leistungsform*) as a "living response" (St. John Wilson, 1995:55) to the need of the living, human material. Having exhausted the symphonic genre in moving through the composition of his last big piece, *Tapiola* (1926), Sibelius was able to allow the material to grow and be unified, but not necessarily to be comfortable. In congruence with his Ancient intellectual forebears both growth towards wholeness and strife are inherent in the composition.

Building to Fill the 'Gap'

It is inevitable that the sections of this study overlap, and this is no exception. The sense of unity which has been uncovered in the work of Sibelius and Aalto is tied to both the explanation of their characters, their interest in forest culture and ecology, in the Ancient culture and ideas of unity, *kosmos* and *harmonia*. In both, this is driven by a primal force. Schildt actually suggests that Aalto's idea of such a *primal force* of architecture may be rooted in the "spontaneous, self-generating" architecture of Karelia (GS3:66). This is crucial, indicating that the inspiration for *Leistungsform* came from an environment of '*lack*', just as the energy behind the Transitional Phenomenon comes from deprivations in childhood environments; i.e., the '*gap*'.

It has been suggested that the concept of unity comprises a dialectic of separation and reunification, giving way to division again, a continuation of growth, a cycle rather than the attainment of perfect (Harrison, 1992:173); the cycle of *Sterben und Werden* (death and becoming). The manner in which Sibelius and Aalto repeatedly turn to nature for inspiration, in contrast to which their selves were painfully fragmented, may have become manifest in their desire for unity through the model of natural growth, and, importantly, decay.

Indeed, if music exists in the foreground, behind which deeper layers represent such "instinctive knowledge in the form of promptings from the subconscious" (Zuckerkandl,

1974:177) (i.e., Langer's "threads of unrecorded reality" - 1993:281),[116] in this way Sibelius' music, for example, may bridge a divide he experienced between the external and the internal worlds. The music helped maintain the man (i.e., was creative) and indeed may thus be described as a process in which growth (of the psyche) towards an inner order (*kosmos*) took place. It was therefore organic.

This thesis contends that what is important is not whether Bergson, Darwin, or Lamarck offer the best theory of life or organicist theory, or whether Bergson could justify a superconscious Being, but whether understanding of Aristotle's *ousia* (essence), Goethe's *Urphänomen,* Bergson's *élan vital,* Schenker's *Urlinie*, or Réti's "inner force" assist understanding of the congruence between "inner urge" in the lives and works of Sibelius and Aalto, in which they sought to "forge" their work into a "multeity" at every stage (Coleridge, 1993:156), and whether this congruence enabled them to create the Ancient-inspired unity, *kosmos* and *harmonia* for which they strove. In other words, reference to the foregoing life forces in no way infers that Sibelius and Aalto were mere midwifes to the immanent life-force, but rather that they were acutely engaged with mental rigour to form the 'inspiration' essence into art, which may in turn have fed back into their search for homeostasis. The *élan vital* therefore stands for that which motivates the creativity, and arguably, attempts to fill the '*gap*', as manifest in the essence of a work's form.

Thus, the chapter has come full circle - from the Ancient conception of life as a precarious process of growth (i.e., an organism), through Goethe's notion of the seed of the organic in art, to the suggestion of Sibelius' music as a "single indivisible organism" (Layton, 1978: 58) and Aalto's work as a "totality of organic work" in which "changes from one activity to another can happen organically" (Aalto, 1930d). That both Sibelius and Aalto were inspired by similar nineteenth century extrapolations of Ancient muses is not surprising, yet the similarity of their technical manifestations of this stimulation, across both disciplines and generations is noteworthy, and generates the following chapters.

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[116] The greater the distance between foreground and background the greater the transformations, and therefore complexity in the music. Importantly Schenker (1956) believed that such background activity ensures that the foreground (i.e., the music) does not degenerate into chaos. As the pattern expands "the inner relationships of the threads become more complex"; the creative diagram becomes more elaborate. Whether part or whole, the same forces "secure the inner, organic unity of the pattern".

Chapter Eleven



11.1

SYMBOLS, MODELS AND IMAGES

Fig.11.1 View of Koli Mountain, Karelia

INTRODUCTION

"A symbol capable of articulating the forms of feeling is [...] necessarily presented in some sort of projection as an extraorganic structure that conveys the movement of emotive and perceptive processes." (Langer, 1988:29)

"Nature is, of course, a symbol of freedom. Sometimes it is even nature that creates and maintains the concept of freedom. By giving our technical plans a solid basis in nature we can redirect the thrust of development in such a way that our daily work, in all its forms, increases our freedom instead of curtailing it." (Aalto, 1949)

"When I consider how musical forms are established I frequently think about ice-ferns which, according to eternal laws, the frost makes into the most beautiful patterns" (Sibelius; Levas, 1972:83)

In 1930 Aalto articulated his search for an "elastic system for orchestrating [...] growth" (1930c), which, in his major works, can be argued to have been Sibelius' preoccupation (see Hepakoski, 1993; Murtomäki, 1993). The ontogenesis of the notion of such 'organicism' originates, in part, in the sentient and emotional experiences of nature which inspired Aalto and Sibelius to produce symbols (i.e., works of art as extra-organic structures),[1] coupled with a deep interest in Ancient notions of creating harmony and order described in the last chapter. Indeed, one scholar suggests that "it is through making that *kosmos* [order] appears" (McEwan, 1993:43). This thesis contends that such a model allowed Sibelius and Aalto to find, among other artistic motivation, symbolic unification of divided elements of themselves. Here, Langer would argue, the men are capable of articulating such "forms of feeling" by projecting their feelings onto the form, creating a link between (internal) creativity, psychological and sentient experience, and (external) artistic form (1988); that interiority which Tawaststjerna believed was inherent in Sibelius' radical classicism (T2:67).

TOKEN WORLD BUILDING

"[...] if music is a logical picture of sentient, responsive life it is a logical picture not of any particular and concrete metal phenomena, but of the structure of emotive experience as such." (Ahlberg, 1994:71)

"Nature speaks to us, first of all, through our senses; the forms and qualities we distinguish, remember, imagine, or recognise are symbols of entities which exceed and outlive our momentary experience." (Langer, 1993:93)

If their art works in some way comprise the creative outworking of the "threads of unrecorded reality" (Langer, 1993: 281), the models and images which facilitated such representation can be assumed to have been deeply significant to Sibelius and Aalto. Part one demonstrated the nature of these threads, part two elucidated the emotive quality of nature and the forest as a Transitional Phenomenon, the last chapter suggested that the Ancients offered ample intellectual precedent for their interest in nature to be applied to their art production, all these harnessing the powerful knowledge and experiences of nature and the forest as a symbol for creativity, in terms of process and form.

[1] To a certain extent these were modelled on nature's ability to relate disparate functions in purposive form (i.e., whole forms growing from contents and functions).

It should be remembered that this study seeks to relate the life and creative patterns of Sibelius and Aalto to each other through the common, mediating phenomena of their primary creativity and, concomitantly, that of nature, but does not seek to state that Sibelius and Aalto consciously sought to reproduce natural forms through their work as an imitative exercise. It suggests that they used knowledge and experience of the process of growth as the model for growing artistic forms; a process of relations not qualities.

PARALLEL RELATIONS

> *"Perception [...] is a building of primary perception of relations and parts into more and more complex and unitary systems"* (Cobb, 1993:47)
>
> *"Art has a logic of its own (and by "a logic" I mean a relational structure) which is very complex"* (Langer, 1988:40)

Langer began her study of mental phenomena by discussing emotional significance, and thus 'significant form' ([1942] 1993), asserting that art bears resemblance to the "emotive life", but is "expressive in a non-specific sense"; expressive ambiguity which will be explored in the discussion of Sibelius' and Aalto's mechanisms for jointing disparate form in chapter thirteen.[2]

Without wishing to infer that the architecture is just 'like' the music, but rather that it shares some phenomenal character of the music, it is helpful to introduce the concept of isomorphy (from the Greek ισος (*isos*, equal) and μορφη (*morphe*, form)) which illuminates the relationship of both Sibelius' music and Aalto's architecture to nature's model. In philosophy the concept of isomorphy offers an explanation of the identity of form or substance in different groups, a correspondence as regards parts or relations (Brown, 1993:1426), offering the form of a relationship, i.e., exhibiting identity of structure between two apparently different systems (Polkinghorne, 1986:107). In biology isomorphism refers to similarities of appearance of organisms from different species (i.e., with different genotypes)[3] (Curtis, 1992:196). This offers a corollary with the relationship of the music and architecture.

In other words both may have been composed from a model (i.e., a process of growth in nature), suggesting that they share a correspondence of relations, and thus their forms may be understood as isomorphic.

Langer discerns two types of structural analogy, namely discursive and non-discursive symbolism (1993:93). A symbol, from the Greek συμβολον (*sumbolon,* mark, token, or outward sign), presents its import in simplified form, thus making it accessible. Yet, such simplification should not deny the fecundity of the symbol. Discursive symbolism, represented

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[2] Langer calls on the work of Bell (1913) and Fry (1924). Her assertions have been challenged by some scholars. For instance, the philosopher, Dickie, famously dismissed Langer's ideas as an imitation theory (1971:78-84) . Stephen Davies believes "Langer's theory removes emotion from art, replacing it with conceptions of emotions."(1983:232). See appendix seven.

[3] Genotype refers to the actual genetic makeup of an organism, which defines the limits and direction of its growth.

by language and used in linguistic structuralism, has only a logical character, similarities being shown not by parallel relations but by independent, linguistic symbols. Non-discursive symbolism, which Langer favours, conceptualises the flux of sensations, being representative symbolism,[4] and denying any dictionary definition.[5]

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[4] Garry Hagberg (1984) uses 'presentational' rather than 'representational' symbolism in his analysis of Langer's theory.

[5] In non-discursive symbolism relations constituting structures of a given reality are presented in symbolic structures, not only 'logically', but immediately as relations of the same type projected onto the same type of material (i.e., possessing the same parameters).

Danuta Mirka (1994:6) suggests that representative symbolism is iconic, relations of reality are reflected immediately, and that analogies of structure being perceived as a similarity of "pertinent" features, neglecting the non-pertinent ones. Mirka suggests that Langer unknowing addressed issues of iconicity in expressions such as "symbolism expressed implicitly".

WEAVING AN ANCIENT PATTERN

"[...] artistic form is always the form of felt life, whether of impression, emotion, overt action, thought, dream or even obscure organic process rising to a high level and going into psychical phase, perhaps acutely, perhaps barely and vaguely." (Langer, 1988:28)

"Proximity to nature can give fresh inspiration in both terms of form and construction" (Aalto, 1953)

"[...] the valuable and biologically beautiful variability intrinsic in humans" (Aalto, 1958b)

The forgoing citations juxtapose the manners in which Langer and Aalto use notions of nature's organic process. Langer's scholarship assists in defining the limits of a symbol's use in her discernment of the distinction between model and image, offering a perspective on correlative analysis, and shedding further light on the notion of isomorphism (1988).

Phenomenal Appearance

In Langer's terms an 'image' represents the overall, external form, exemplifying not the construction of the object it symbolises, but "abstracts its phenomenal character" (i.e., the immediate effect of the object on our sensibility) as something of fragility, strength or, say, transience (Langer, 1988:26) (fig.11.3 & 11.4).[6] An image shows "how something appears" (1988:xiii). In assisting in the relation of experience to total phenomena, this notion of image is important, and will be expanded on in the final chapter, to give a basis to the discussion of Sibelius' and Aalto's pursuit of *harmonia* and unity and *kosmos*. Figure 11.3 shows a rock pool, but it might equally well be the edge of a lake. Figure 11.4 illustrates an Aalto vase, which can be said to be an image, in Langer's terms, of the rock pool or lake; i.e., it "abstracts its phenomenal character".

Natural Modelling of Life: Experience - Memory - Form

A 'model', on the other hand, is based on principles other than the phenomenal character of its object, its construction may be utterly different, while the created semblance confronts us like the phenomenon itself (fig.11.5 & 11.6).[7] A model shows "how something works" (Langer, 1988:xiii), giving a representation of structure (Brown, 1993:1802). Figure 11.5 shows a young plant orienting its leaves to avoid overshadowing as they turn towards the sun. Figure 11.6 is from a series of sketches which Aalto drew in a meeting at M.I.T to explain the derivation of the form of the end of the *Baker House Dormitory* as it turns, like a plant or branch towards the sun, to maximise its absorption of light; i.e., it created a semblance, borrowing something of how the young plant works.

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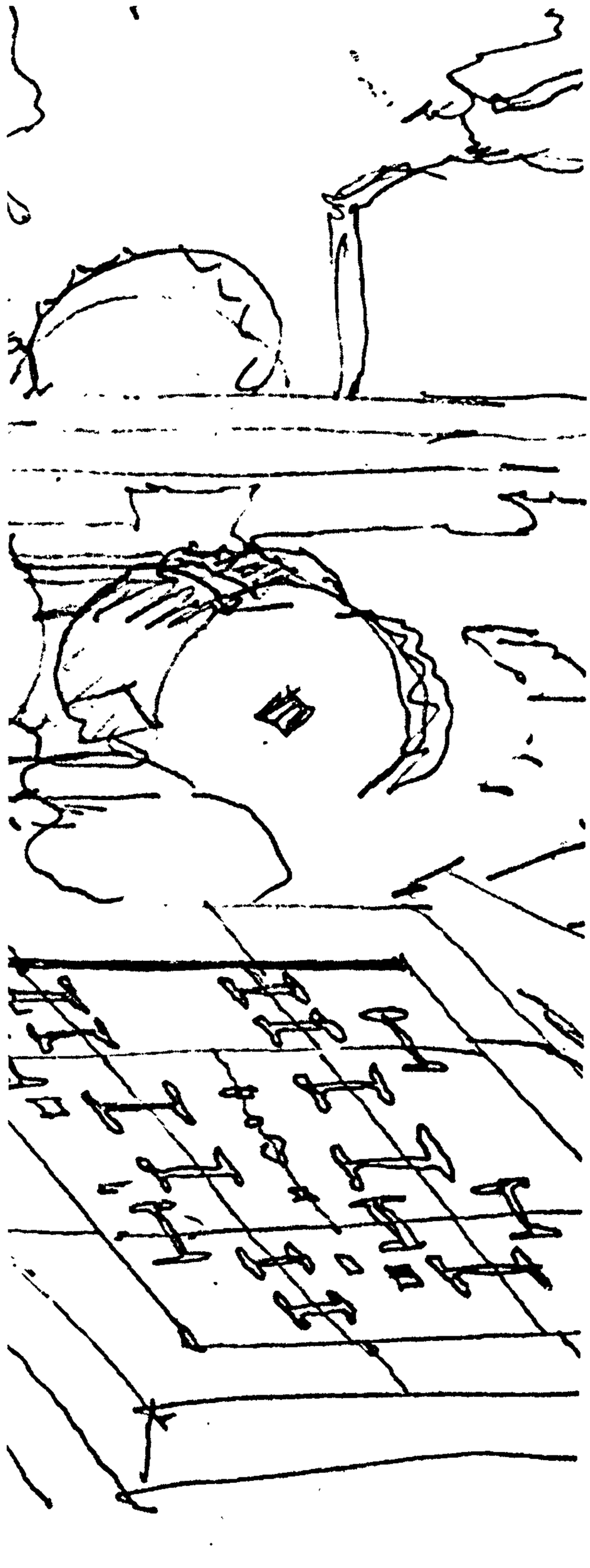
[6] Indeed, Scott (1991:41) invites us to abandon any concepts of particles as little *things*, in favour of little *phenomena*, since particles are virtually the smallest units into which the universe can be broken.

[7] Langer explains that "A *model* [...] always illustrates a principle of construction or operation; it is a symbolic projection of its object which need not resemble it in appearance at all, but must permit one to match the factors of the model with respective factors of the object, according to some convention." (1988:25).

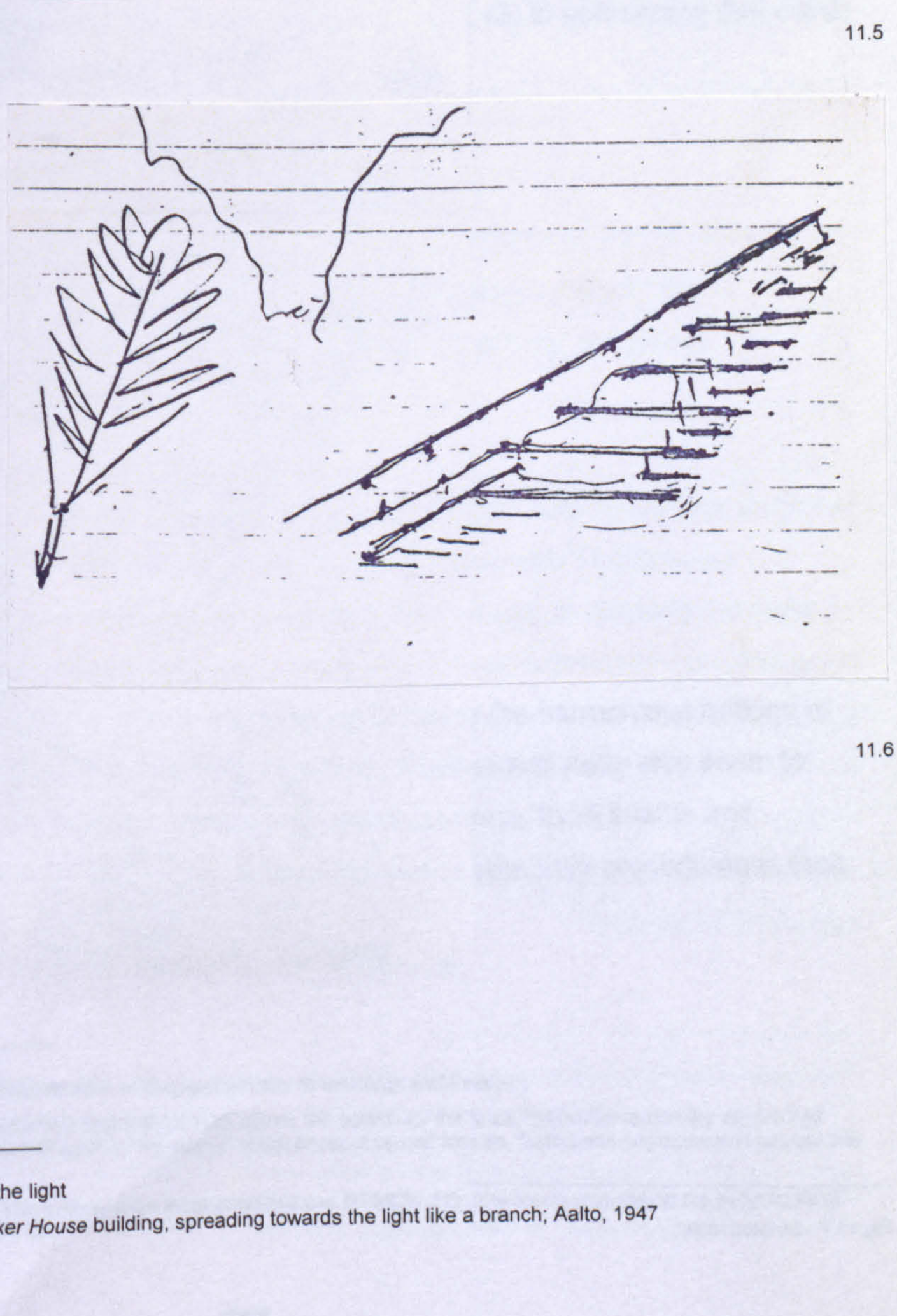


11.2

Fig.11.2 Sketch of foundations and runied columns, Olympia; Aalto 1953



11.5



11.6

Fig.11.5 Oak sapling spreading towards the light

Fig.11.6 Sketch design for end of the *Baker House* building, spreading towards the light like a branch; Aalto, 1947

The model is applied "to the limit of its accuracy", that is to the limit of formal simplification imposed by the symbolic translation (Langer, 1988:26). Both cognitive and sentient experience of nature are perceived and enter the bank of memories, to be digested by the imagination, and to be brought into the creative palette; this is not to say that the experiences are mimetically interpolated, but rather that they are poetically extrapolated into creative forms.

A model reflects the manner in which its phenomena is informed through a pattern or process. A pattern (the Greek word παραδειγμα, *paradeigma*) such as the infinite pattern of flexible standardisation (to be examined in chapter twelve) "both measures the work and can and be measured by it" (McEwan, 1993:42). Recollection of the root of ontology in the Greek word *õnt* (being) roots this analysis in the significance of the process of making form in the essence of life;[8] (i.e., in Winnicott's notion of primary creativity and Lake's dynamic life cycle). As suggested, this *paradeigma* (pattern) which pertains to the origin and development of Sibelius' and Aalto's most significant work, is taken in part, from the late nineteenth-century perception of nature's growth processes, evolution, the Finnish vernacular creative tradition, and, in turn, in Ancient notions of the relation of life and natural order.

Nature-Art Isomorphies

Langer describes music as "significant form, and its significance is that of a symbol, a highly articulated sensuous object, which by virtue of its dynamic structure can express the forms of vital experience" (1953:32). In other words, form grows in nature and is made in art. But this does not suggest that the form made in art may not seek to mirror that grown in nature, in a symbolic sense.[9]

Langer's notions of image and model concern the issue of the isomorphy of natural structures and artistic forms; i.e., the way in which "the object is abstracted from the physical, causal, and practical orders of ordinary perception, and becomes a virtual object" (Berndtson, 1956:490). As the works of Sibelius and Aalto demonstrate, this is not direct copying (i.e., not μιμησις, *mimesis*)[10] of nature, because "imitation has its own matter and form distinct from whatever in the real world might be imitated." (Hansen, 1968:169).[11]

One biologist states that "nature [...] seems to be dissatisfied with too much symmetry" (Stewart, 1995:73). This suggests that elements of form come to 'being', grow or relate in a

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[8] Ontology derives from ontogenesis, the biological study of the development of individual organism from the embryonic stage to maturity, and the development of a particular feature of an organism.

[9] This evinces a shift in Langer's argument from the earlier position in which the principles of creation in nature and art do not conform (1988:67)

[10] *Mimesis* was a Greek notion of direct representation of the real world in art.; to be discussed in chapter twelve.

[11] Some scholars argue that the Greeks did not distinguish between imitation, representation, copying and impersonation. e g., Janko, (1987:xv). In his *Theory of Forms* (*The Republic* X, 595a-608b) Plato attacks poetry, arguing that perceptual reality is a matter of opinion, and that art relates to the world of appearance by imitation or *mimesis;* suggesting that visual arts copy nature at two removes from reality. In *Poetics*, on the other hand, Aristotle stated that whatever imitation there is in art it is not copying, explaining his theory of poetry as the representation of reality, of action and life; ποιησις, *poiesis* rather than *mimesis*. Aristotle (47a28-b24) argues for be a better understanding of what comprises *poiesis* (poetry)).

certain way which has correspondences, rather than any suggestion of imitation (i.e., *mimesis*) of certain parts, members or elements of a model. As Salmenhaara has noted in relation to *Tapiola*,

> "Nature is not the source of the music, it is the source of the composers; inspiration and stimulus." (Salmenhaara, 1970:126).

Indeed, in this case nature may be the source of the model, and may also, through the connotations of the forest god, Tapio, be the image Sibelius sought to portray (tape e.g.,35).

The form (*morphe*) which the work of Sibelius and Aalto share, or which is equivalent (*isos*), arises from the process which was the model of the artistic form. In other words that which was the substance of analogous composition.

Picturing the Forest

Langer's notion can be understood as an endorsement of the picture theory of meaning, which assumes that, "for A to stand in a symbolic and semantic relationship to B, A must possess the same *logical form* as B." (Åhlberg, 1994:72). If, for example A denotes *Tapiola* (1926), and B denotes nature's flexible cell growth and variation principle, then for *Tapiola* to stand in a symbolic and semantic relationship to nature's flexible growth process, *Tapiola* must possess the same logical form as such a growth process. In this way the music must have a semantic relationship with the natural growth process, allowing feelings to find their common "logical expression" (i.e., the process of relations not of qualities) (Langer, 1993:218 & 55). Thus, non-discursive symbolism concerns the relation (*logos*) which this thesis seeks to elucidate within and between the works of Aalto and Sibelius. Analysis in chapter twelve will assist this elucidation.

However, Langer has been challenged by critics who suggests that nothing can be said about the, "exact nature of this formal similarity" (Hagberg, 1984:331). However, chapter twelve will seek to demonstrate two aspects of the nature of this formal similarity in terms of the relationship (or *logos*) between A (small episodes and their flexible 'growth' in Sibelius' or Aalto's work) and B (the small units in nature, and their flexible growth).



11.7

Fig.11.7 Striated rock

MODELLING INSEPARABLE CONCOMITANTS

"When a work of art which is intuitively created is scientifically analysed it reveals amazing requirements. Yet the artist works entirely instinctively." (Sibelius; Levas, 1972:83)

"Architecture and its details are connected in a way with biology" (Aalto, 1947b)

"[...] what the created form expresses is the nature of the feeling conceived, imaginatively realised, and rendered by a labour of formulation and abstractive vision." (Langer, 1988:41-42)

D'Arcy Thompson joined Bergson in challenging Finalism,[12] introducing *On Growth and Form* (1917) with the suggestion of teleology without the telos (the end and search for causes or "inseparable concomitants") is the way of modern physicists, and should be heeded by naturalists (1959:4).[13] Since he believed that "the mechanical phenomena which are profoundly associated with Life, and inseparable from our understanding of Growth and Form" (1959:7), Thompson may be cited in discussions of Aalto, balancing the influence of the process of making and of a vital force; i.e., bringing morphology, biology and nature into the grasp of the philosopher, and the makers of form (i.e., the artists). Indeed Langer (1988:91) has more recently joined Thompson (1959:8) and Bergson (1935:43) in bemoaning that which is intimately associated with telic issues.

Inseparable Concomitants

Following the forthcoming examination of the ontology of these notions of growth and change informing art, this section will then seek the relation of the "inseparable concomitants" (Thompson, 1959:4), in preparation for the demonstration of the 'growth' processes inherent in Sibelius' and Aalto's work in chapter twelve.

It is clear from what they wrote that the two Finns found congruence between nature and what they sought to create in at least phenomenal terms. This correlates with Thompson's "inseparable concomitants".[14] Again, this is not to suggest they sought to recreate nature, but rather that nature was an image whose phenomenal character they experienced as inherent in themselves, and which they abstract in their work, being linked to the harmonious notions of the Ancients to which their inquiry was oriented. However, Sibelius and Aalto also seem to have found some structural, compositional exemplar, which became, to all intents and purposes some sort of model with which to challenge the extant structural procedures in their respective media.

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[12] Chapter ten sought to describe the difficult relation of Bergson's theory to teleology and Finalism.

[13] Thompson indeed, cites Bacon's lament of the fact that the final cause, the search for the telos, "hath intercepted the *severe and diligent enquiry* of all real and physical causes" so that "the search of the physical cause" for Life, "hath been neglected and passed into silence." (1959:8).

[14] Langer points out that it is a model, not an image which most scientists use (1988:30-31). She recognises that at the outer limits of philosophical science images are common tools.

FROM LOGIC TO ANALOGY: THE MATTER OF RELATIONS

"Proximity to Nature can give fresh inspiration both in terms of form and construction" (Aalto, 1953c)

The use of models, Langer believes, belongs to a higher level of perception (i.e., is less primitive) than the use of the image. It requires discursive thought and "deliberate analogical reasoning" (1988:28). This thesis seeks to elucidate such analogy, without suggesting that Aalto and Sibelius were slaves to their scientific interest in nature.

The Greek ανα (*ana*, again, anew)[15] prefixed to λογος (*logos*), gives αναλογος (*analogos)* - an equivalence or likeness of relations (Brown, 1993:70). This is important since it identifies the use of the biological growth model as something which relates; i.e., is the *logos* for) Aalto's architecture and Sibelius' music. In other words the analogy between them rests, in part, upon the model of nature's growth process.[16] Langer states that,

> "Art has a logic of its own (and by "a logic" I mean a relational structure) which is very complex" (Langer, 1988:40)

This accords with the use of *logos* which denotes relational structure in this thesis.[17]

Analogos also forms a biological term, analogous, meaning resemblance of form or function without resemblance of fundamental identity (Curtis, 1992:211).[18] This definition is applicable to the relationship between Sibelius' music and Aalto's architecture since the musical media is different from the architectural, although they share temporal character (e.g., both are set in motion by the user-listener and both involve sentient experience). Each, however, must allow the matching of "the factors of the model" (i.e., the factors of the growth process) with "respective factors of the object" (i.e., of the music and of the building functions) (Langer, 1988:25). It is an example of these factors of the growth process which will be identified in chapter twelve.

Creatively Relating to the Past

Indeed, continuity of creative work with the past (personal or collective) may be either as "near analogy" (the new situation is 'like' the old), or as "identity" (a cognitive 'transfer' from an earlier model) (Weisberg, 1993:252-3). Rapid "strings of association", triggered by the thinker, memories, the environment etc., are "near analogies". Discontinuities based on reasoning and sensitivity to external events are ordinary thinking processes (Weisberg, 1993:154), explaining so-called 'inspiration'.

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[15] *Ana* (again, anew) should not be confused with *an* (without, lack); (Brown, 1993:71)

[16] Other relations, such as the character profiles in chapter five and six, form relations between the artists too.

[17] Incidentally, Bergson (1911:68) too settled on the value of analogy. "By two entirely different series of accidents being added together, two entirely different evolutions will arrive at similar results." (1911:57).

[18] In reference to analogy D'Arcy Thompson pointed out that Newton did not show the cause of the apple falling, but a similitude between the stars and the apple, "the more to increase our wonder". (1959:9).

In 1932 Aalto described, "the cells tendency to group themselves (biology's principle of construction) will also confirm itself in this case".[19] Throughout his career Aalto sought and found such analogies for the life in buildings and their development of form from biology's principle of construction. Indeed, Sibelius also explained to his secretary that, "When I consider how musical forms are established I frequently think about ice-ferns which, according to eternal laws, the frost makes into the most beautiful patterns." (Levas, 1972:83). The latter does not describe cells, but does allude to a natural process of growth through the addition and variation of small units.[20]

The next chapter will demonstrate that the work of Aalto and Sibelius share a such *paradeigma* ("to the limit of its accuracy"),[21] and even a τεχνικα (*technika*) being that by which pattern becomes form.

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[19] Aalto was referring to housing in this case.

[20] This includes other processes in nature such as accretion.

[21] This is a caveat which, incidentally Langer shares with dictionary definitions of isomorphy and analogy (Langer, 1988:26; Brown, 1993).

CONCLUSION:
NATURE'S MODEL *PARADEIGMA*

"What we extolled as Nature's deep conundrum,
We venture now to penetrate by reason,
And what she did organically at random,
We crystallise in proper season." (Goethe, Faust II, 6857-60)

"Art is the creation of forms symbolic of human feeling" (Langer, 1993:40)

"[...] a deep need to dramatise and act out man's intuitions of his relations with nature" (Cobb, 1993:51)

To recall, in Aristotle's language, the Greek view of the soul as "vital activities of the body" was the *logos*; "To hear a ringing bell, then, is to receive into one's own organism the *logos* of the ringing bell" (Collingwood, 1945:86). Equally, to hear or move in a creation (natural or manmade) is, then, to receive something of that creation's *logos* into one's own organism.

NATURE PATTERN

"If we consider mental development as a personal evolution from biological levels through cultural mean, the intuitive but latent perceptual discovery made by the child in this exodus into nature as a deepening, evolving world image, is that his knowledge of the real world is organised around his own perception and that he and nature are involved in some common formative purpose." (Cobb, 1993:83)

Part two of this study illustrated the intrigue of the forest for Sibelius and Aalto, suggesting that knowledge of natural purposive form informed their love for nature, augmenting what was already emotionally and sentiently stimulating. Part three seeks to indicate the dialogue which emerged between Ancient ideals of nature, *harmonia* and *kosmos*, and their own preoccupations with nature and relating their divided selves, all of which seems to have helped to focus their creative attention in their modern time. The next chapter will investigate the additive or agglutinative nature of their compositions, seeking to unravel such strings of association as they lead along threads of unrecorded reality in the life and works of Sibelius and Aalto, believing that therein lies the key to creative congruence.



11.8

Fig.11.8 Oak leaves

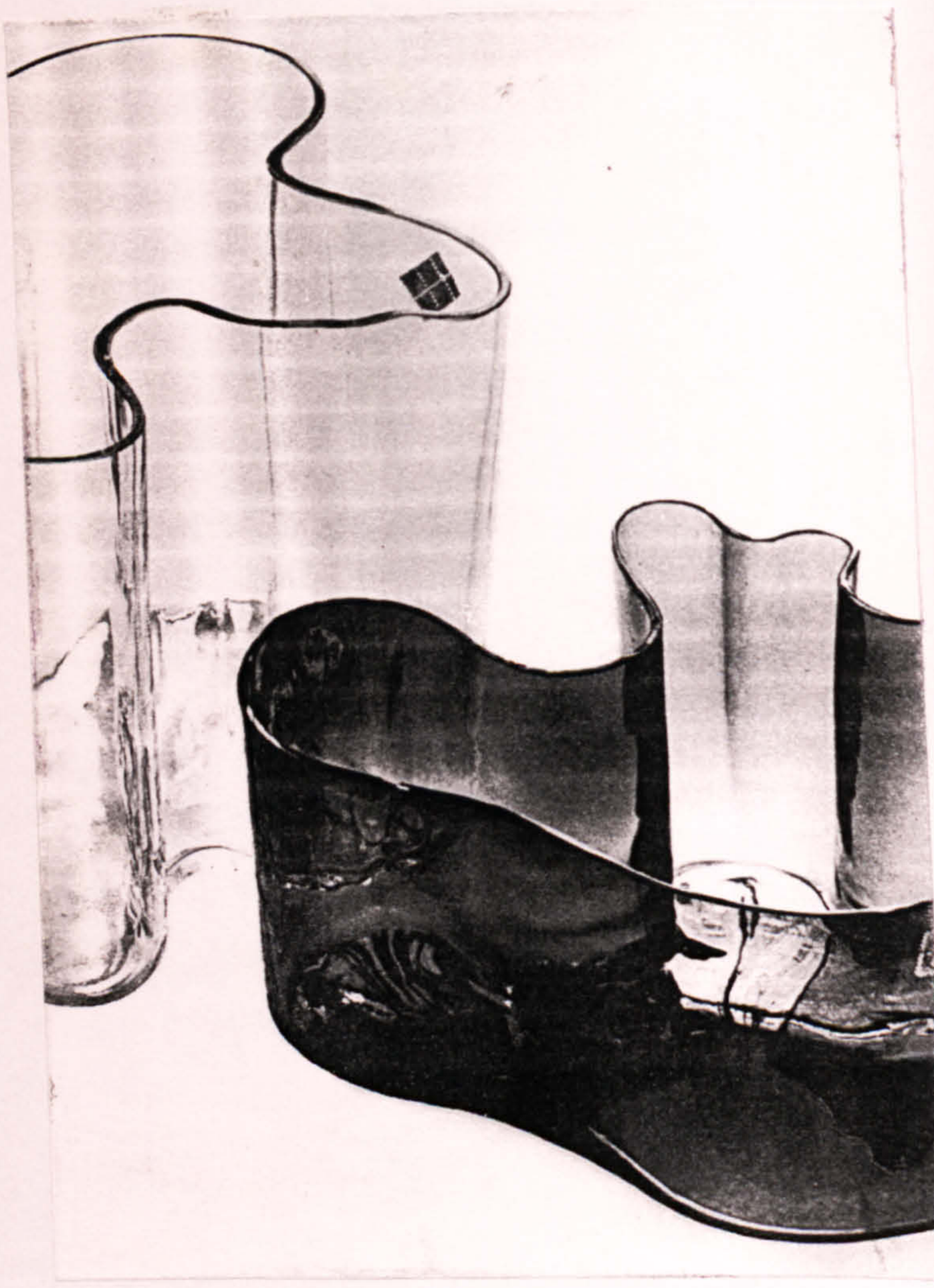
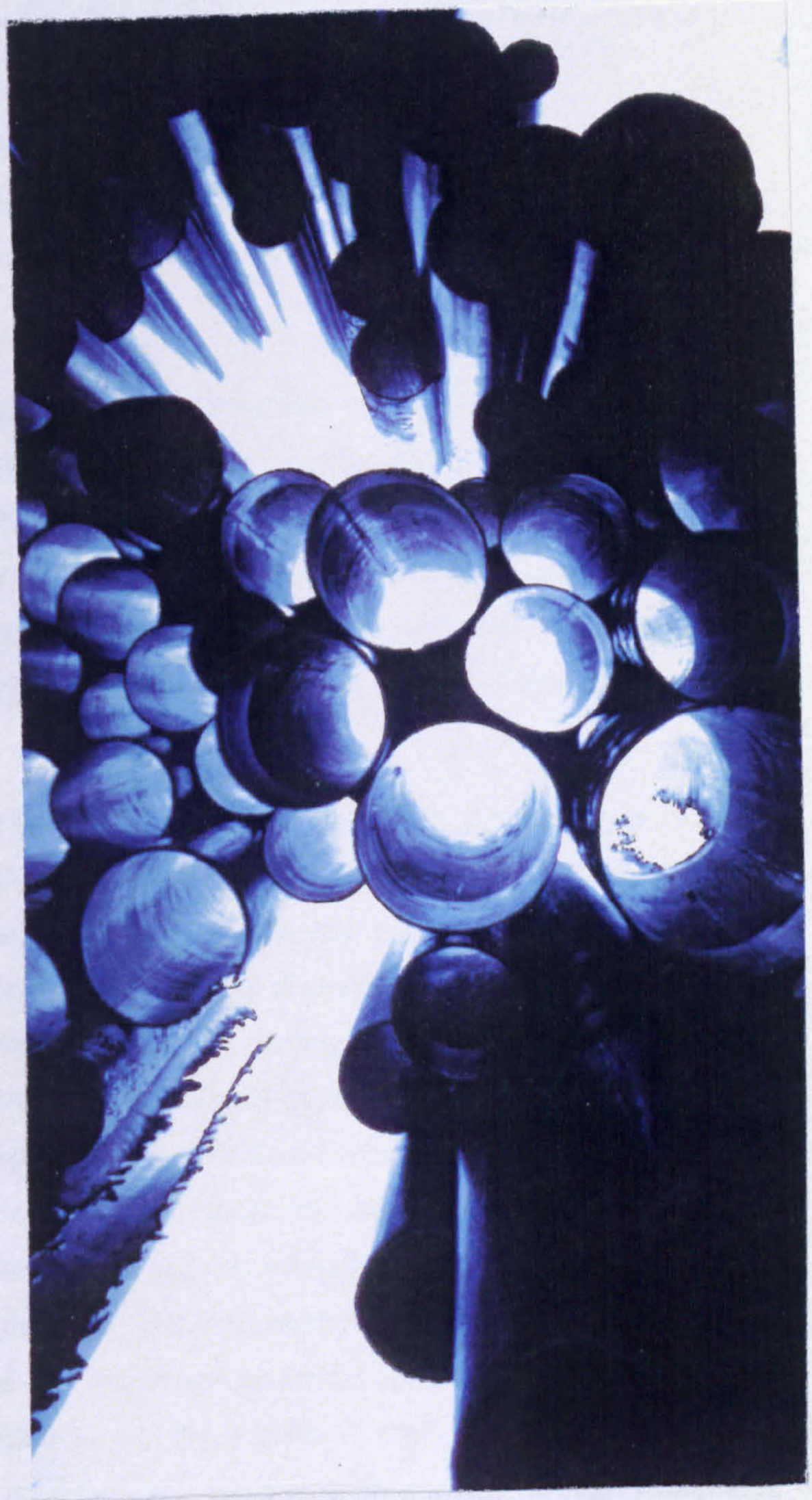


Fig.11.9 Aalto vases

Chapter Twelve



12.1

MILLIONS OF FLEXIBLE COMBINTATIONS

Fig.12.1 Sibelius Monument, Helsinki; Eila Hiltunen, 1961-7.

INTRODUCTION

"Nature, biology, offers profuse and luxuriant forms; with the same constructions, same tissues and same cellular structures it can produce millions and millions of combinations each of which is an example of a high level of form. Human life comes from the same roots." (Aalto, 1935)

"The starting point for total variation is not a theme unit but a germ motif." (Salmenhaara, 1970:124)

"You may find thematic connections in my symphonies when you study them. I myself call these the 'symphonic necessity '." (Sibelius; in Johnson, 1960:158)[1]

Aalto believed the "only true style" was the one which derived from the same root as human life; i.e., "nature's variability" (1938). Indeed, both he and Sibelius sought to challenge "established forms and uniformity as the only way to achieve architectural [and arguably musical] harmony" (Aalto, 1938). This was not a creative free-for-all without the discipline of skill, but rather the search for "the inner nature", of music and architecture, which "is a fluctuation and a development suggestive of natural organic life." (Aalto, 1938)

The creations of Sibelius and Aalto are in essence, if not also in form, inspired by nature and its biological processes. In other words at least in the deep need of both men to find some sort of inner equilibrium, if not also in the arrangement of the formal musical and architectural parts, their work demonstrates processes of growth and change. For example, part two indicated that Aalto's emotional reserve resulted in his having difficulty in articulating non-instrumental values of nature,[2] preferring to seek rational outworkings of the spirit of nature in terms of technical or material advantage. His thoughts demonstrate a search for a correlation between the processes he undertook in design and those he observed in nature. He wrote of the "endless variation of organically growing forms", believing that "[a]rchitectural standardisation must tread the same path." (1938); the creation of "a wealth of nuances" (1941b). This chapter will demonstrate that this has a structural correlation in Sibelius' work. This will be undertaken through an exploration of the manner in which nature may literally have 'informed' (i.e., have given form to) their work, becoming an analogy through which their artistic form grew. As stated before, this is <u>not</u> to suggest that they slavishly copied nature's ways, nor that they sought to represent nature. Indeed, since the aesthetic actualities of appreciation of nature embody biological, physical and mathematical reality (Schillinger, 1976:4),[3] and since particular imagery can be used to illuminate substance through similitude, the ontology of Sibelius' music and Aalto's architecture will be questioned in relation to their

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[1] Cited, without source, in Johnson, (1960:158).

[2] Harrison suggests that representations, implications and metaphors of the forest are a "strange reflection of the order to which [the forests] remained eternal" (1992:63).

[3] Schillinger (1976:4) describes these as "pre-aesthetic", strangely prescribing the natural (physical, chemical, biological) period as art creation. This is not the intention here.

interest in nature, and, importantly their interest in achieving ideals of unity through the adoption of elements and processes which resemble those of the unities produced in natural growth.[4]

[4] See appendix nine for the biological explanation of cell growth.



Fig.12.2 Rowan



12.2 cont.

Fig.12.2 cont. Rowan and pine

GROWTH: THE ROOT OF THE ORGANIC

"Architecture and its details are connected in a way with biology" (Aalto, 1947b)

"Expressive form is always organic or 'living' form" (Langer, 1988:xiii)

"[...] the germ-cell develops into a very complex structure" (D'Arcy Thompson, 1959:289)

If, as chapter eleven suggested, a model shows "how something works" (Langer, 1988:xiii), a basic understanding of natural cell growth may explain the basic model with which Sibelius and Aalto "forged" their creations (i.e., music and constructions).[5] In other words, their composition techniques can be argued to have been modelled, to some extent, on the essence of natural cell growth: the process of becoming.[6]

Langer believed that a model (i.e., the process of cell growth) "need not share the phenomenal traits with its object" (i.e., the compositions) (1988:30). Indeed, the art forms cannot be said to look like a cell growing, but, in Langer's terms, they may "symbolise its structure or function", or even its inherent process. It is crucial to reiterate that even if cell growth may have been the model borrowed from nature by Sibelius and Aalto for composition technique and spatial manipulation, there is no evidence, and this thesis does not attempt to prove, that Sibelius' work was a model for Aalto's.

Indeed, the admission of such structural affiliations need not suggest that it must automatically be accepted that the music reflects certain emotions also enshrined in the architecture. The conclusions of chapters five and six suggest that there were common emotional and psychological phenomena which may have become imbued into their creations, whether in form or content ("to the limit of its accuracy"; Langer, 1988:26), and which may have stimulated the interest in nature and ideas of the Ancients. Indeed, Langer's notions suggest that music and architecture are capable of presenting "the dynamics of our inner life" and "the dynamic patterns in nature." (Åhlberg, 1994:72).

It is a contention of this thesis that, in addition to the psychological affinities, there are elements and processes in the compositional form which are common to Sibelius most unique music and Aalto's most effective and moving buildings. An examination of nature as a model should address the main characteristics of the growth process of individual cells of creative matter; the economy inherent in this; the flexibility from which this process produces unique individuals and the inverse view of growth of parts as fragmentation and decay from fruition of the whole. Part one addressed examples of economy in the works of Sibelius and Aalto, and

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[5] This must not be limited to Aalto's architecture, because this concept is vital for understanding his wood experiments and furniture too.

[6] Langer suggests that "[...] the creative symbol represents the tensions, rhythms and activities of the unfelt substructure of life" (Langer, 1988:xiii). To be addressed in chapter fourteen.

the last chapter will demonstrate the importance of decay or fragmentation in their work. This chapter will question whether there is any degree of translation of the biological realities of cell growth (given in appendix nine) into small units in their work, which are amalgamated and varied to form wholes through something like a growth process.

Mimesis and Meiosis

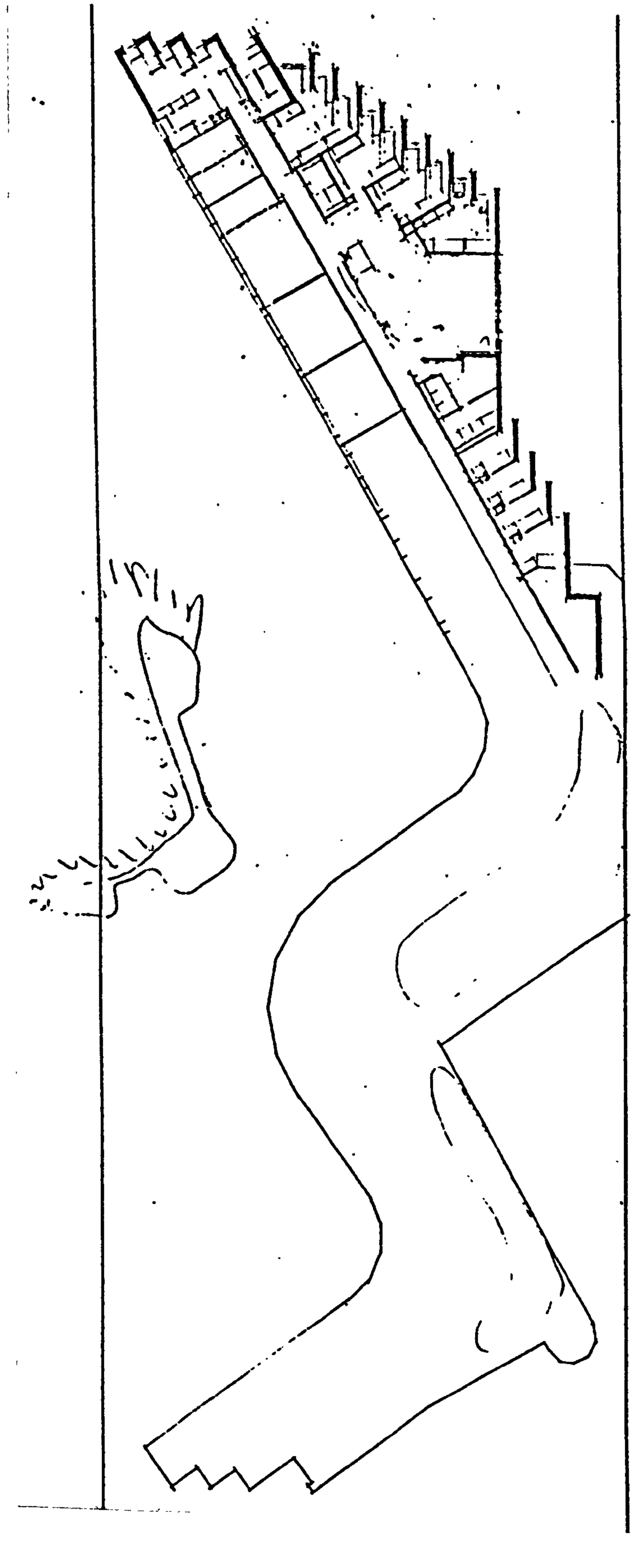
The process of cell division known as mitosis enables identical, replacement cells to emerge, while that of meiosis promises new, unique cells. The two Greek concepts of *mimesis* and *poiesis* are, on first appearance, analogous of these cellular mechanisms; *mimesis* (the imitative or identical copying of something) with the mimetic cellular reproduction of mitosis, and *poiesis* (the creative, poetic production, interpretation or representation of something) with the production of unique cells in meiosis. However, this is not the place to explore this notion further. Suffice to point out that Aalto (1949) coined the phrase "elastic" or "flexible standardisation",[7] akin to meiosis in biology and *poiesis* in art, rather than multiplication of identical units, mitosis in biology and a mimetic quality of *mimesis* in art.

[7] Aalto had described this process as early as 1930, yet articulated it in this manner in 1949.



12.3

Fig.12.3 *Sphagnum* moss



12.4

Fig.12.4 Plan and sketch of wing of *Baker House Dormitory*, M.I.T; Aalto, 1946-9

GERMS OF SPACE AND SOUND

"The living cell is the fundamental unit of life." (Scott, 1991:122)

"Living bodies are not simple geometrical forms [... but] are typically combined forms [...] they consist of simpler parts of different characters, which have a special arrangement with regard to one another; these parts have a typical form of their own and may again be combinations of more simple different parts." (Driesch, 1908:20)

"When an idea develops it organically takes shape and continuously returns 'to a more organic way [...] Nature as an inspiration is a personal option available to the architect." (Pietilä; in Price, 1983:16)

Zuckerkandl believed that through searching deeply, for and within the pattern or the fragment which a creator (i.e., artist) has made, its inherent potentialities as yet unrealised become clear (1974:345).

> "Before the complexity of an organism and the practically infinite multitude of interwoven analysis and synthesis it presupposes, our understanding recoils disconcerted." (Bergson, 1911:263) [8]

However, Bergson notes that as a result of cell division in rudimentary organisms consisting of a single cell, "we already find that the apparent individuality of the whole is the composition of an undefined number of potential individualities potentially associated." (1911:275). Indeed, the basic notion of genetics is that within every organism there is a cryptic combination of factors that determines features of the thing to be; "directing its function" (Curtis, 1992:203). At the heart of biological cellular structure we find symmetry, nature's default position, "when there is no reason for their component parts to differ from each other." (Stewart, 1995:84; see also appendix nine). These parts are then replaceable and interchangeable (Jones, 1993). Yet the opposite also occurs, spontaneous symmetry breaking; "symmetric causes often produce less symmetric effects." (Stewart, 1995:85). This section will explore whether Aalto's explanation of natural variation of small elements holds good;

> "Nature, biology, offers profuse and luxuriant forms; with the same constructions, same tissues and same cellular structures it can produce millions and millions of combinations, each of which is a high level of form." (Aalto, 1935)

Aalto sought these from the "cells and tissues" which he saw as "the building components of which human life is composed. They cannot be dealt with in a different way from biology's other units" (1935).

The musicologist Schenker believed that the mysteriousness of repetition serves a biological protective purpose, since by remaining hidden to consciousness a species has a better chance of thriving. Yet, Zuckerkandl warns against a mystical reading of Schenker (1974:184), recalling that *"Semper idem sed non eodem modo"* (Always the same but not in the same way), which incidentally was Schenker's motto for his main work, *Frei Satz* (Free Composition,

---

[8] Bergson saw an insensible, infinitely graduated, continuance of the change of form, including the phenomena of organic destruction in growing up and growing old. The evolution of the living being (like the embryo) is a continual recording of duration, past on present; an organic memory (1911:20) .

1979), indicates "the process of begetting, the miracle of successive transformations" (1974:193), rather than the sameness of the begetting agent. Zuckerkandl continued,

> "It is only in so far as the process of organic growth is *repeated* in every individual growing thing that universal laws apply and the process can be predicted [...] organisms are at the same time *essentially* unique" (1974:348).[9]

This section will examine whether there is a formal similitude in the work of Sibelius and Aalto in which the character of nature's growth process is manifest through the use of small elements reminiscent of 'cells' but not necessarily imbued with all the characteristics of these, rather that they form the content which in turn informs the whole.

SIBELIUS' CELLS OF SOUND

> *"[...] organic process form [...] the fundamental point of departure for processive form, the influence of which permeates everything that happens in the work."* (Salmenhaara of *Tapiola*, 1970:124)
>
> *"He takes a tiny drop of sound and from it draws a veritable ocean"* (Oscar Merikanto, 1896)[10]

On 22 March, 1918, Sibelius wrote to his dying friend, Axel Carpelan, describing the coming of spring growth, "Life is awakening. The life I love so infinitely". He went on to correlate this life and growth with his work: "this is the feeling that must leave its mark on everything that I compose." (Sw.T4:326).

SEEDS AND KERNELS AND SUB-THEMATIC PROCEDURES

> *"In the organic sphere one cell engenders the other in its own image, yet each of the innumerable cells is different from all the others [...] In an astoundingly analogous way one musical motif, one theme releases another as an expression of its own innermost idea, yet the latter is a being entirely different from the first."* (Réti, 1961:359)

Later, in the letter to Carpelan, Sibelius implies that the mysteries of thematic growth emanate from nature, and God (1918; T2:129).[11] This mirrors the ideas of his friend, Busoni, who wrote that; "I am a worshipper of form [...] every motif, every object demands its own form, related to that idea, to that motif, to that object. In nature this is so: the bud already contains the fully grown plant."[12] Indeed, indicating that these friends were not alone amongst modern composers to be thinking about the growth of form, Anton Webern (1883-1945) also called for unity to be established through "the utmost interrelatedness between component parts" (1963:42), a desire which is extremely close to Sibelius oft-expressed desire for "the profound *logos* that created an inner connection between all the motives " (Ekman, 1938:191).

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[9] Stevens observes that in the growth of trees, "The rules are rigorous, but within those rules variety abounds." (1974:222)

[10] Finnish composer, Oskar Merikanto, 14 April, 1896, *Päivälehti*. Written with reference to *Lemminkäinen's Return*.

[11] The comment concerned the *Third Symphony*..

[12] Expressed in a letter to Robert Freund, 25.4.1907. (Beumont, 1987:115).

Cell Motifs and Guff?

Perhaps it is not surprising that some early Sibelius scholars, such as Gray and Cherniavsky extrapolated such expressions into a theory of a technique in which Sibelius "achieved unity by the use of germ motifs" (Cherniavsky, 1942:9). Sibelius, Gray believed, "breathes life" into "a handful of seemingly disconnected and meaningless scraps of melody bringing them into organic relation with each other and causing them to grow [...] like living things." (1931:135).[13] Cherniavsky, too, believed that Sibelius' music was based in quite small motifs ("thematic germs" or "germ motifs") (1947:141).[14] He suggested that "it was left to Sibelius to develop the really organic manner of imparting unity originated in Beethoven" (1942:2). Cherniavsky also advanced Gray's notions of Sibelian unity, maintaining that the "gradual synthesis and the growth of thematic germs" (1947:171) had ensured the totality of Sibelius' composition (1942:8-9),[15] summarising this by highlighting,

> "[...] a trend which is far deeper and more essential to his style [...] is his basic insistence on organic form, on natural growth, on uninterrupted continuity of expression, on the attainment of balance, of unity within diversity, and on the complete freedom of his ideas to achieve their own development and seemingly inevitable fulfilment within the whole." (Cherniavsky, 1947:168-9)

Challenging Cherniavsky

Without resisting the vast majority of the formal characteristics of the latter citation, other scholars have countered the 'germ motif' theory directly, suggesting that, on the contrary Sibelius' compositional process can only be called "continuous development" (Collins, 1962:239) or "a new process of synthesis" (Abraham, 1947:20); an idea which Hepakoski has recently advanced into a Hegelian process of cyclical growth (1990; 1993; 1995). They believe that Gray and Cherniavsky seek to force Sibelius into an external theory, although it must be acknowledged that the composer himself stated that he seeks to let the content inform the whole (5.1912; T2:218).[16]

Although some believe that the "germ-motif theory" throws no light on the musical purpose or motivation (Collins, 1962:253; Tovey, 1981:53), others remodel and rephrase notions of Sibelius' organicism, avoiding the danger they see in suggesting the reductionism which results in the suggestion that whole works may derive from single small 'cells' (Tawaststjerna, T1, T2, T3; Murtomäki, 1993; Hepakoski, 1993; Salmenhaara, 1970, 1984).[17] Collins, for

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[13] Elsewhere, Gray contradicts this by suggesting the use of the 'leitmotif' betrays "the innermost spirit of the symphony" (1931: 158-9).

[14] He found the first example of this in the *Second Symphony* (1942:2), in the interval of a falling fifth.

[15] Cherniavsky believed that this language includes a "sense of proportion" between movements; " a balanced relationship" between keys; a "real consistency of style"; a breaking down of boundaries between movements coupled with a wedding together of movements to form "one continuous organic whole"; the "spontaneous evolving " of themes from one or two "thematic germs". (1947:156).

[16] Collins believes Gray and Cherniavsky have cited affinities of identity without proving that these gave rise to the ideas (1962:240). Incidentally concurring with the challenge to Cherniavsky and Gray, Zuckerkandl explained that, "[i]t is just as impossible to infer the form of the mature organism from a germ cell of an unknown species as to infer the final pattern of a melody from its 'seed'," although he stresses that familiarity breeds recognition of individuality and unique characteristics (1974:349). However, in the process of biological growth in a known species one can predict the individual as one can a "familiar" melody; "predictability and unpredictability apply to different aspects of the process." (Zuckerkandl, 1974:349).

[17] For example, Murtömaki cites Cherniavsky's statement that Sibelius' *Second Symphony* (1901-2) derives from its kernel motif (a descending fifth) (1942:2), and the fact that he later toned down this statement, which had already bred many one-sided opinions (Murtömaki, 1993:198).

example, takes the opening augmented fourth of the *Fourth Symphony*, indicating that the composer must "show the connection or series of relationships" between the initial idea and the material that follows it; indicating that Sibelius allows the augmented fourth to appear in the second main subject (1962:242) (fig.12.5; tape e.g. 36).[18] He describes this as placing a detail in the musical foreground, which then "accrues a mass of relationships to itself"; a description which may shed light on Sibelius' incapacity for mutual, adult relationships.

Sibelius himself responded to a question from Ringbom stating that "The *leitmotiv* technique has always been foreign to my mode of thought; there is something too calculatingly purposive about it" (1954:48).[19] Sibelius' antipathy towards Wagner later in life may partly explain this comment. However, there is arguably an important distinction between Wagner's championing of the *leitmotiv* as a tool for the evocation of association and Sibelius' use of small motives which are vital, constituent structural elements (Parmet, 1959:81), being, for example tonal, intervallic, rhythmic, use of contrasts, use of tritones. Yet, despite receiving Sibelius' refutation about the leitmotif technique, Ringbom confirms this distinction in relation to *Lemminkäinen's Return* (1895, 1897, 1900), maintaining that the "tiny scraps and fragments that are tossed about from one group of instruments to another [...] gradually welded together into little organic themes" (1954:49) (fig.12.6; tape e.g.37); part of a structural method he believes to be used later in the *Sixth*.

The Growth of the "small idea"

The detractors of Gray and Cherniavsky also call on Sibelius' own testament that, "I do not build my themes out of small fragments" (Levas, 1972:88; Laufer, 1990). As cited in chapter three, one scholar has explained that although these fragments are not "put together to make big themes later on", there is, nevertheless, a "source repertory of common components" (Laufer, 1990); that is to say that themes do have certain "basic structures" (Kilpeläinen, 1995b) or elements in common, and it can be thus said that all variations draw upon these same source components which are reusable, and which are transformed "often in quite concealed ways" (Laufer, 1990). Whether or not the analogy with 'cells' holds, these may be identified as small, unique episodes. This explanation maintains that Sibelius did not create deliberate fragments, yet that the outworking of the content (i.e., musical material) often asked to be scattered (or disintegrated) into different voices,[20] only to be brought back into the whole in concert-use.[21]

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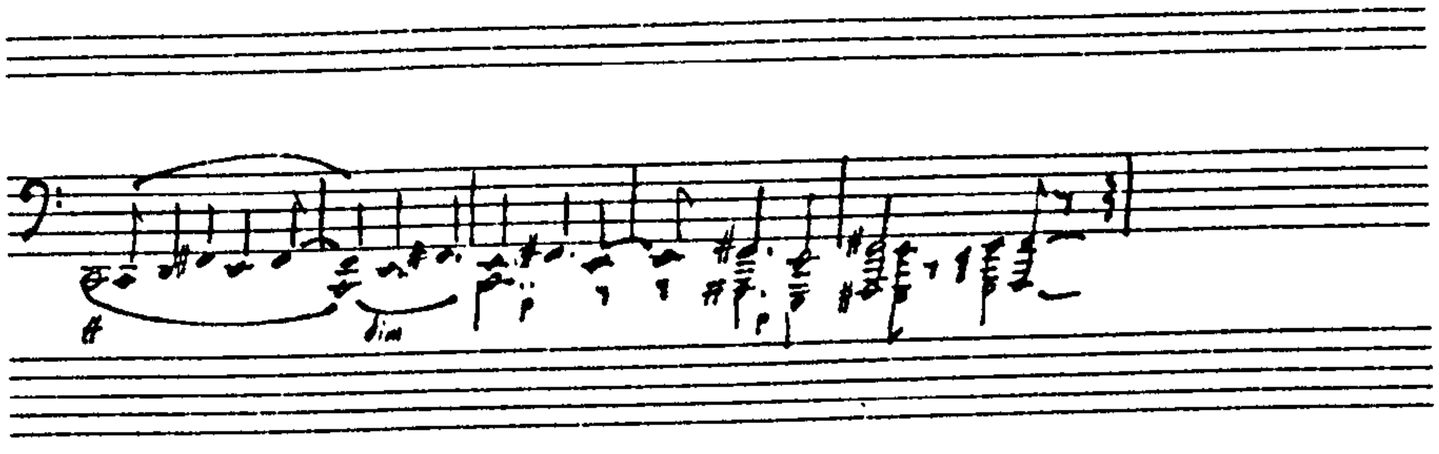
[18] Collins cites the schism between Cherniavsky and Gray regarding the germ motive of the *Fourth Symphony* (1911), calling on Tovey's (1981) refutation that any small figure could possibly be the 'idea' for a whole piece.

[19] *Leitmotiv* (or leitmotif) literally means leading-motiv. This is mainly associated with Wagner's processes of composition, although his own term was *Grundthema*. However, this was not Wagner's invention. There are different spellings for motiv, i.e., motive and motif.

[20] This suggests the character of polyphony, as cited above.

[21] Kilpeläinen notes that the sketches for the *Seventh Symphony* (1924) show long phrases ("basic structures"), however, not themes as such, which are broken into different parts, and around which other small elements are added (1995b).



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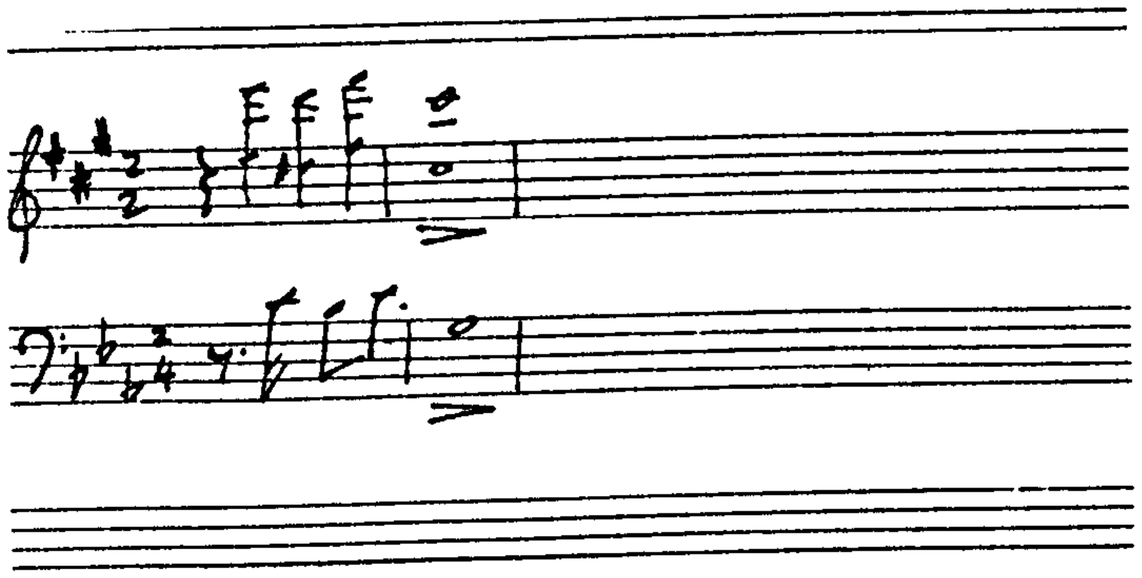

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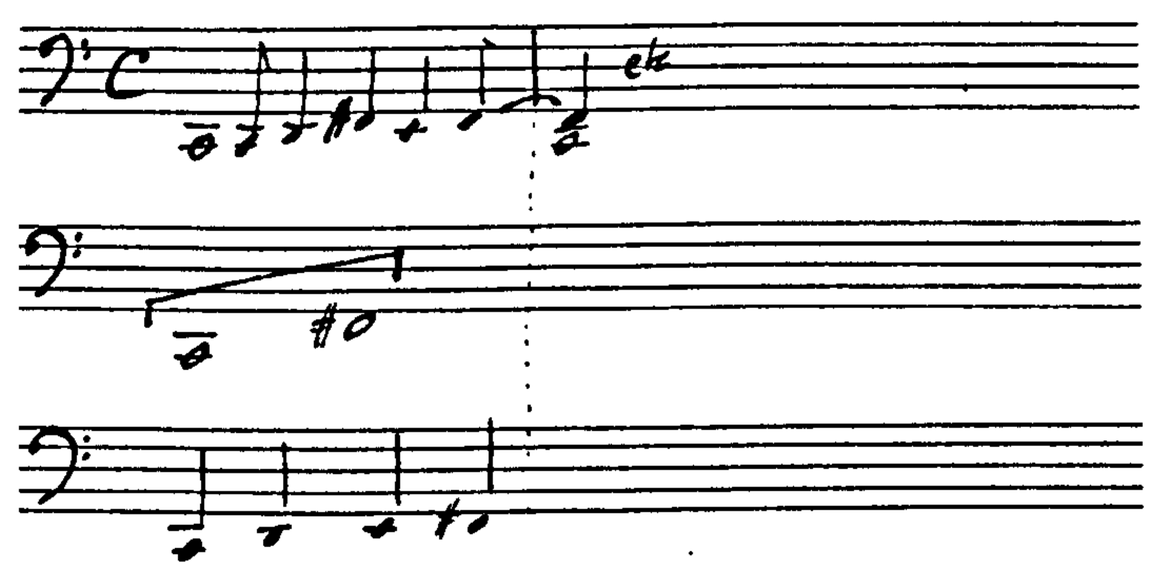

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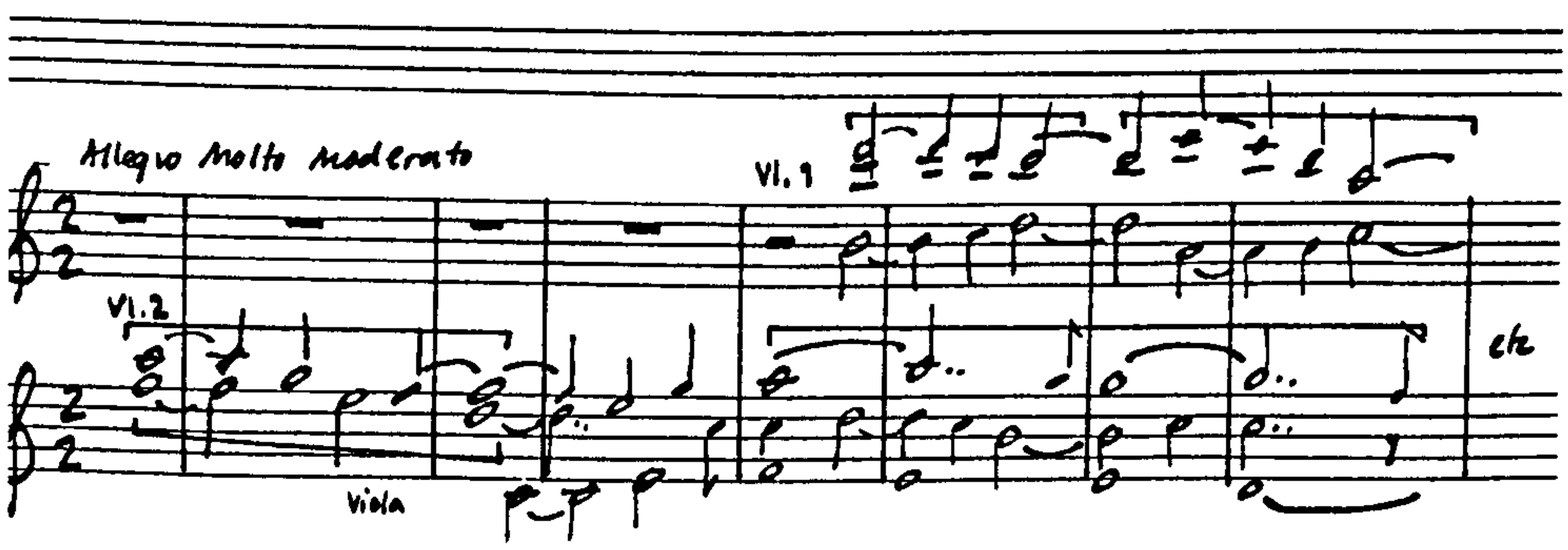


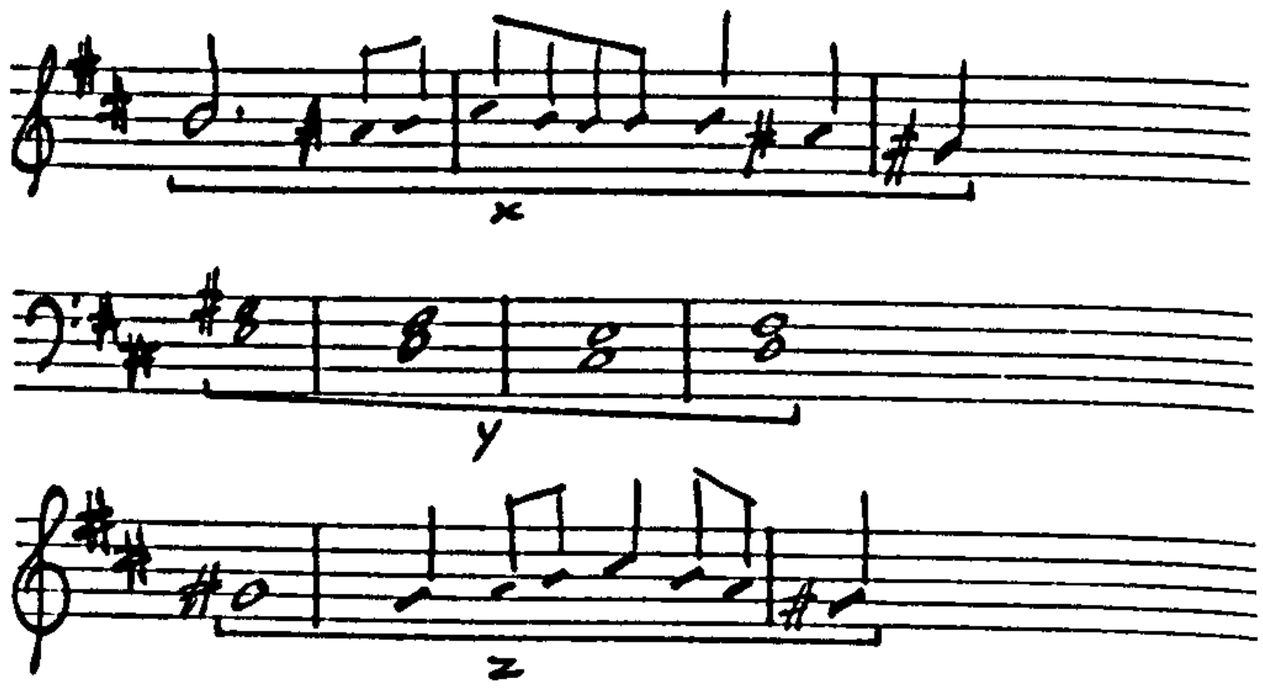
12.8

Fig 12.5 Progress of augmented fourth in *Fourth Symphony*; Sibelius, 1911

Fig 12.6 Tiny fragments in *Lemminkäinen's Return*; Sibelius, 1900

Fig.12.7 Tritone and fourth motifs in the *Fourth Symphony*; Sibelius, 1911

Fig.12.8 Kernal motif in the *Sixth Symphony*; Sibelius, 1923



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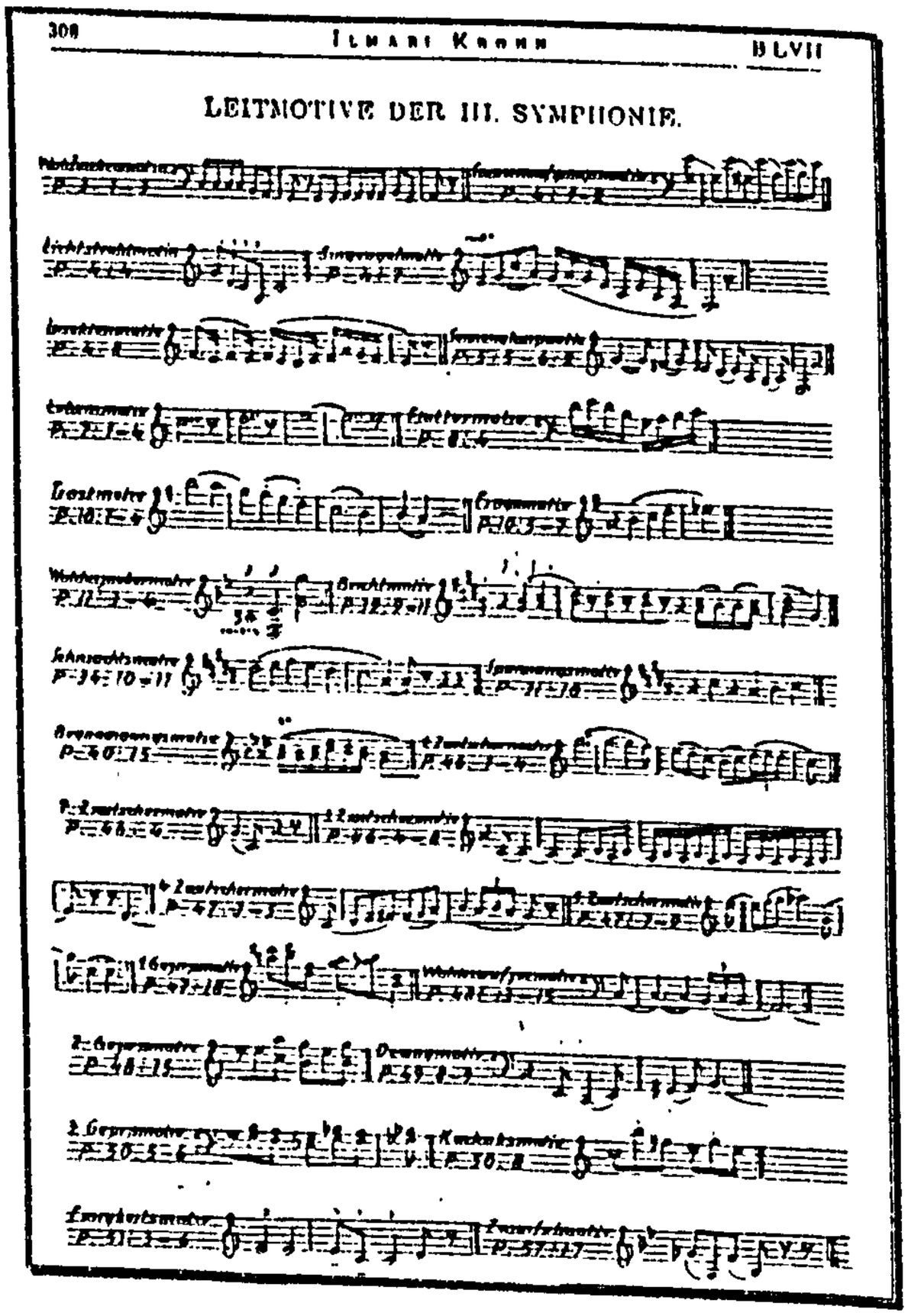

12.10

Fig.12.9 Three stepwise fragments, *Tapiola*; Sibelius, 1925

Fig.12.10 Leitmotifs in the *Third Symphony*; Sibelius, 1904-7

Tawaststjerna's detailed survey of his life and works suggests that Sibelius' organic approach (be it based on cell-motifs or not) may be illustrated early in his symphonic career, confirming that even in the *First Symphony* (1899) "Sibelius tends to think in terms of germinal seeds rather than finished themes" (T1:66). He also finds "organic cohesion" grown from the "small idea" in the *Third Symphony* (T2:74-5). In *Voces Intimae* the weaving of threads of sound draws his attention; "[t]he final idea grows organically from the preceding material", (T2:119); concurring with traces of Aalto's thoughts on how,

> "with the same constructions, same tissues and same cellular structures [nature] can produce millions and millions of flexible combinations, each of which is a high level of form." (1935)

Hepakoski has also examined the insistent repetition of a short melodic phrase or phrases in Sibelius' early works; "a momentary withdrawal from linear time in favour of 'circular' stasis", which he calls the reiterative principle (1993:23).[22]

While arguing that in Sibelius' work there are active "organic elements" (which he calls "kernel motifs", expressly to avoid using the expression "thematic germ"), Parmet challenges Cherniavsky's suggestion that these imbibe every interval progression (1959:95), although he admits that in his later years Sibelius puts themes together "from several fragments" (1959:111). He suggests that the motifs generate the nature of the works in which they are particularly characteristic, describing such tritone and fourth motifs in the *Fourth* (1959:49) (fig.12.7; tape e.g.38),[23] and the "kernel motif" in the *Sixth* (1959:94) (fig.12.8; tape e.g.39).

These episodes of scholarship indicate that there is not a blanket denial of the growth process in Sibelius' work, but rather a refutation of the notion that Sibelius constructed his wholes only from small "cell-motifs", without any other active compositional procedures (Parmet, 1959:91).

Modern Growth

Dalhaus' major treatise on nineteenth century music confirms Sibelius as a 'modern' (1989).[24] Revisiting something of Cherniavsky's argument, Dalhaus demonstrated that Sibelius "sufficiently informs us" about the motivic "germ-cell", C-D-F#-E (with its characteristic tritone), at the opening of the *Fourth Symphony* (1911), finding that a transition "from motivic to 'structural' thought" put the piece at the centre of musical modernism. This, he believed is manifest as the 'germ-cell' which "functions as the basis of a chord progression which attains

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[22] McEwan (1992:82) explains Aristotle's discussion of *topos* (place) and *chora* (scant space) as being "a territory made to appear through a continual remaking, or reweaving of its encompassing surface." This is applicable to the composition process which Hepakoski (1993,1995) discerns. This move from the linear to the 'mythic' sense of time is similar to Bergson's desire to challenge the discursive, linear intellect with the associational intuition, which Carpelan interested Sibelius in (T3:ch.5), and which Mikkola discerns in Aalto too (1976).

[23] The emphatic tritone content is the basic unifying motif of the *Fourth*, appearing again as a "kernel structure technique" in *Tapiola* (Salmenhaara, 1979).

[24] Carl Dalhaus was a widely influential musicologist, specialising in nineteenth and twentieth century music (1989).

thematic significance" (1989:367-8).[25] This revisits the conclusion of chapter four, since Dalhaus believed that at the heart of Sibelius' modernism was the "germ-cell" which persuaded him of Sibelius' modernity (1989:367). Indeed, Dalhaus' assessment of this procedure as the coalescing (and abstraction) of "different aspects of a single musical idea"[26] recalls the discussion of the runic composition ("theme and variation") and the associated vernacular building tradition of chapter three. Dalhaus' conclusion is that Sibelius replaces traditional thematic processes with "sub-thematic" procedures (1989), the "motivic rudiments" of which have been described as forming a "background texture" (Coad, 1985) and a "mosaic technique" (Schwarz, 1995).[27]

> "Form is governed by a musical basic idea [...] it produces a mosaic which is formed by combining and uniting paraphrases of the basic idea." (Murtomäki, 1993:239)

In the letter to Carpelan, cited above, Sibelius writes, "You mention interconnections between themes and other such matters, all of which are quite subconscious on my part. Only afterwards can one discern the relationship but for the most part one is merely a vessel." (22.3.1918, T2:129-30). If these interconnections were subconscious (and they may not necessarily have been so since Sibelius often phrased explanations to advance the notion of his being a genius), the coming together (i.e., "interrelatedness") of these bits of themes may have the deep psychological significance which chapter six explicated; i.e., relating the divided self. Indeed, having prefaced the foregoing remarks with an acknowledgement of Carpelan's "unerring musical judgement",[28] Sibelius' comments do not deny the vital role of the interconnections, on the contrary, by giving them and their relations (i.e., *logos*) a divine heritage he confirms their significance; "That wonderful logic (let us call it God) which governs a work of art, that is the important thing",[29] and elsewhere "the profound *logos* that created an inner connection between all the motives " (Ekman, 1938:191). Levas interprets Sibelius as meaning that "the ethical striving of man and his aspirations to God were closely linked to the eternal germ." (1972:80); the "ethical line" to which Sibelius alluded in his diary (1919; T3:ch.9), and to which this study will return.

Six years earlier Sibelius had written in his diary that there was no solution to the problem of form, other than allowing the motives to dictate its shape (5.1912; T2:218); i.e., *Leistungsform* in which the content informs the form. Flodin concurs with his ideas about the *Third Symphony* (inspired, Levas believes, by a conversation with the composer):

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[25] Dalhaus explains that Sibelius also derives other motives from the main theme. A feature of this structural thought is Sibelius' abstraction of motives from a 'theme' (1989:369).

[26] For instance Dalhaus suggests this difference holds true for pitch and rhythm (1989:369).

[27] Schwarz finds more evidence of this technique in the *Lemminkäinen Suite* than in his other work (1995).

[28] Sibelius wrote to Carpelan; "Your interest in my new work has given me such joy. You are a phenomenon [...] I am lost in admiration of your profound musical understanding and unerring artistic judgement" (T2;129).

[29] In another episode Sibelius used the Greek word *logos*, explaining to Levas (1972:80) that the creative function "is brought to life by means of the *Logos*, the divine in art. That is the only thing that really has significance; yet it is impossible to explain it through words." It is not clear whether this is a different translation of the same diary entry.

"When the creative spirit is awakened, he takes motives from their hiding-place according to the requirements of the compositional process at the time." (Flodin; in Levas, 1972:88)

Indeed, Sibelius himself wrote,

"The arrangement, make-up and grouping of the themes: with all its mystery and fascination this is the important thing. It is as if God the father had thrown down mosaic pieces from the floor of the heavens and asked me to put them back as they were. Perhaps this is a good definition of composition - perhaps not." (Sibelius, 10.4.1915; T3:ch.2)[30]

Motives are given a great role in the development and, it has been argued, the growth of the form of the whole (e.g., Hepakoski, 1993; Murtomäki, 1993; Tawaststjerna, T1, T2, T3; Ringbom, 1954), without necessarily suggesting that they are exactly 'cell motifs' in the way Gray and Cherniavsky describe them. Scholars broadly agree that the use of such small, pregnant cells of sound as a division of larger ideas, if not original sound fragments, allowed Sibelius to create multiple variations, combinations, accretions and permutations, which, in some senses, can be understood as a sub-thematic procedure, or a 'mosaic technique' (Dalhaus, 1989; Coad, 1985; Schwarz, 1995).

Salmenhaara indicates that although *Tapiola* is built from "musical 'germ-motifs' ", and the *Seventh Symphony* is "built on very fragmentary, different, material", the latter nevertheless "still becomes an 'organic whole'. " (2.7.1988; pers.com). Another scholar suggests that these cells or fragments must be somewhat abstract so that from them can be produced many permutations which cannot be produced if the cell is too fixed (Kambe, 12.1995: pers.com.). Therefore, a notion of the necessity of importance of flexibility arises, one which concurs with an essential element of Aalto's work; i.e., "flexible standardisation" (1949) which in turn relies on "the smallest possible units" (1938). In other words, in both the music and the architecture in question the larger the formal element, the more fixed it is, and the less it can be permuted, and inversely the smaller the unit the more combinations are possible. This recalls both the nature of cell growth (appendix nine) and the discussion of runic composition (chapter three).

THE SPIRIT OF THE PINE TREE AND WIND[31]

"[...] aspect after aspect of what might be called the soul of the forest" (Newman; in Ringbom, 1954:156)

The one movement, monotonal[32] and monothematic tone poem, *Tapiola* (1926) lends itself to this discussion. At this stage the nature of the small cell-like episodes will be addressed, with the discussion of their interrelation to follow below.

Corresponding with the earlier themes of economy, *Tapiola* has been described as "classically concentrated and romantically free" (Murtomäki, 1993:295), meeting the concentration of the

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[30] This admission should be compared with the words Sibelius spoke to Newmarch, cited at the end of chapter three; "musical inspiration is like the children's game of word-taking and word-making. A spiritual force (call it God) throws down to one a handful of letters - a message - and a voice says: 'make what you can of this'. " (1939:56).

[31] This is a translation of a working title of *Tapiola*. (*Hongatar ja Tuuli*).

[32] Pike describes this as arguably "hovering" around B minor (1978:114).

Third Symphony (Layton, 1978:42). Salmenhaara's analysis of *Tapiola* offers a complete breakdown of the work into thirty motifs (see appendix fifteen) which comprise its structure through "different degrees of variation" (1970:122).[33] He believes *Tapiola* demonstrates, " [...] the use of musical 'germ motifs', from which everything in a work is developed" (Salmenhaara, 2.7.1988; pers.com.)

Pike, on the other hand, discerns only three fragments of a stepwise scalic nature (fig.12.9; tape e.g.40), indicating the whole-tone nature of some of the musical material (1978:114).[34] Gray, differing again in pursuance of his germ-motif theory, describes the opening phrase as being "pregnant with possibilities", from which he believes the whole work is derived, through twenty-two variations (1931:89).

While challenging Gray, Salmenhaara believes that abstract germ-motifs behind Sibelius' basic motifs are "the fundamental point of departure for processive form, the influence of which permeates everything that happens in the work" (1970:124). Such a process of integration of these "abstract germ elements", which is understood as "organic process form" (1970:122), will be demonstrated below (fig.12.10).

AALTO'S CELLS OF SPACE AND FABRIC

> *"Standardisation involves industrial violence against individual taste."* (Aalto, 1947a)
>
> *"Nature herself is the world's best standardisation committee, but in nature standardisation is practised almost exclusively in the smallest possible units, the cells [...] Architectural standardisation must take the same path."* (Aalto, 1938)

Through his career Aalto developed the use of a number of motifs (e.g., the wave, steps, the courtyard) without these being formulaic. However, their relationship to each other is particularly significant, correlating with the discussions about 'germ-motf' theory above.

CELLS AND STANDARDISATION

> *"The search for a module [... represents] the slavery of human beings to technical futilities"* (Aalto, 1957a)

Aalto led the move to standardise materials and details in the Finnish construction industry, encouraging the availability of good quality design and construction.[35] He believed that "the motivation for form derives from fragments." (Aalto, 1940a). *Baker House Dormitory*, M.I.T. (1946-49, fig.12.13) was the first major building in which standardisation expressed Aalto's deep

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[33] *Tapiola'* can be argued to meet Adorno's demand for "the totality of musical manifestation"; (1966:19). Adorno fired the most vitriolic attack on Sibelius, yet actually promoted a form of modern music which many believe can be found in Sibelius late work.(1966:19).

[34] In this the work corresponds to the *Fourth* and *Sixth* Symphonies.

[35] Aalto led the standardisation committee of the Association of Finnish Architects (SAFA) in the 1940's and 50's. He sought to continue the work of Morris and van de Velde (with whom, incidentally, Aalto's mentor Frosterus had worked); the improvement of the quality and design of mass produced goods, and thus increasing the spiritual quality of life.

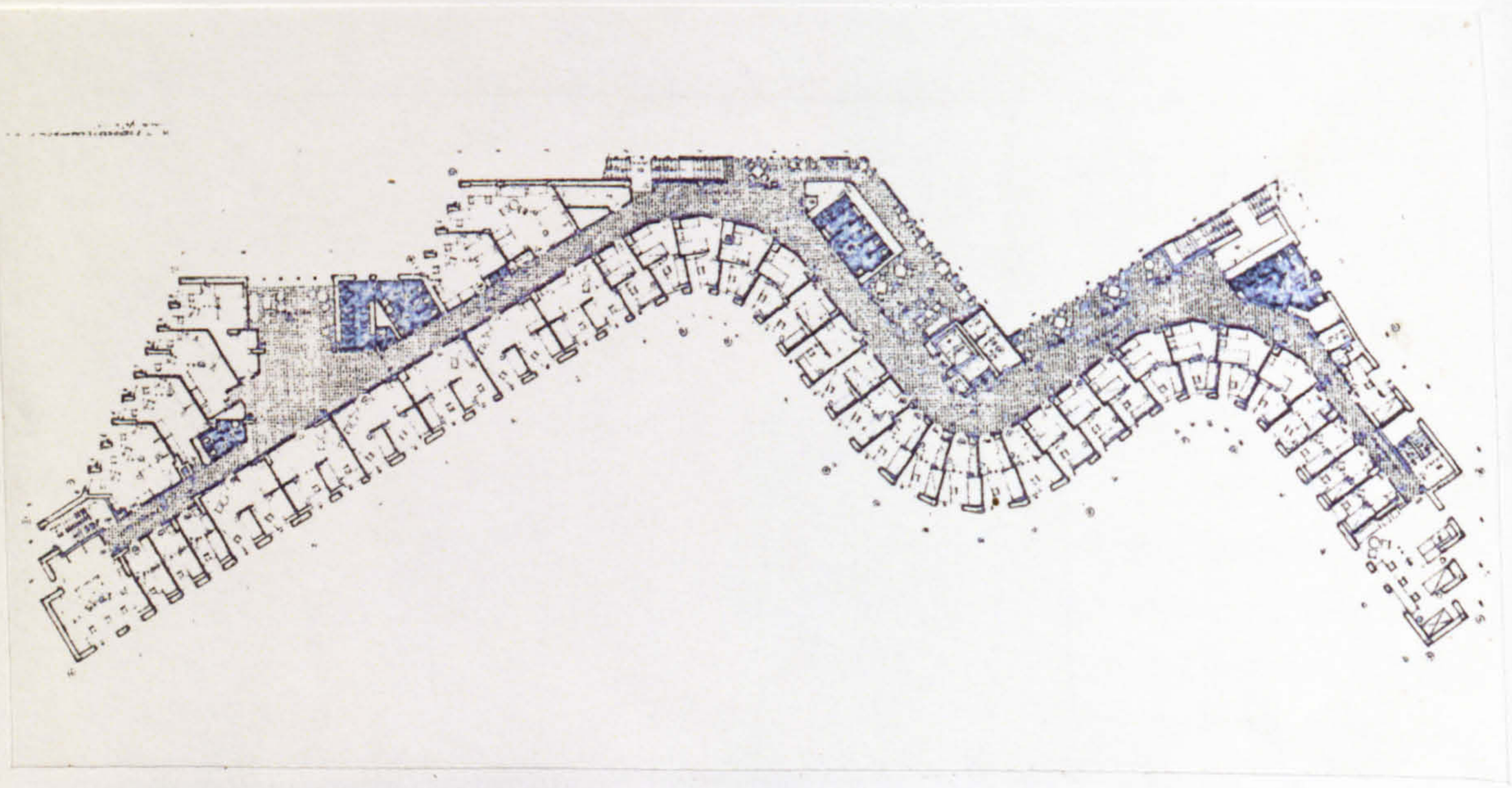


12.11

Fig.12.11 Alder buckthorn



12.12



12.13

Fig.12.12 Spruce banches

Fig.12.13 Plan of *Baker House Dormitory*, Aalto, 1946-9

personal belief in nature-inspired flexibility, being fine tuned in *Neue Vahr*, Bremen (1958-62, fig.12.14). Nevertheless, it has been suggested that in all his work, he sought creative form which could comprise standard elements to exploit the true nature of the materials and the function (Standertskjöld, 1992a & 1992b);[36] being both complex (i.e., flexible and related as their functions demand) and economic (i.e., made of standard parts), but which was never lifeless.

Individuality and Variation

In 1955 Aalto asked how massed production might be broadened in scope "without detriment to people's natural individuality and the natural variations in their surrounding?" (1955a) Criticising the "rootless airborne internationalism" (1955a) of his old CIAM colleagues, his work had long manifest a call for the "natural variability of theme" (1938) and a rootedness in the natural context of geography and specific human needs (1955a).[37] In part it was this which stimulated him to explore a more natural standardisation in which he sought "cell-like" units, the outworkings of which he had observed in the living forms of nature and in botany classes. These were uniform to a degree which enabled mass production, but not to the extent which impinged on their uniqueness, or, in extrapolated building forms, the "freedom" of "little man".

For example, since the mid 1930's Aalto had developed cheap, designer furniture through the Artek company (fig.12.15). He had also sought to develop a flexible minimum dwelling to house the thousands of Karelians fleeing Russian occupation of Eastern Finland during and after the war,[38] the result of which is said to have motivated his *Baker House* design.[39] Integrating topography and design flexibility, Aalto had encouraged the planning of towns in which "construction is accompanied by sufficient variation and uses of elements suited to the landscape [so] the conditions for an organically well-formed town are met." (1966). Thus, Aalto's experimental approach allowed a problem to be broken down into elements, from whence it was allowed to grow into a whole from a root belief in "humane standardisation" (1955a).[40] Thus he, as an architect, strove for "life patterns" which were more "sympathetic", believing that "ever-increasing mechanisation" estranges humans from nature (1955b).[41]

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[36] Aalto' developed a hundred or so 'type-forms' or 'standards' for stairs, windows, railings etc.These evince his commitment to elements of modernism. See Standertskjöld, (1992a & 1992b).

[37] If, as Aristotle believed, "[...] that which was small at the start turns out a giant at the end" (Stocks, 1930:1.5, 271b8ff), then symbolically Aalto's concern for "little man", the often powerless user of the building, would have triumphed.

[38] Aalto was sponsored by the Alfred J. Bremis Foundation to study prefabricated, low cost housing units in 1940, at M.I.T..

[39] Aalto's unsuccessful competition entry for the H.A.K.A. (Social Democratic Building Society) had a single loaded corridor, and the beginnings of the fan-form plan. These ideas expanded on the Modernism of Europe, which was still not popular in Finland.

[40] Chapter six has cited examples, such as the acoustics and cladding for Finlandia Hall that have proved to be an extremely costly mistake. Indeed, citing Chaplin's film *Modern Times*, Aalto mused that "We declare our selves masters of the machines when in reality we are their slaves." (1955b).

[41] "In architecture, the rule of standardisation is thus not to aim at a type, but on the contrary to create viable variety and richness which in an ideal situation is comparable to nature's infinite capacity for nuance" (Aalto, 1941b). Indeed to avoid the "law of fatigue" repetition "needs to be intermixed with changes which refresh again" (Spearman, 1931:48).

HARMONIOUS SUM OF DETAILS

> *"Each fragment of this construction carries the mark of the total creation, and a beauty is born from the harmonious sum of the details."* (Review of the *Finnish Pavilion*, Paris World Fair, 1937)[42]

It can be argued that Aalto formed his whole compositions from parts, themselves generated by the brief. Thus the parts may become generators of whole form, be they (a) small spatial units, such as in *Rovaniemi* (1963-68, fig.12.16) and *Seinäjoki* (1963-65, fig.12.18) libraries, the *parti* of which was the subdivisions of the sunken, top-lit reading space (fig.12.20), (b) the configuration of individual study-rooms with the requisite good natural lighting and views, and which should break the pattern of institutional corridors which generated the *parti* of *Baker House* (1946-49, fig.12.21) and *Otaniemi* (1962-66, fig.12.22) dormitories, or (c) larger spatial units, such as the form of a cultural development at *Wolfsburg* (1958-62, fig.12.19) that was determined by the size and nature of increasingly large meeting spaces, and their relation to smaller elements within the whole.

'Little sister of the column' : Detailed Episodes

The derivation of the rich forms and variation which Aalto sought, he found, in part, in wood as a building material (1956). Like the *Savoy Vase* (1936),[43] the Aalto stool (1932-3) had became an icon of his design genre, being a starting point for many areas of exploration into the 'cellular' nature of form. In the case of the stool, Aalto explored the layered nature of the laminated wood, and the function of standard, stackable units (fig.12.24). He signified its nature by relating it to the past as "the little sister of the column"; i.e., the basic tenet of classical building form. The development of the design of the leg is also apparent in experimental wood sculpture (fig.12.26) dating from between 1930-1947, in which he explored the nature of wood; i.e., its flexibility, its tubular nature, and its capacity to produce standard, yet unique form.

For example, in one experiment two multiple-stick curving protrusions are placed on the multifaceted background comprising hundreds of small, unique cubes of wood (fig.12.27). This created a dialectic both between the background and foreground, and within these zones of the work. These may be said to demonstrate the relation of the rational (e.g., rectilinear) to the unique (e.g., natural) eloquence from either a natural material (e.g., wood) or from an undulation, and the way in which the rectilinear (e.g., cubes) may itself comprise a rationale which is natural rather than artificial (e.g., inherently different, uniform sized cubes). In this experiment Aalto denotes the natural strength and flexibility of wood, its capacity to be machined into standard elements, yet also its inherent capacity to retain individual character. Significantly, it should be remembered that at this time wood had no place in Modern design.

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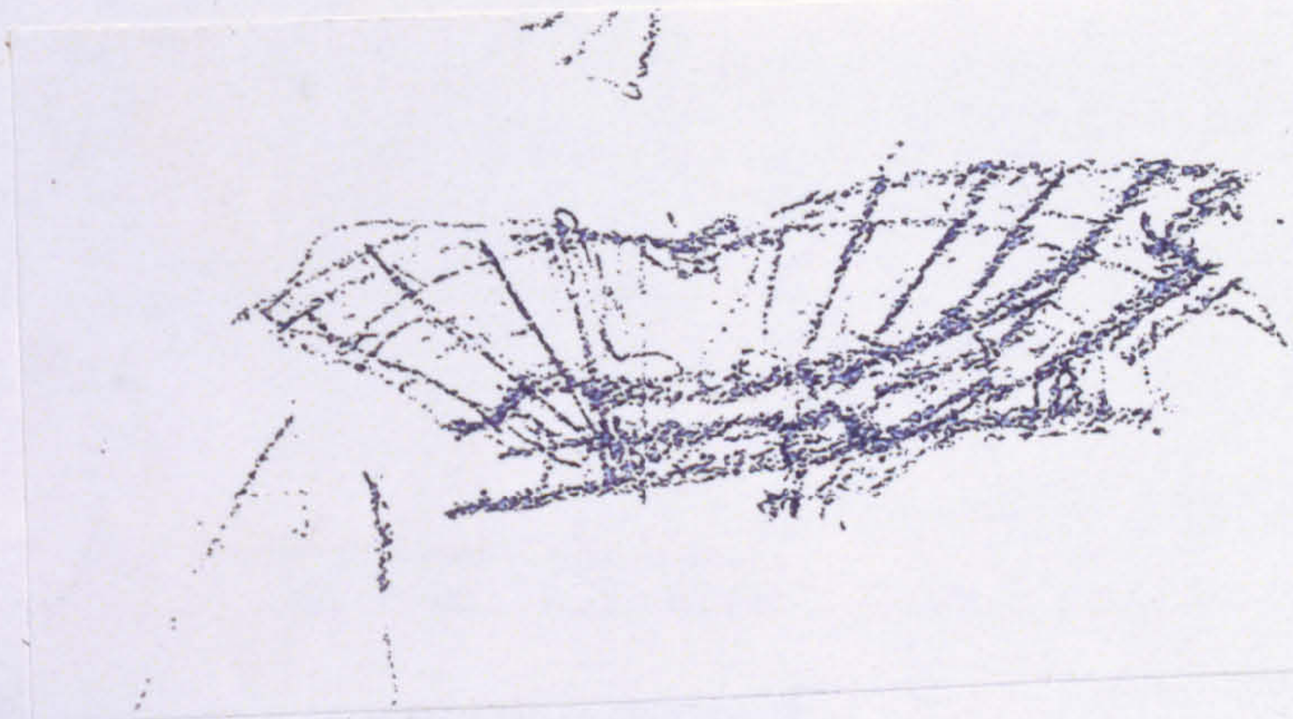
[42] Anonymous article in *L'Architecture d'Aujourd'hui* (1937:10:77).

[43] The vase was originally known as *The Eskimo Woman's Leather Breeches*. For discussion see Connah (1994).



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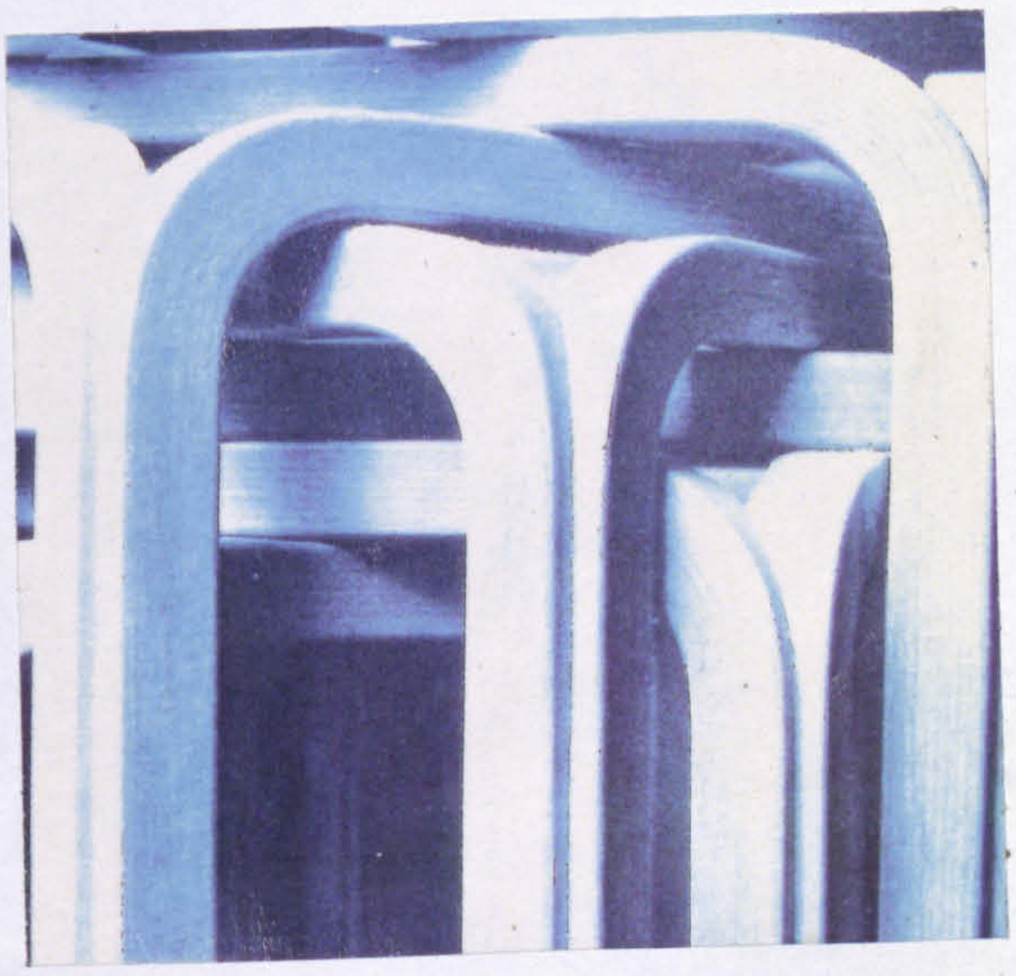

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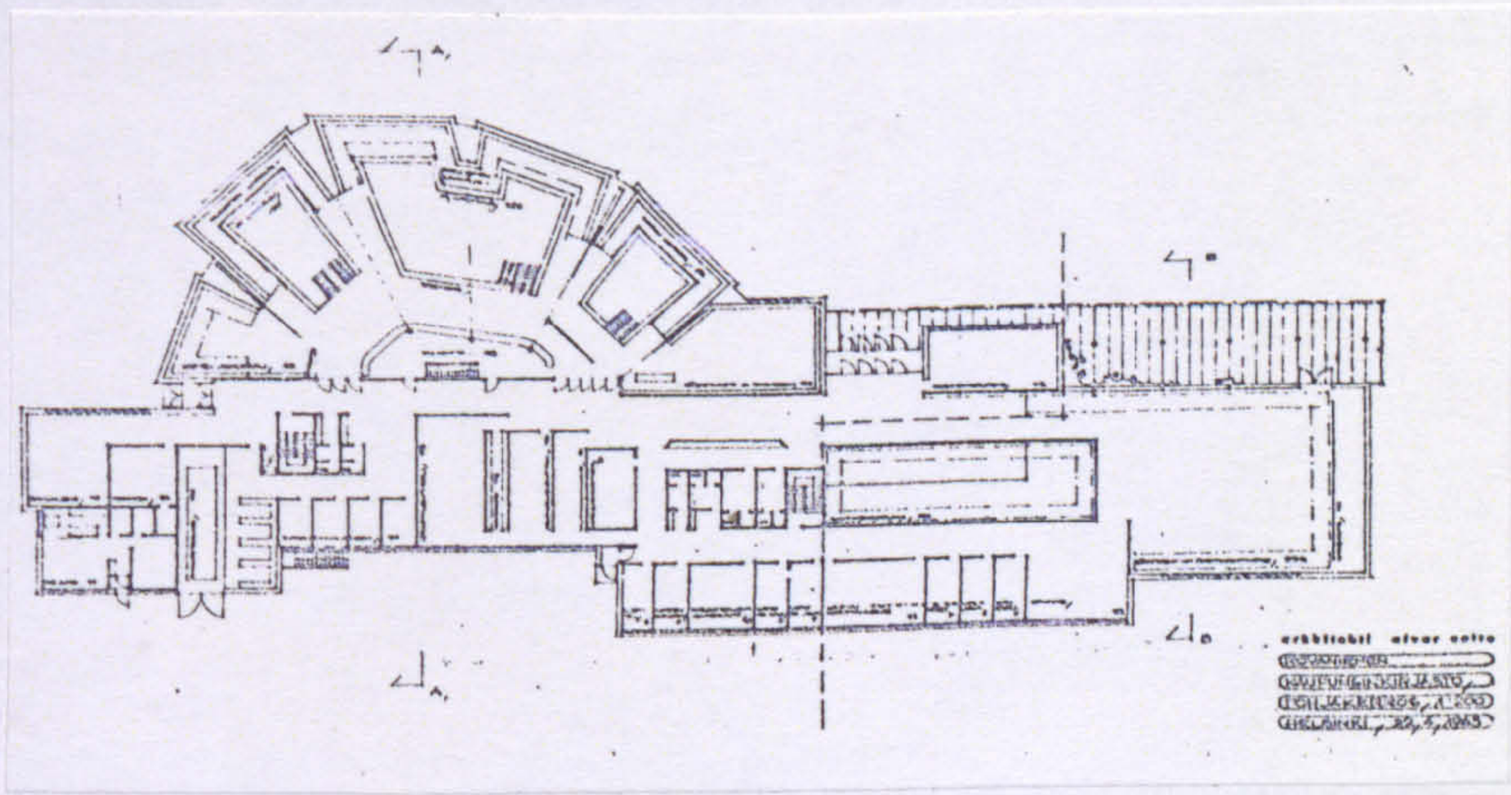

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Fig.12.14 Sketch plan of *Neue Vahr Apartments*, Bremen; Aalto, 1958-62

Fig.12.15 Stack of 'Y' leg bent-wood chairs; Aalto, 1946

Fig.12.16 Plan of *Rovaniemi Library*; Aalto, 1963-8

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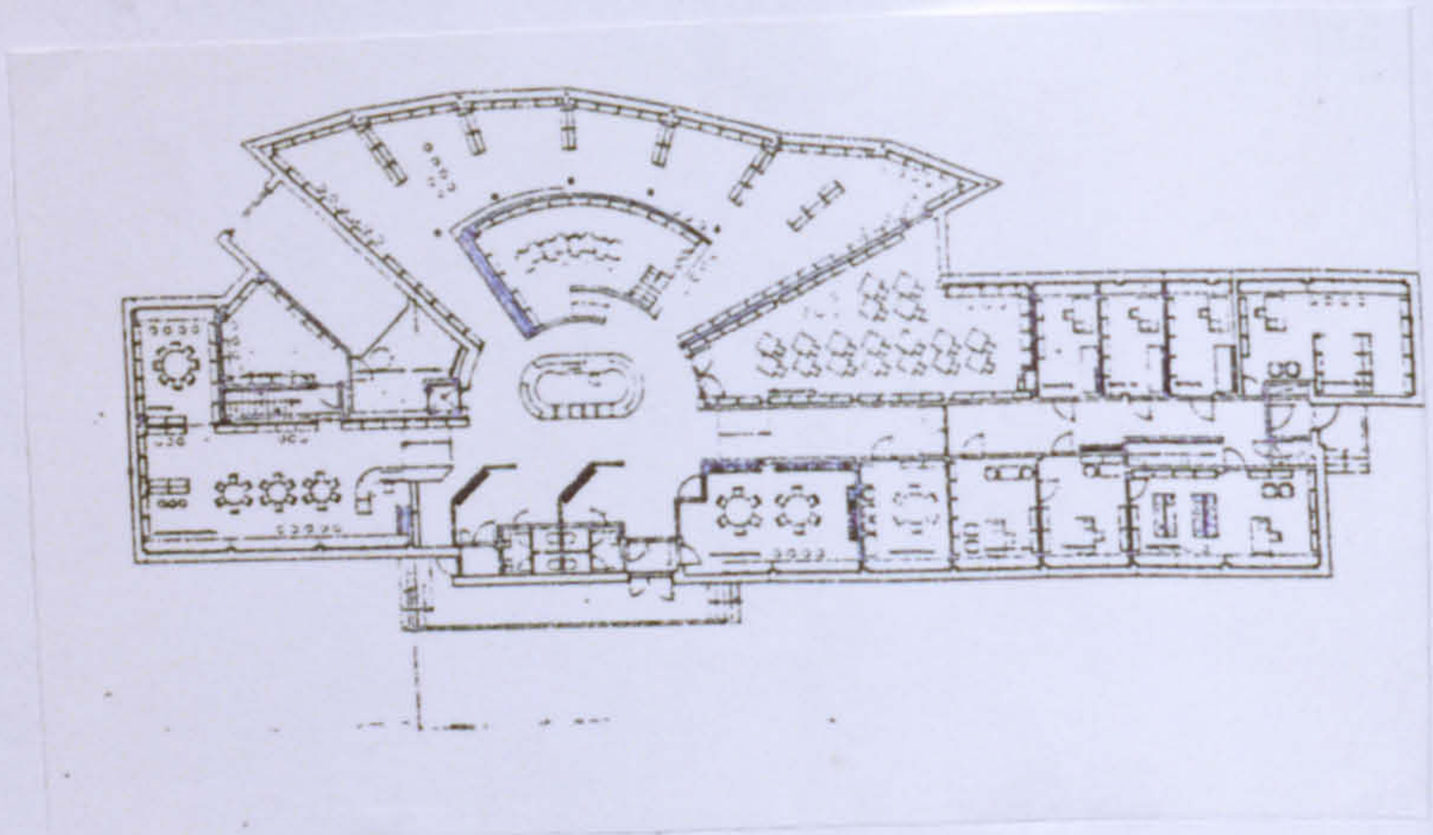



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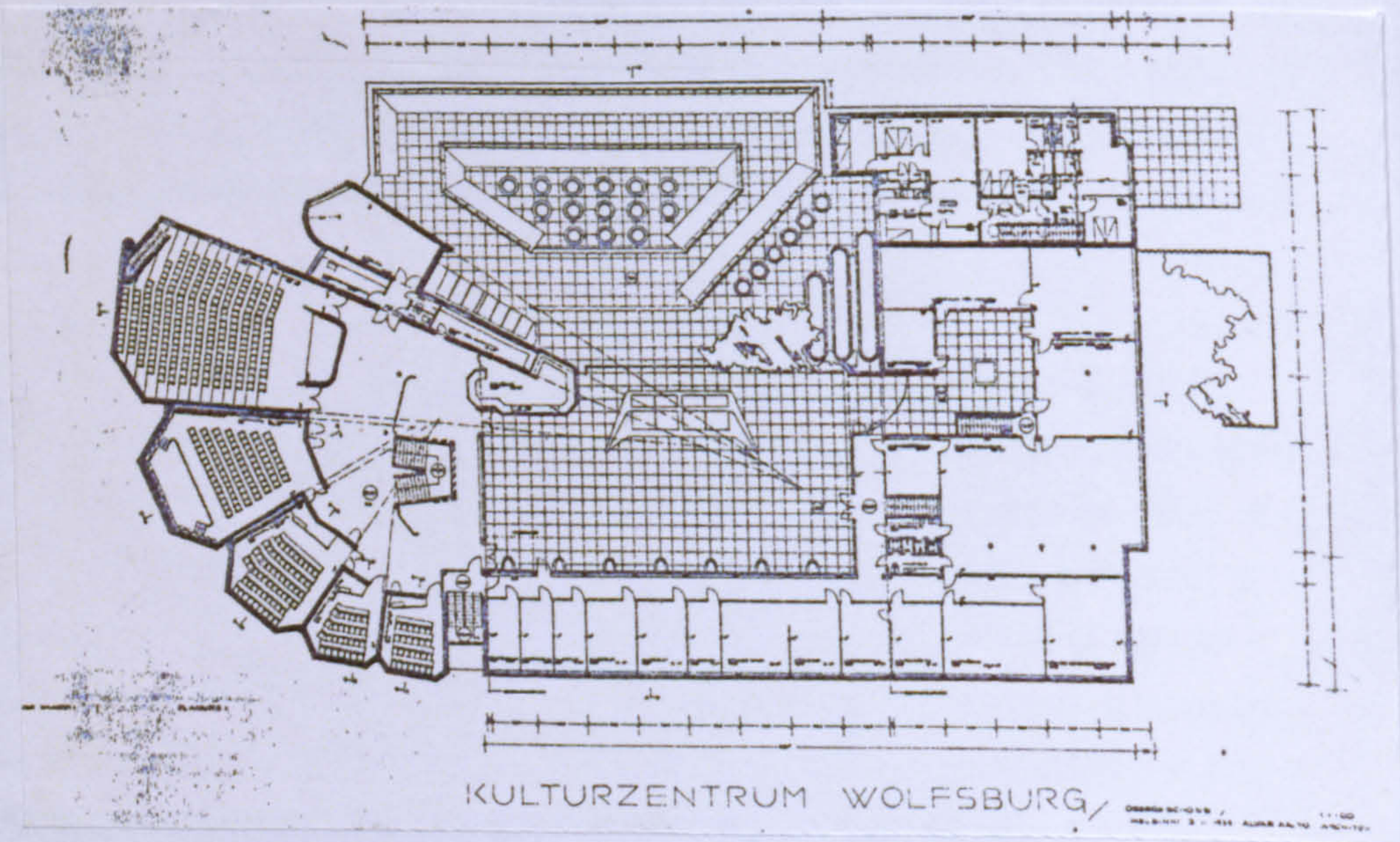

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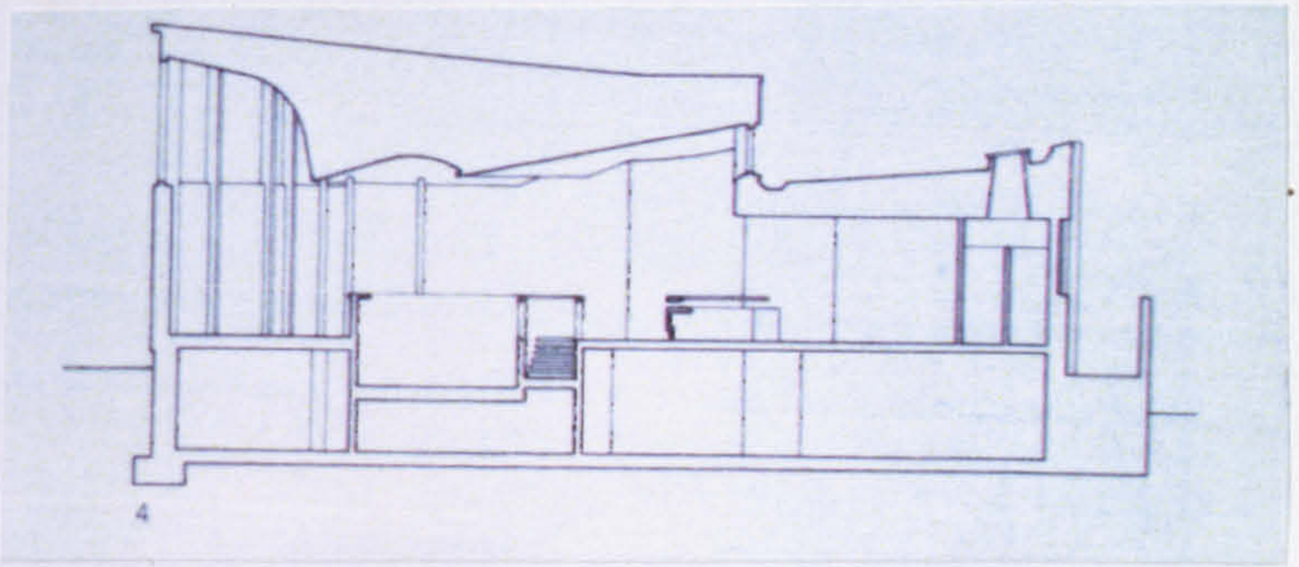
Fig.12.17 Plan of *Seinäjoki Library*; Aalto, 1963-5

Fig.12.18 Lady fern

Fig.12.19 Plan of *Wolfsburg Cultural Centre*; Aalto, 1958-62



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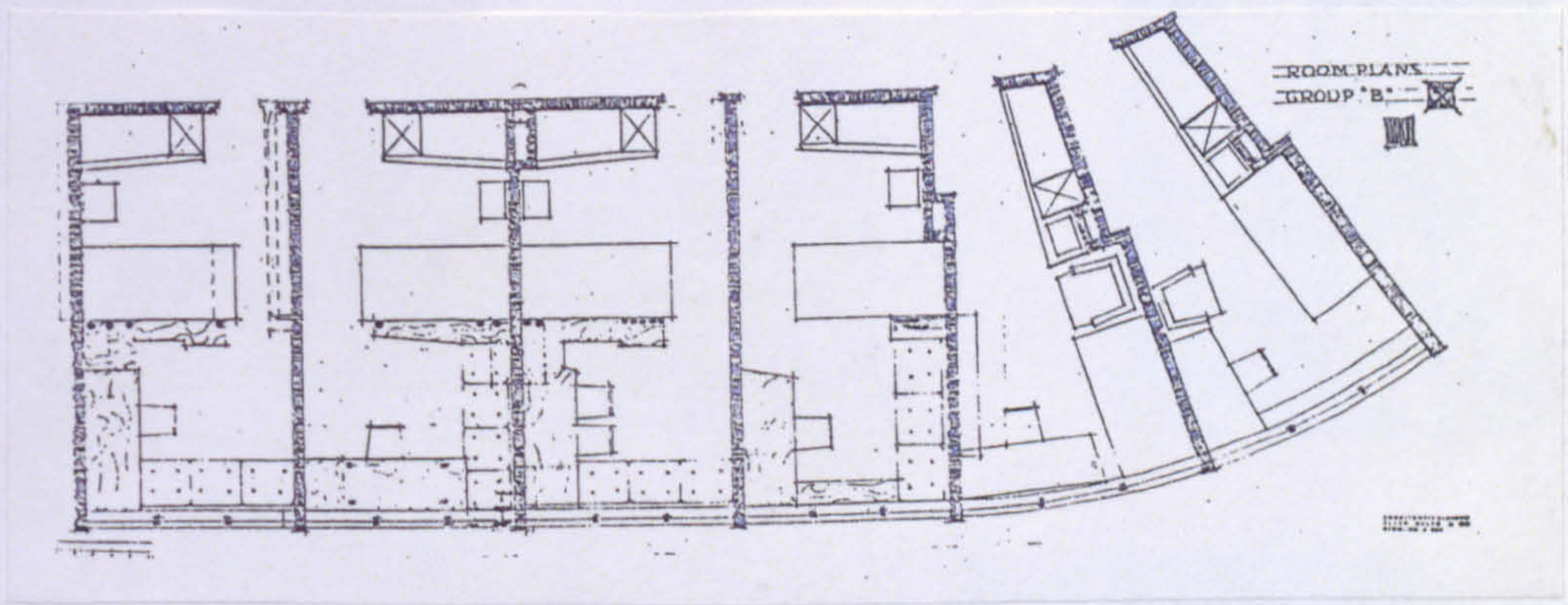

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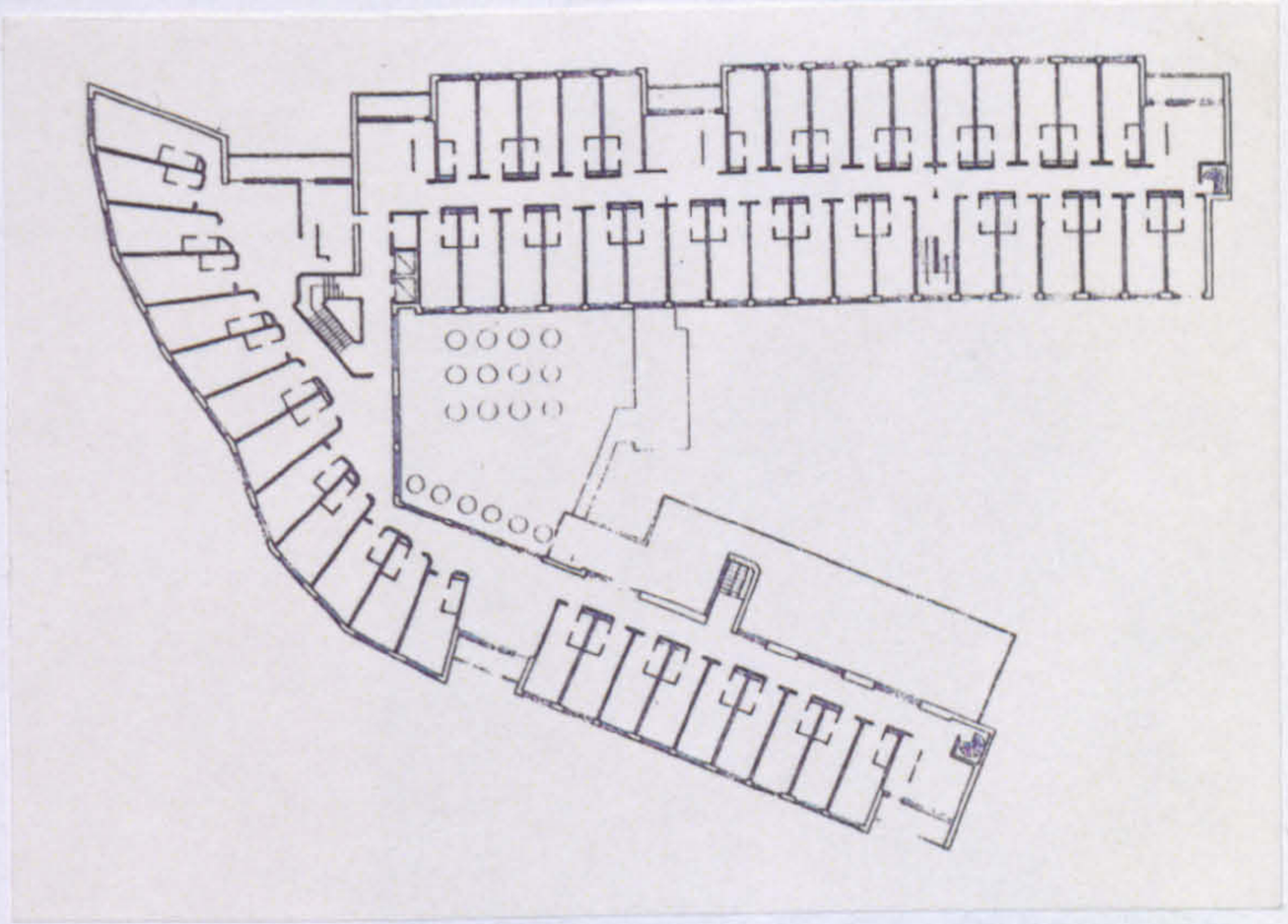

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Fig.12.20 Section through *Seinäjoki Library*; Aalto, 1963-5

Fig.12.21 Part plan of *Baker House* study-bedrooms; Aalto, 1946-9

Fig.12.22 Plan of *Helsinki University of Technology Dormitories,* Otaniemi; Aalto, 1962-6



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Fig.12.23 Pine branch growing towards sun

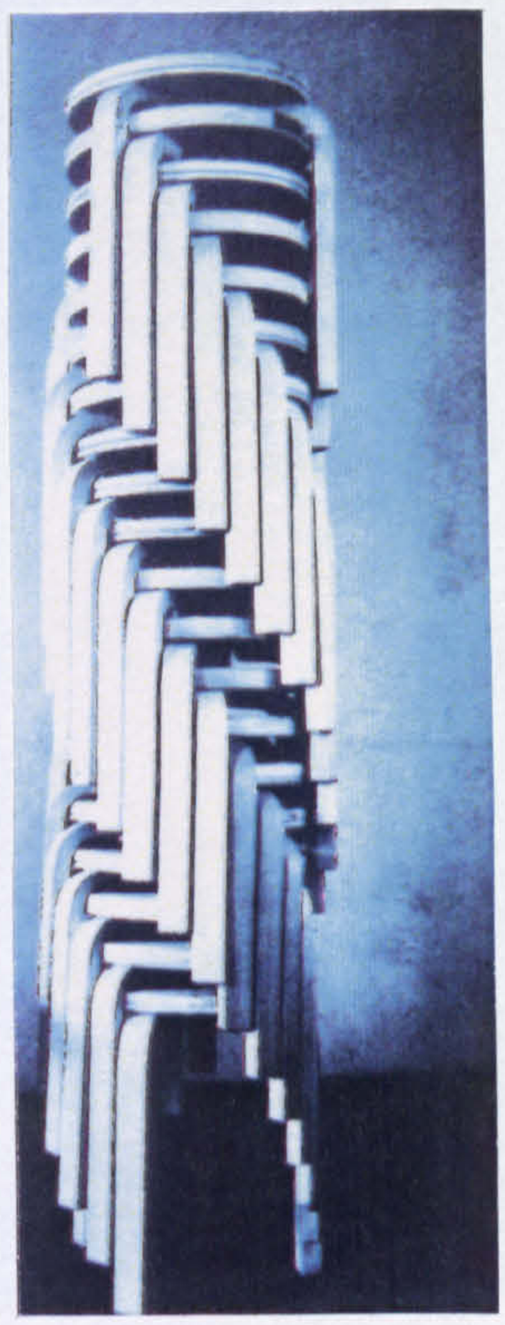

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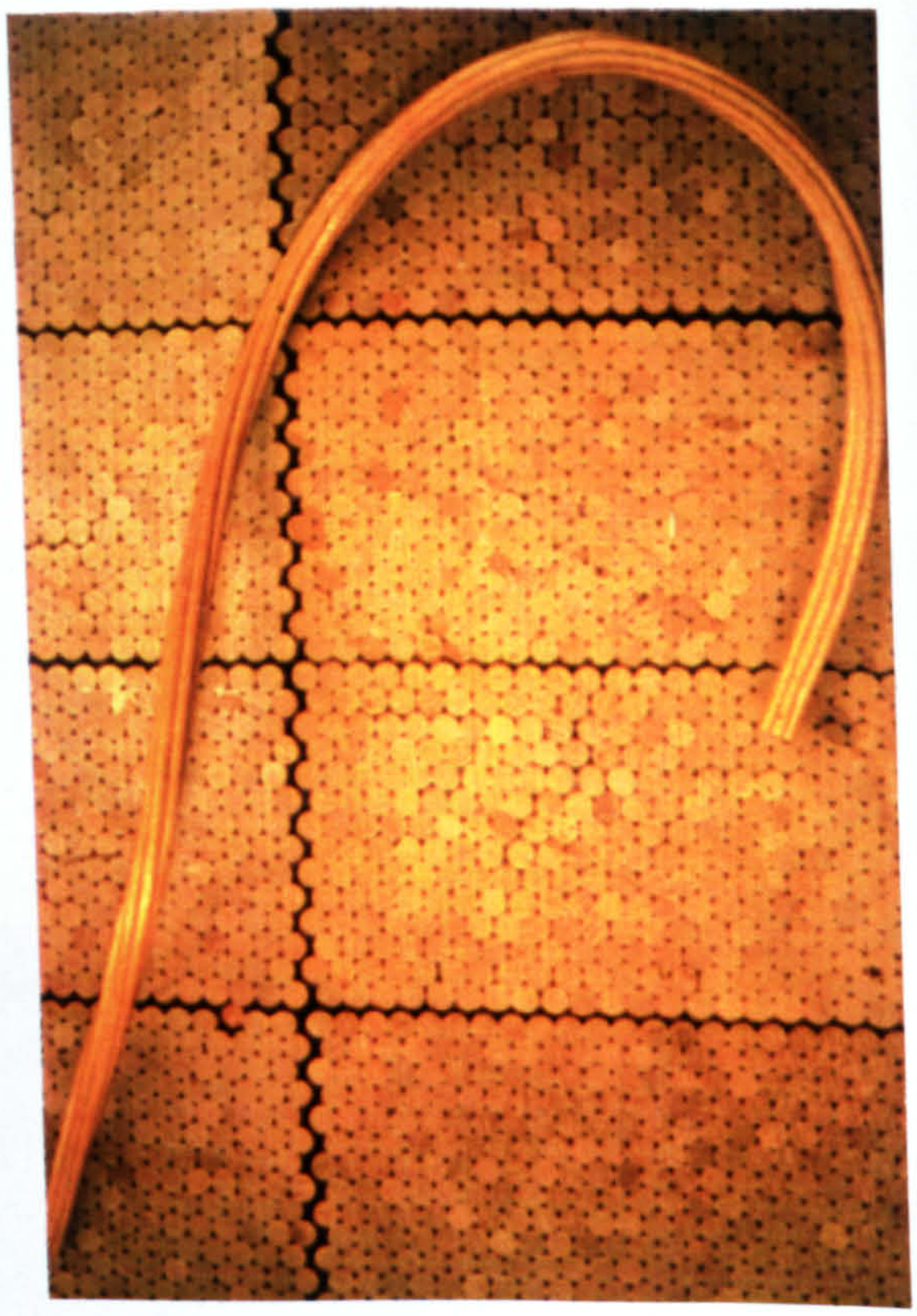
Fig.12.24 The 'little sister of the column'; Stackable *Bent-wood Stools*; Aalto, 1933

Fig.12.25 Fungus growing on Alder



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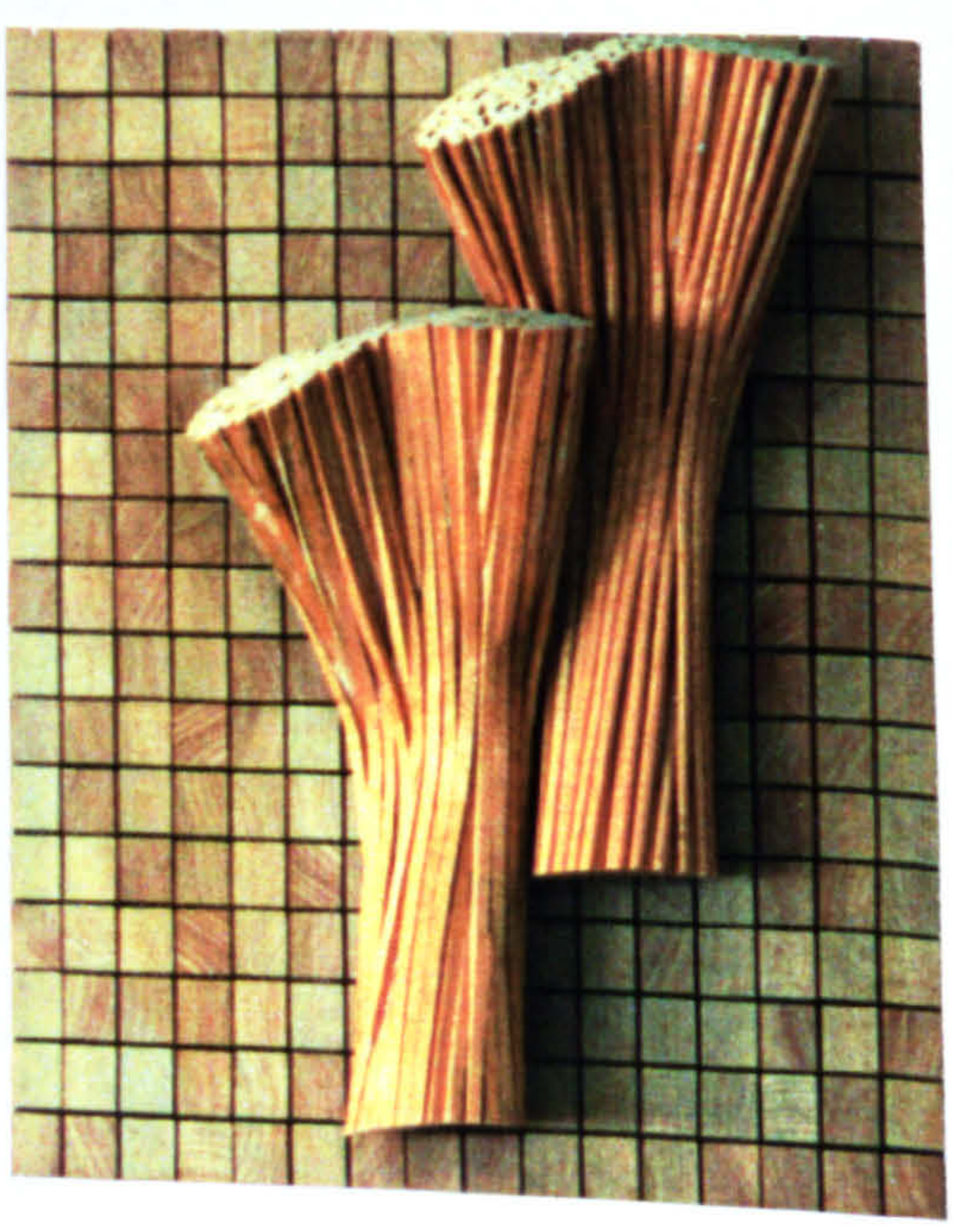

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Fig.12.26 *Wood Experiment*; Aalto, circa 1930

Fig.12.27 *Wood Experiment*; Aalto, circa 1930

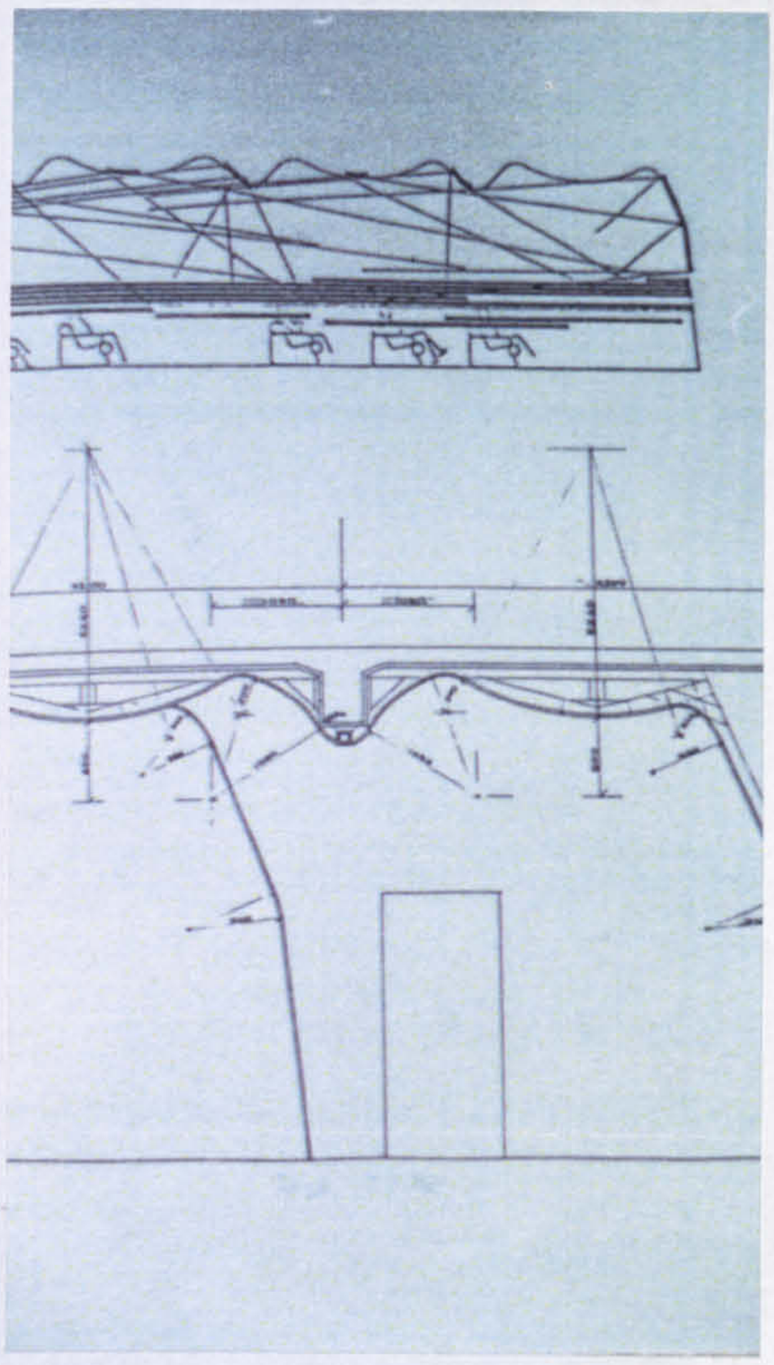

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Fig.12.28 Section through undulating ceiling, *Viipuri Library*; Aalto 1927-35

Fig.12.29 *Savoy Vase*; Aalto, 1936



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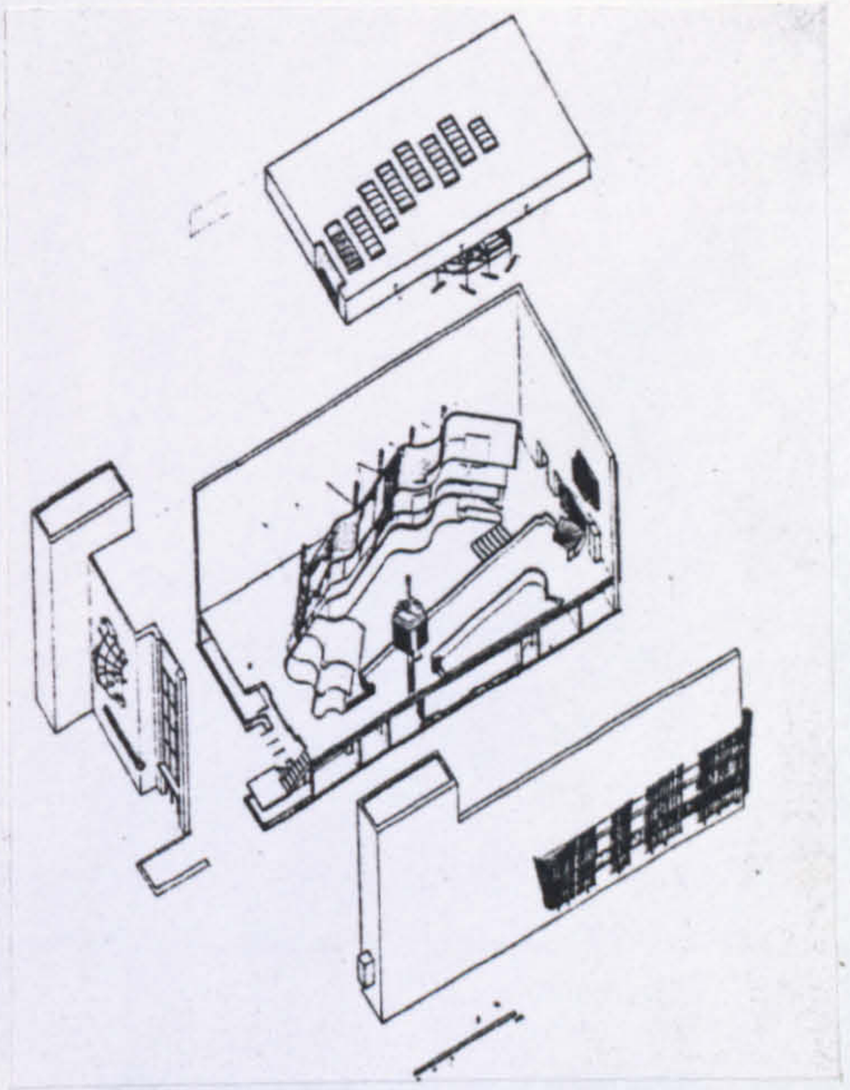
Fig.12.30 Chimney breast, *Villa Mairea*; Aalto, 1936-9

Fig.12.31 View of first floor studio, *Villa Mairea*; Aalto, 1936-9



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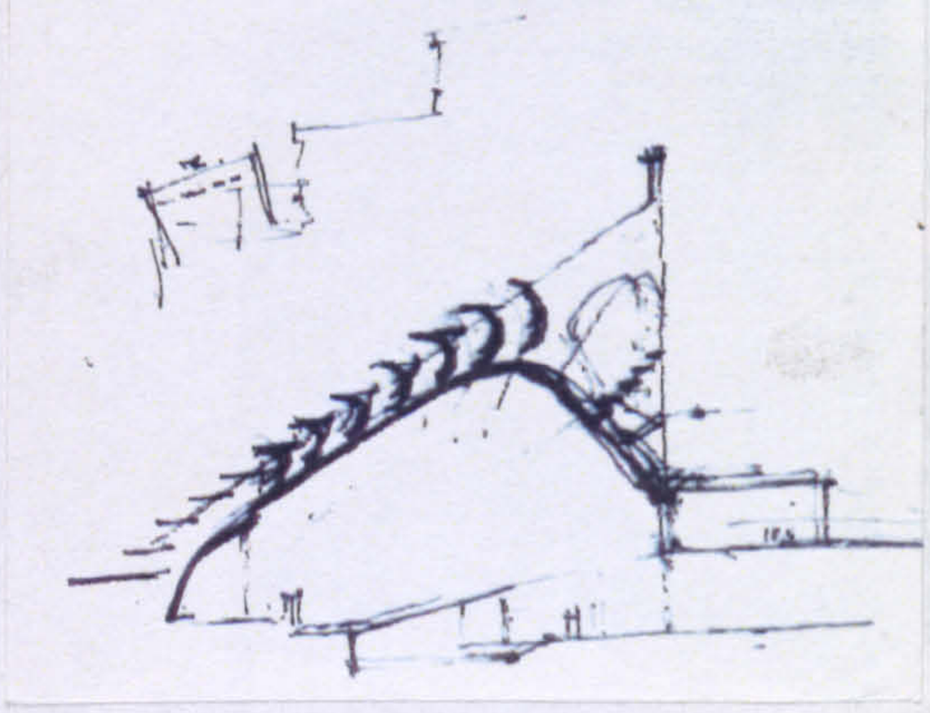

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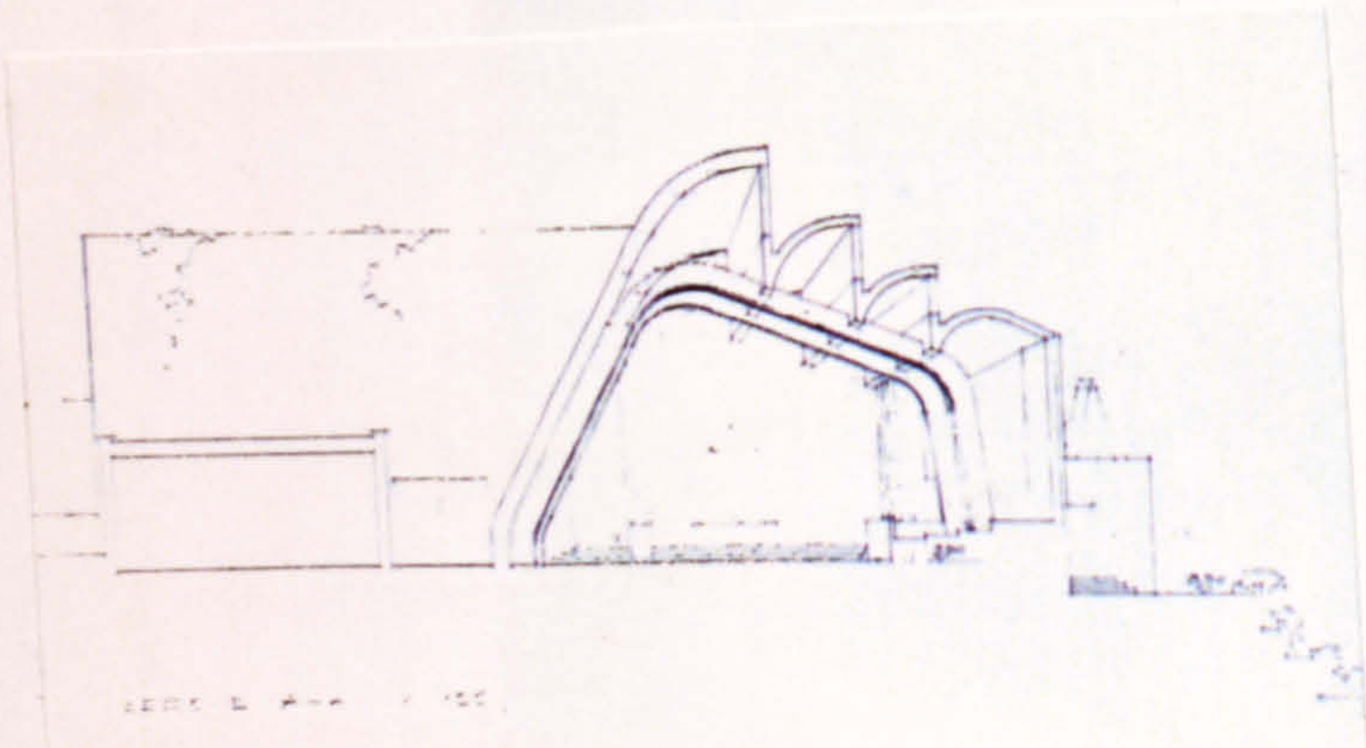
Fig.12.32 Axonometric of the *Finnish Pavilion*, New York World Fair; Aalto, 1939

Fig.12.33 Ceiling of *House of Culture*; Aalto, 1955-58

Fig.12.34 Sketch section through *Helsinki University of Technology* lecture theatres; Aalto, 1955-64



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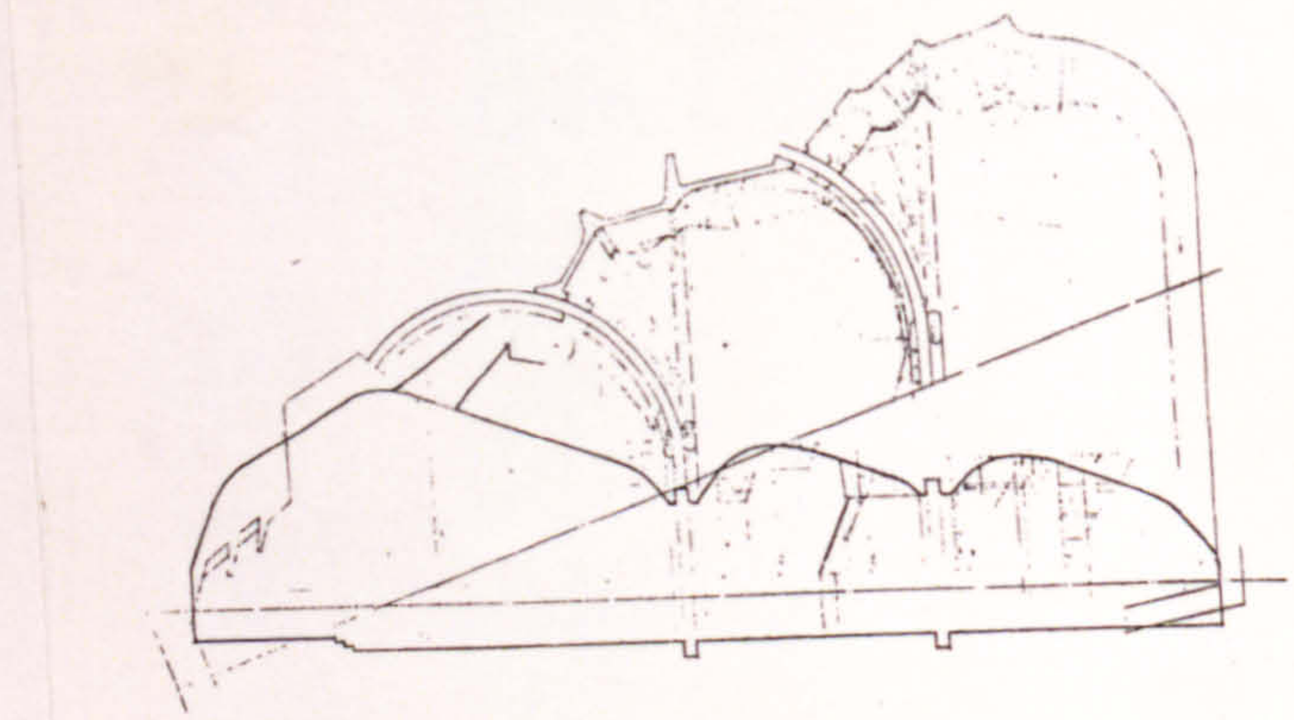

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Fig.12.35 Section through *Riola Church*; Aalto, 1966-7 (designed)

Fig.12.36 Plan and section of *Vuoksenniska Church*, Imatra; Aalto, 1956-9

Fig.12.37 Section through chancel and top lighting, *Vuoksenniska Church*, drawn as a 'little sister of the column'; Aalto, 1957



12.38



12.39

Fig.12.38 View of *Seinäjoki Library* clerestory lighting; Aalto, 1963-5

Fig.12.39 Interior of *Seinäjoki Library* showing book shelves and clerestory lighting; Aalto, 1963-5



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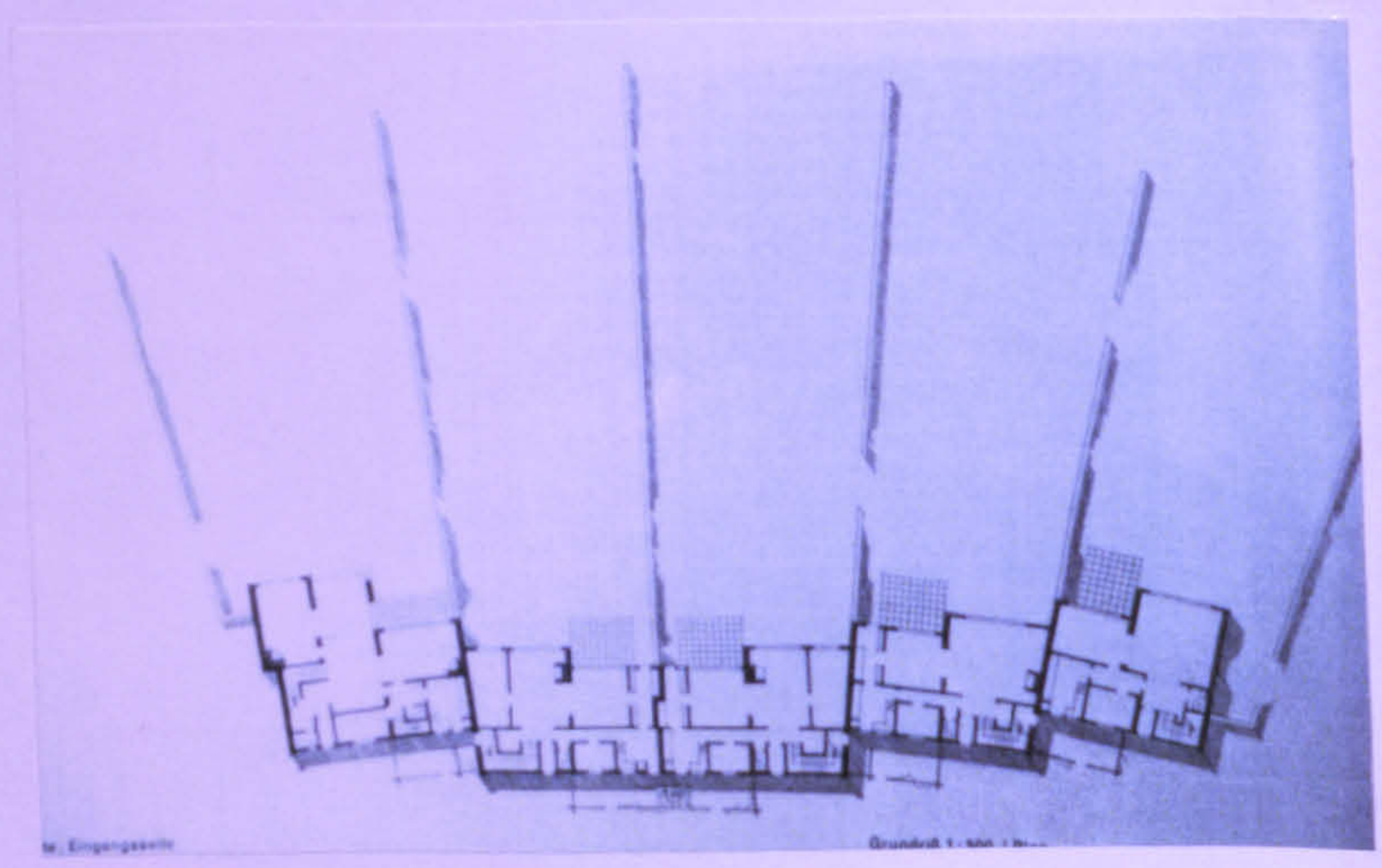

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Fig.12.40 Facade of *Workers' Housing*, Sunila; Aalto, 1935-9

Fig.12.41 Plan of *Workers' Housing*, Sunila; Aalto, 1935-9

Fig.12.42 Terraced housing at *Kauttua*; Aalto, 1937-40

Other motifs, such as the wave, the undulation, and the fan-form, developed alongside the bent-wood *parti.* From *Viipuri's* acoustic ceiling (1935, fig.12.28), the *Savoy Vase* (1937, fig.12.29) and the *Villa Mairea* fireplace and studio wall (1939, fig.12.30 & fig.12.31), the wave undulated towards the plan and section of the *Finnish Pavilion* at the New York World Fair (1938-9, fig.12.32). From there the plan of *Baker House* (1946-9), and the plan, elevation and ceilings of the *House of Culture* (1955-58, fig.12.33) were developed, anchored to some element of rectilinearity. In *Otaniemi* lecture theatres (1955-64, fig.12.34), and in *Riola Church* (1966-78, fig.12.35)[44] the 'little sister of the column' motif has become the structural system, intersected with light, giving the building its overall form. In *Vuoksenniska Church* (1956-59, fig.12.36) the sign of the bent wood is apparent in plan, section, and in details such as the heating/ventilation system, being accompanied by the sculpted waving interior volume. The wave, undulation and 'little sister of the column' motifs were thus translated into many formal contexts, including both visible and hidden form (fig.12.37).

Spatial 'cells'

In *Seinäjoki Library* (1963-65, fig.12.17) there are two types of spatial 'cells'; the simple rectilinear and the flexing. The former were designed as offices (now united to offer enlarged book/music, viewing/storage spaces), which forms the anchor, or 'pedal' in Sibelian terms; i.e., the bass (or base) which roots the more vibrant, melodic activity above, to be demonstrated in detail in chapter thirteen. The fragmented book-shelf areas which form the second type of 'cell' space (fig.12.39), combine to produce the flexing southern facade (fig.12.38). As in many of his buildings Aalto allows the space at the heart of the library to flex beyond the planar dimension,[45] reaching up in a sculptured manner to the light (i.e., the source) on which the function of the space is dependent (fig.12.39). The motif of these elastic spatial 'cells' may have grown out of the flexibility of the waving elements and details cited above; yet they also express an 'essential', often individual, content or character of a space.

Aalto had begun expressing the individual identity of the homes in the *Sunila Housing* (1935-39, fig.12.40 & 12.41). Then, in the *Kauttua Housing* scheme (1937-40, fig.12.42) he allowed the building to take its form from the topography of the stepped site, although the plans are inherently rectilinear. However, the first outworking of these flexible spacial units into a complete form came in *Baker House* (1946-9); to be explored below.

The use of such 'cells' then developed apace. From *Baker House* came the accommodation buildings of *Neue Vahr* apartment block (1955-57, fig.12.44, and those at *Otaniemi* (1962-66, fig.12.22), *Lucerne* (1965-8, fig.12.43) and *Porvoo* (1966, fig.12.45). From *Seinäjoki* (1963-5, fig.12.17) came *Rovaniemi* (1963-8, fig.12.16), *Otaniemi* (1964-9, fig.12.47) and *Mount Angel*

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[44] This building is incomplete. The bell tower, an important element of the scheme, was never built.

[45] For instance, in churches often the most malleable formal element is reserved for the chancel area, in which the central element of Lutheran liturgy (the Word of God) is spoken, and where the communion altar is placed.

(1965-70, fig.12.48) libraries. The flexible cell spaces also appeared in lecture theatres in *Jyväskylä University* (1950-56, fig.12.49), the *Technical University*, Otaniemi (1955-64, fig.12.50), and in the museum exhibition spaces of the *Alvar Aalto Museum*, Jyväskylä (1971-3, fig.12.51), the *Museum of Central Finland*, Jyväskylä (1959-62, fig.12.52), and in a scheme for a *Fine Art Museum* scheme in Chiraz, Iran (1970, fig.12.53).

SUMMARY

"I am a unity that is multiple and a multiplicity that is one." (Bergson, 1911:271)

In his life-infused philosophy Bergson recognised that the tendency for individuality is everywhere present in the organised world, and is everywhere opposed by the tendency towards reproduction; "For individuality to be perfect, it would be necessary that no detached part of the organism could live separately." (Bergson, 1911:14).[46]

Without suggesting he built his whole works from a single three note cell, it is established that Sibelius worked with small episodes of sound in the process of creating integrated musical 'wholes' ; a "totality of musical manifestation" (Adorno, 1966:19). Aalto, too, chose to handle distinctive units of space (arising from distinct functions) and other architectonic motifs (e.g., mullions, fig.12.46 or stools, fig.12.24) with which to form creative totalities.

Whitehead asserted that reality "is an organism" because everything resembles a living organism in the fact that its essence depends, not on its components merely, "but on the pattern or structure in which they are composed." (Collingwood, 1945:167). In other words, there are more to these totalities than the small episodes explored above, such as the many other harmonic and rhythmic, or functional, structural and environmental elements which demand attention, and which must be properly accommodated in the composition. Nevertheless, it is necessary to recognise the significance of the small episodes or units if the true extent and significance of their interrelatedness within a greater process of the conciliation of different parts (e.g., instrumental voices or different functions) or forms (e.g., static elements against those which are dynamic) is to be appreciated.

Having demonstrated the componential nature of Sibelius' and Aalto's compositional techniques it is appropriate to move to discuss the process by which these elements and episodes came together into whole form. The next section will explore something of that process, which, it will be shown, is inherent in the 'cells' themselves. In other words, inherent in their separate identity is a vital force; the need to relate.

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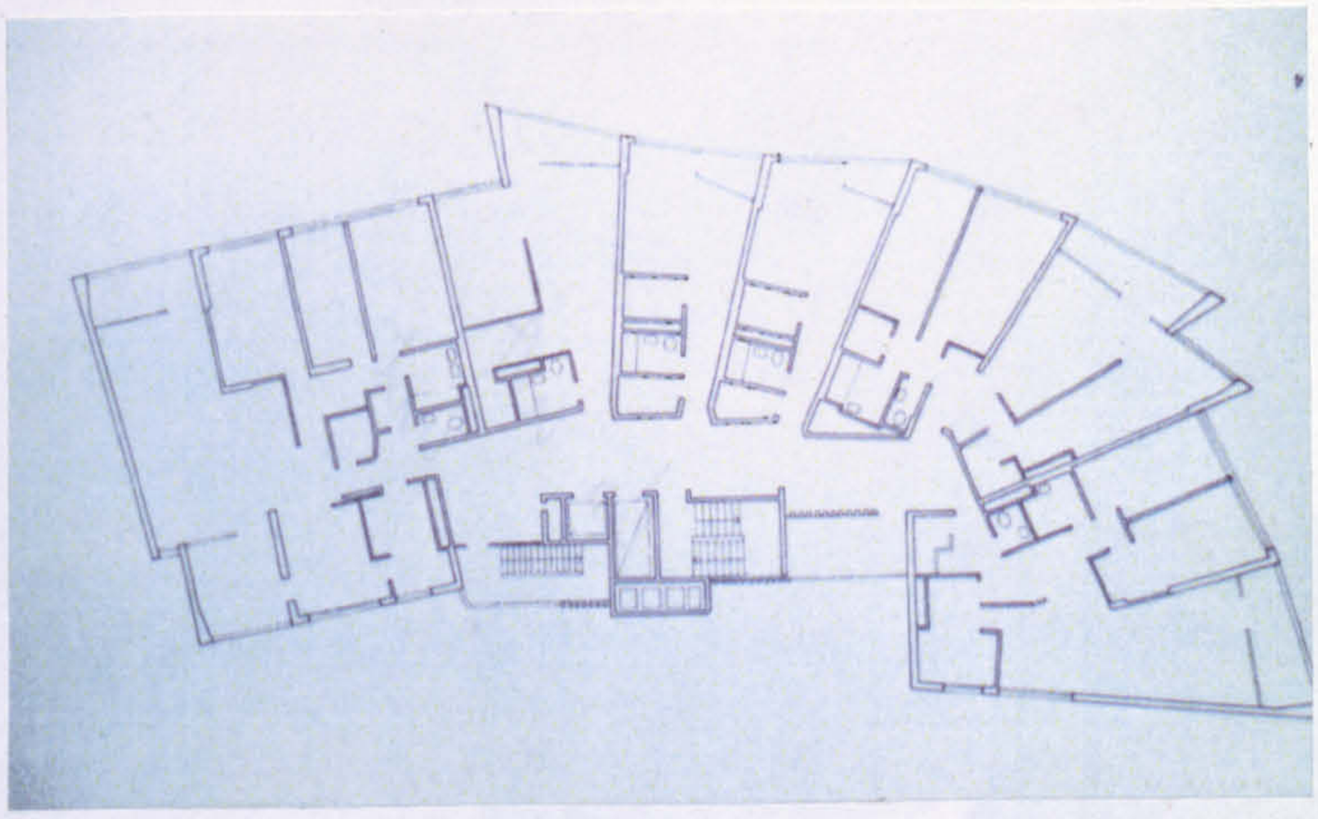
[46] Reproduction would then be impossible, being the building up of a new organism with a detached fragment of the old. He writes (1911a:15) that, "the present contains nothing more than the past, and what is found in the effect was already present in the cause." An organised body grows and changes without ceasing. What was one becomes many.



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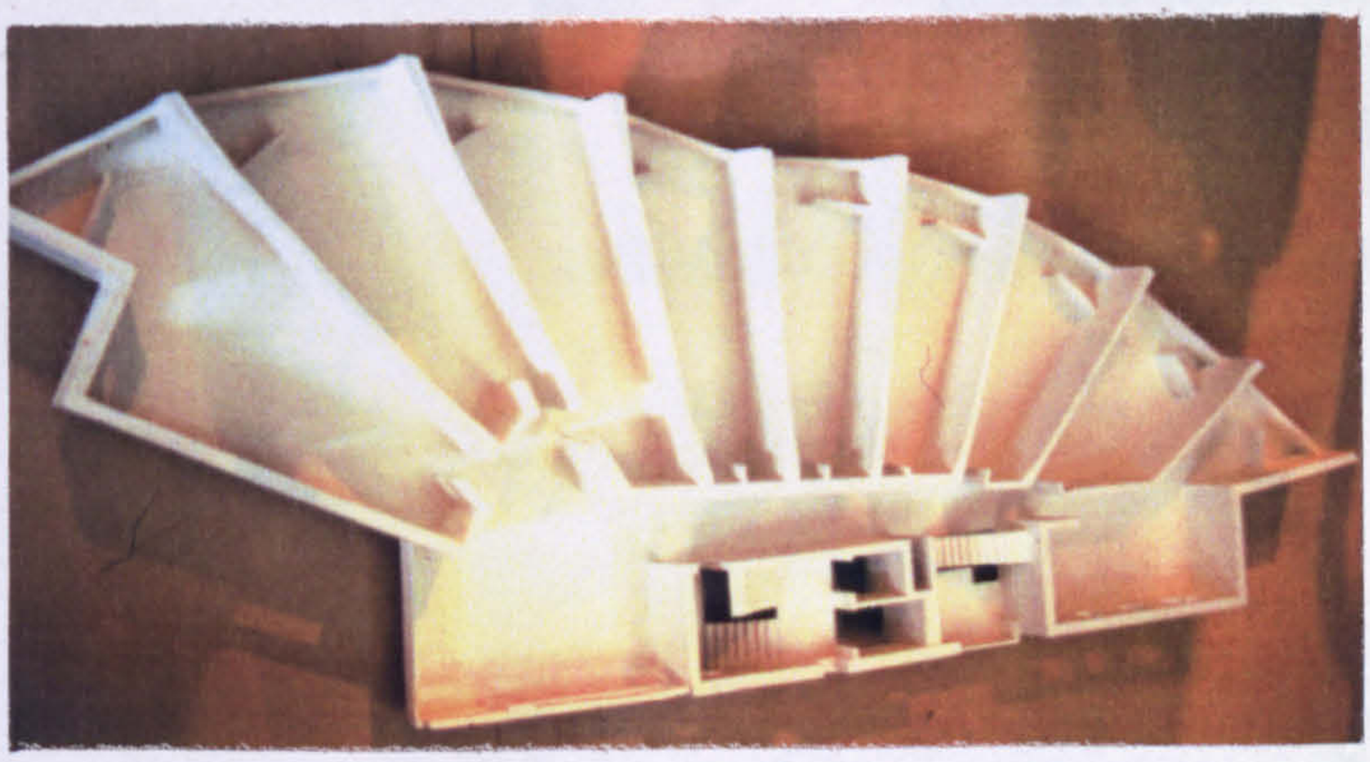

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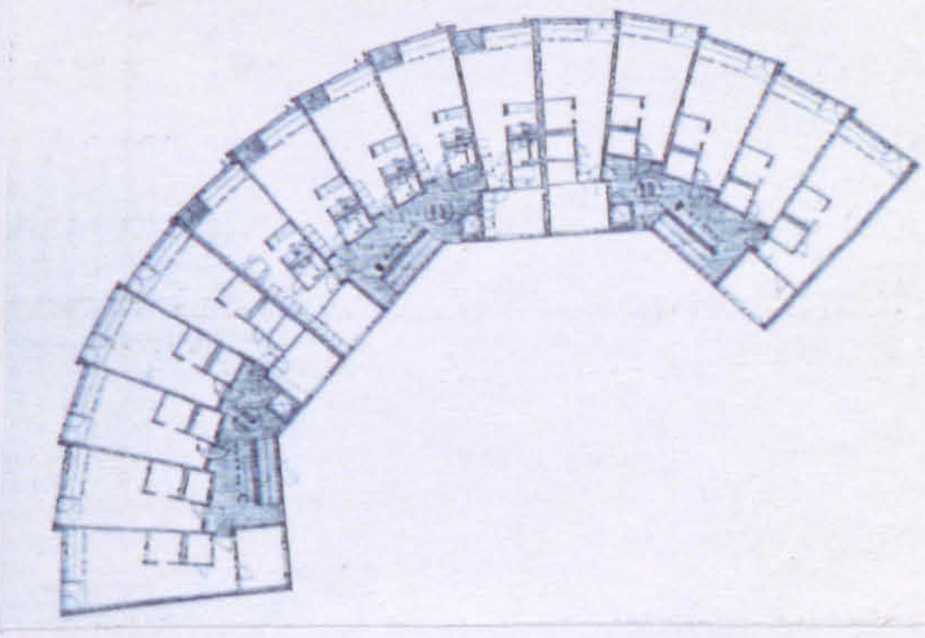

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Fig.12.43 Plan of *Schönbühl Apartments*, Lucerne; Aalto, 1965-8

Fig.12.44 Model of *Neue Vahr Apartments*, Bremen; Aalto,1958-62

Fig.12.45 Plan of *Gammelbacka Housing Development*, Porvoo; Aalto, 1966 (designed)



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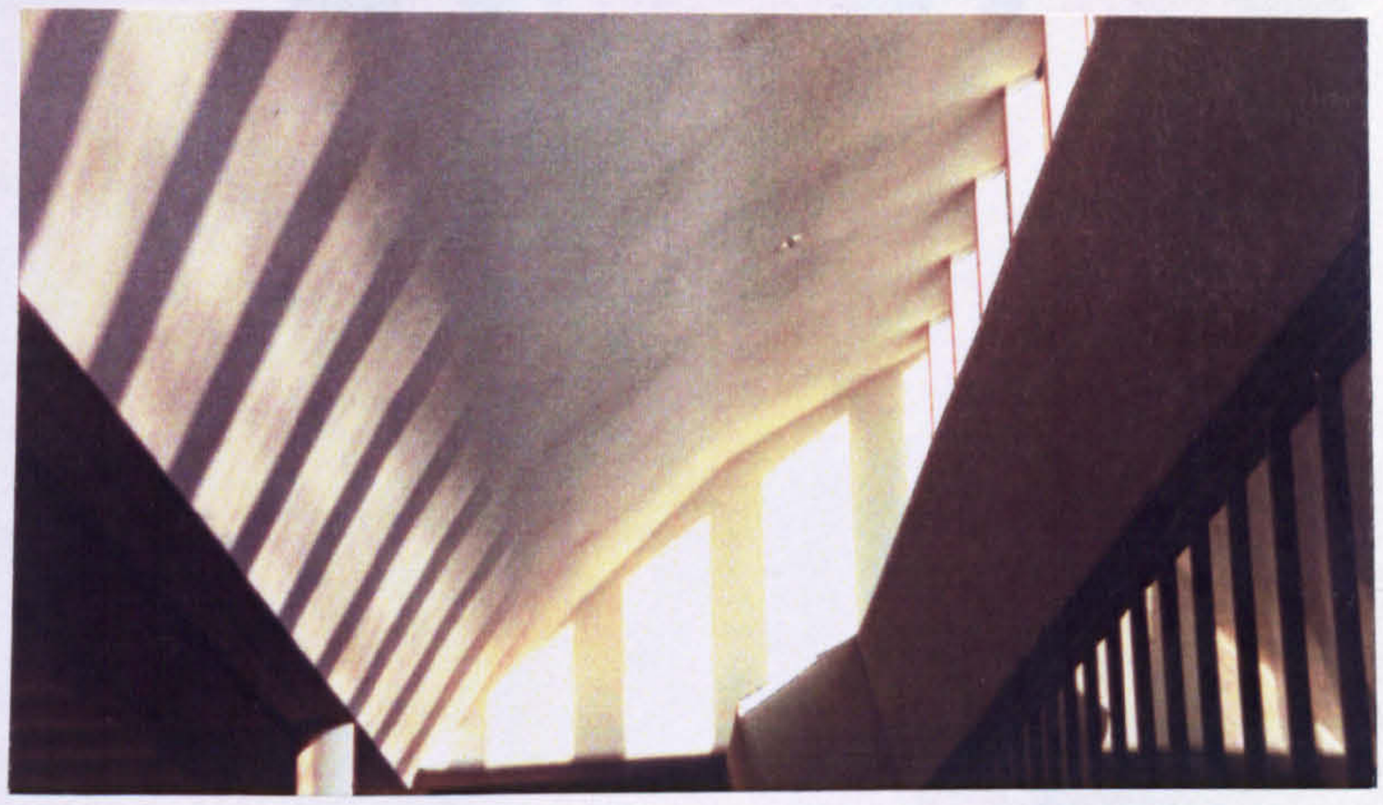
Fig.12.46 Bracken gowth



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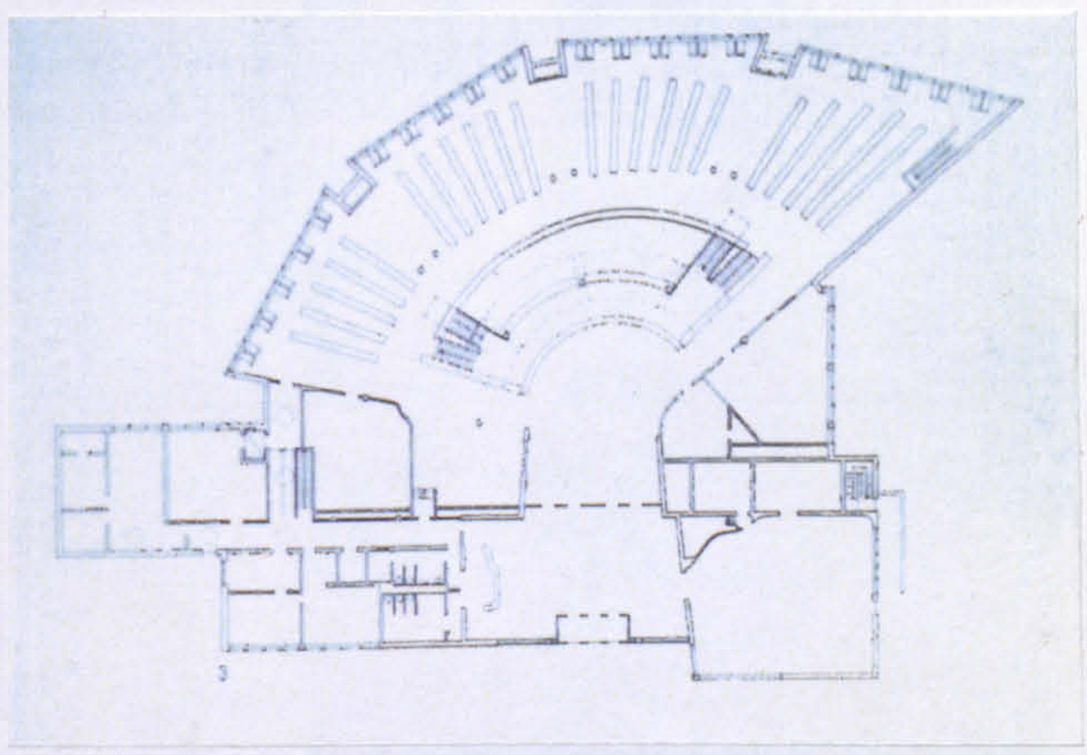

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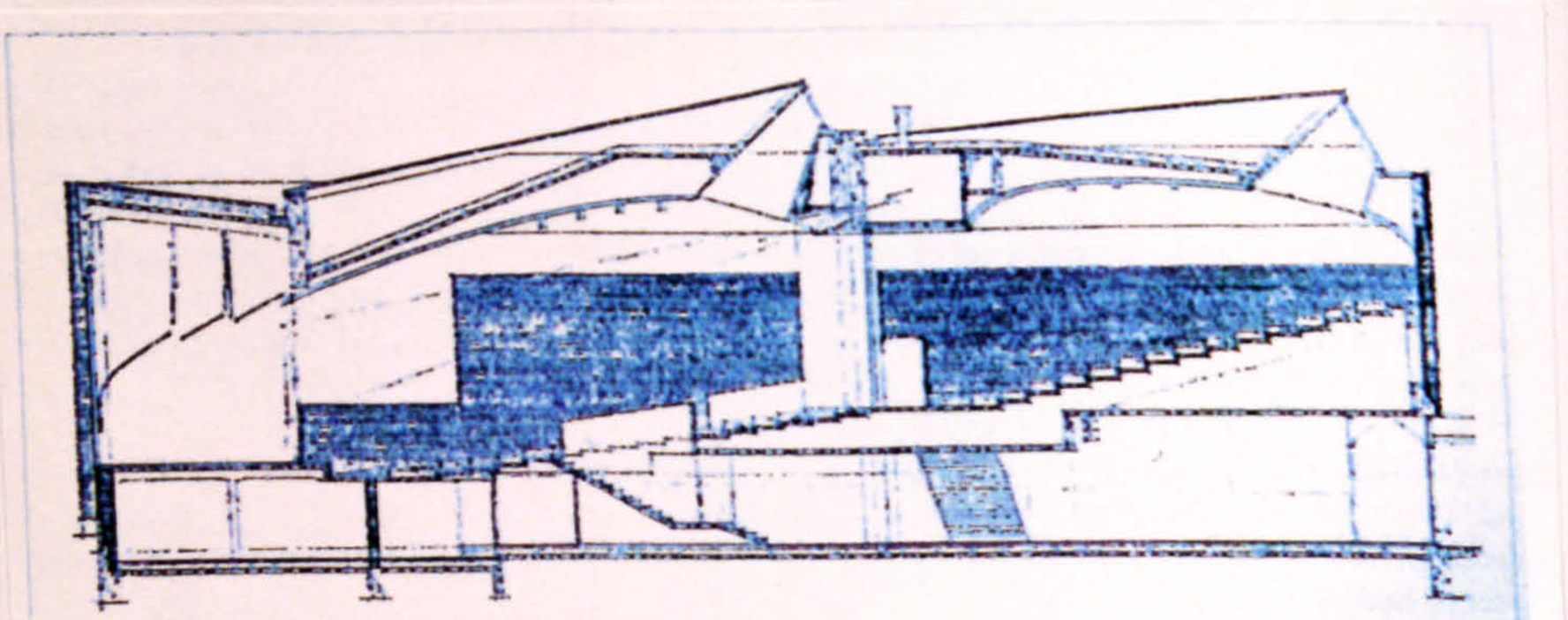
Fig.12.47 Clerestory lighting, *Helsinki University of Technology Library*, Otaniemi; Aalto, 1964-9

Fig.12.48 Plan of *Mount Angel Library*, Michigan; Aalto, 1965-70



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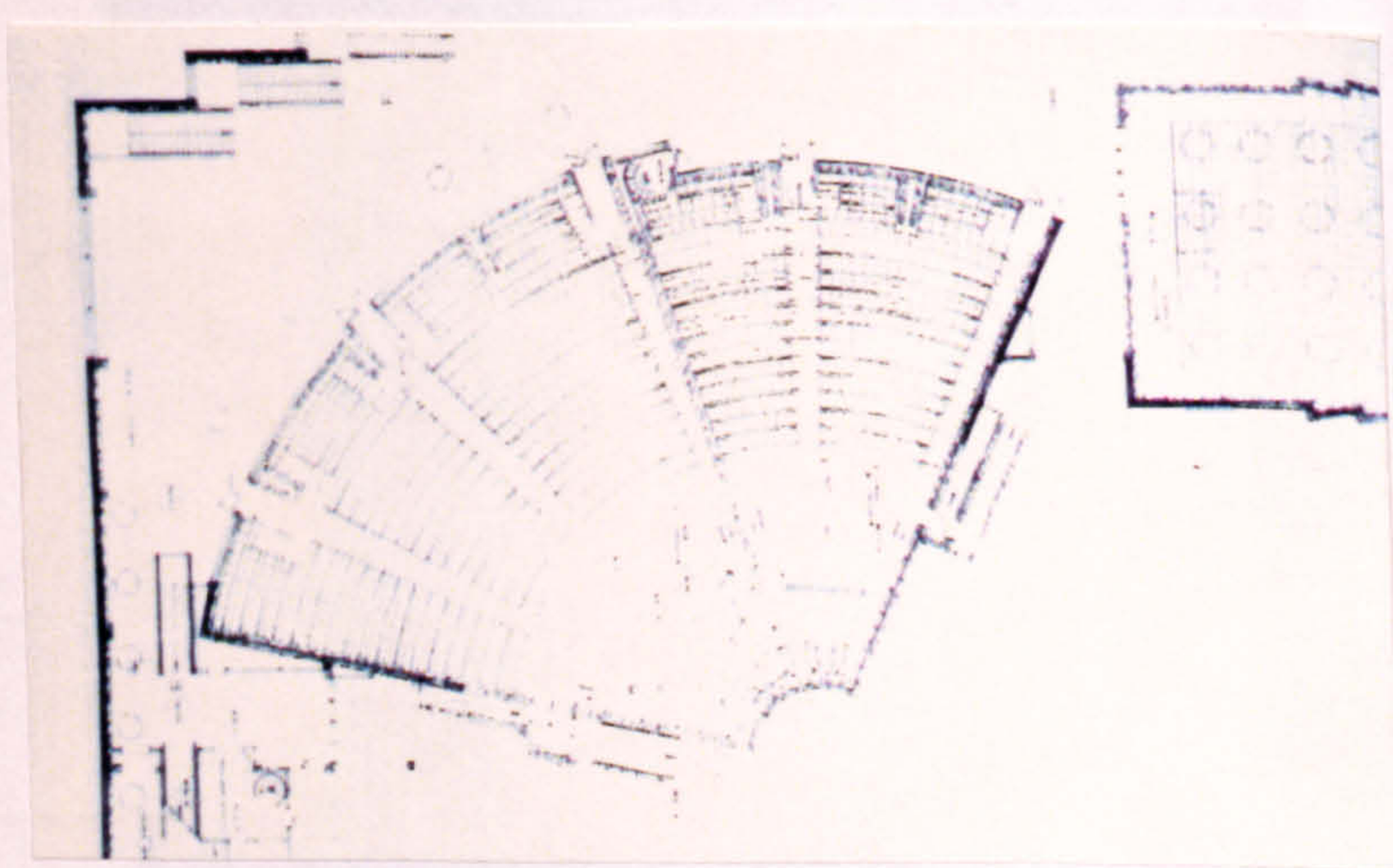

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Fig.12.49 Section through *Jyväskulä Pedigogical University* auditorium; Aalto, 1950-6

Fig.12.50 Plan of *Helsinki University of Technology* lecture theatres; Aalto, 1955-64

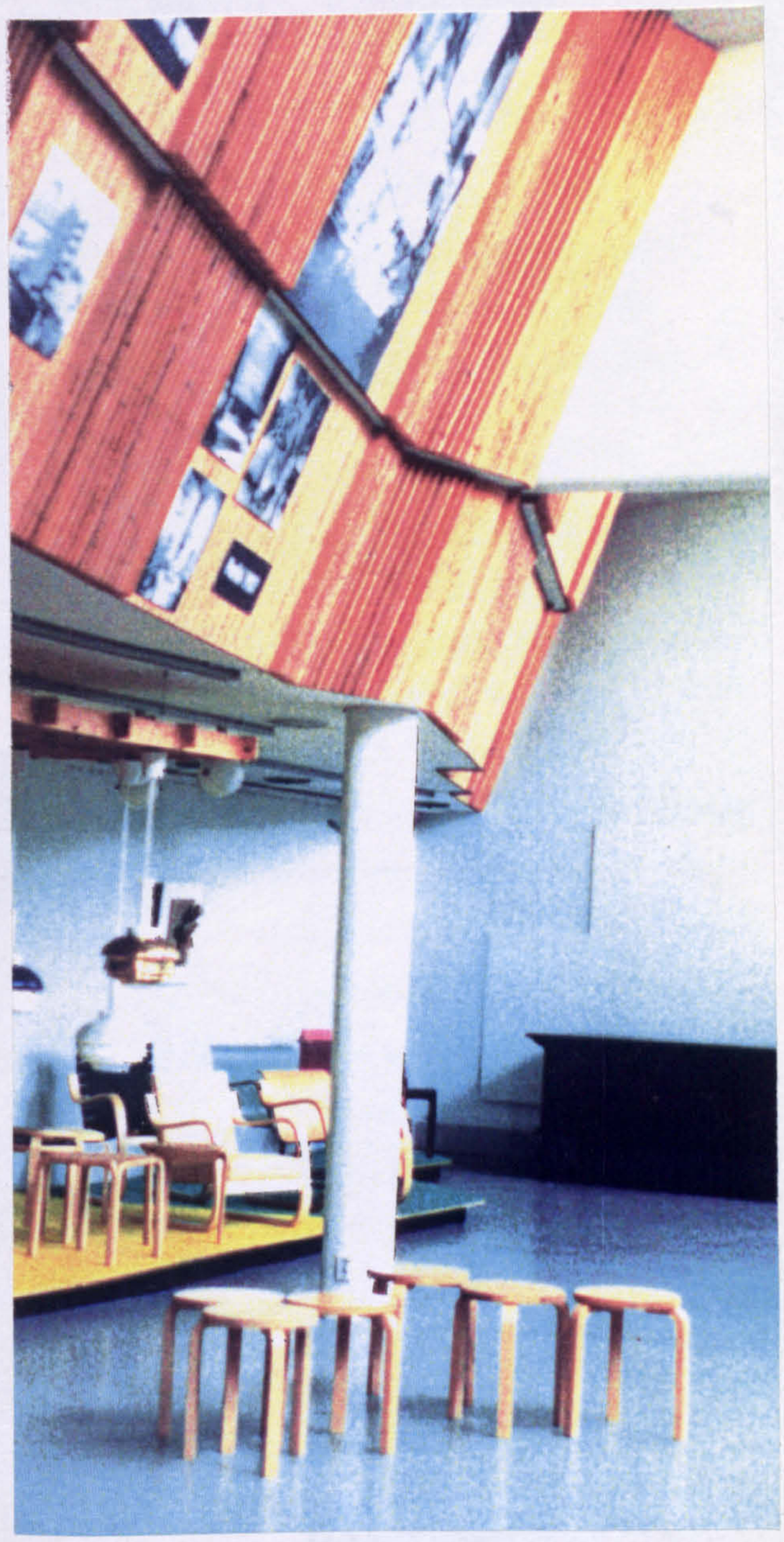

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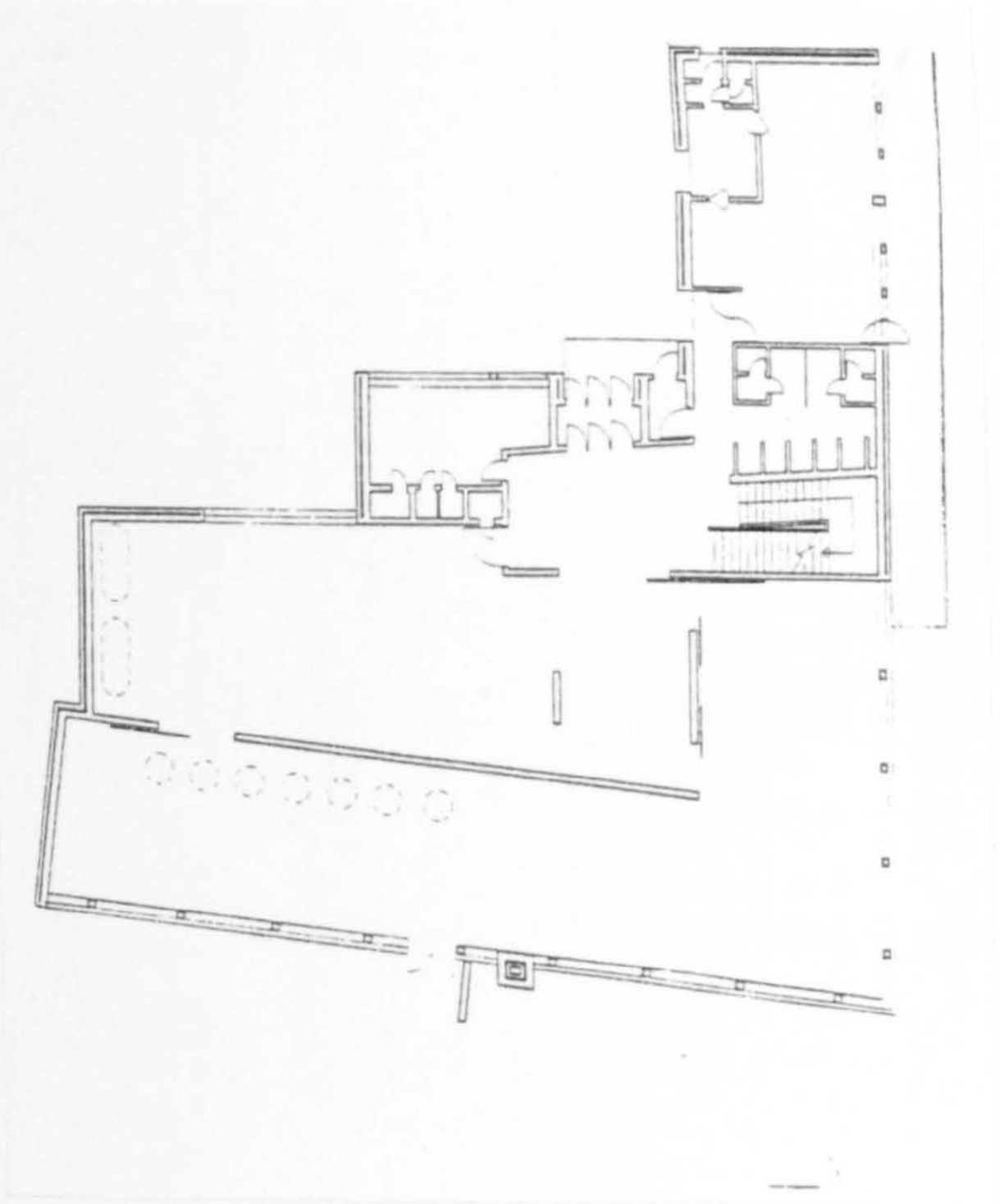
Fig.12.51 Interior of *Alvar Aalto Museum*, Jyväskulä; Aalto, 1971-73



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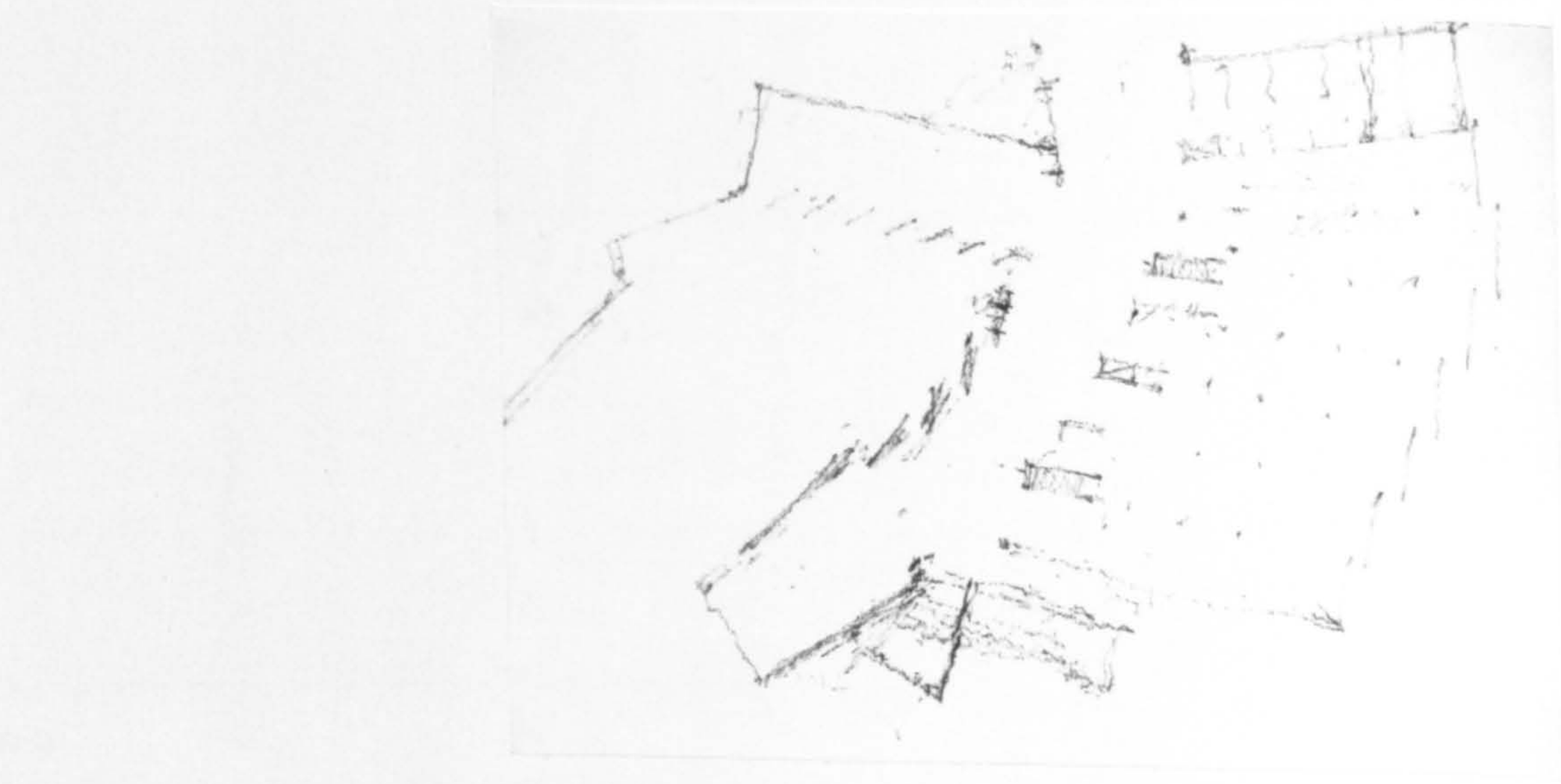

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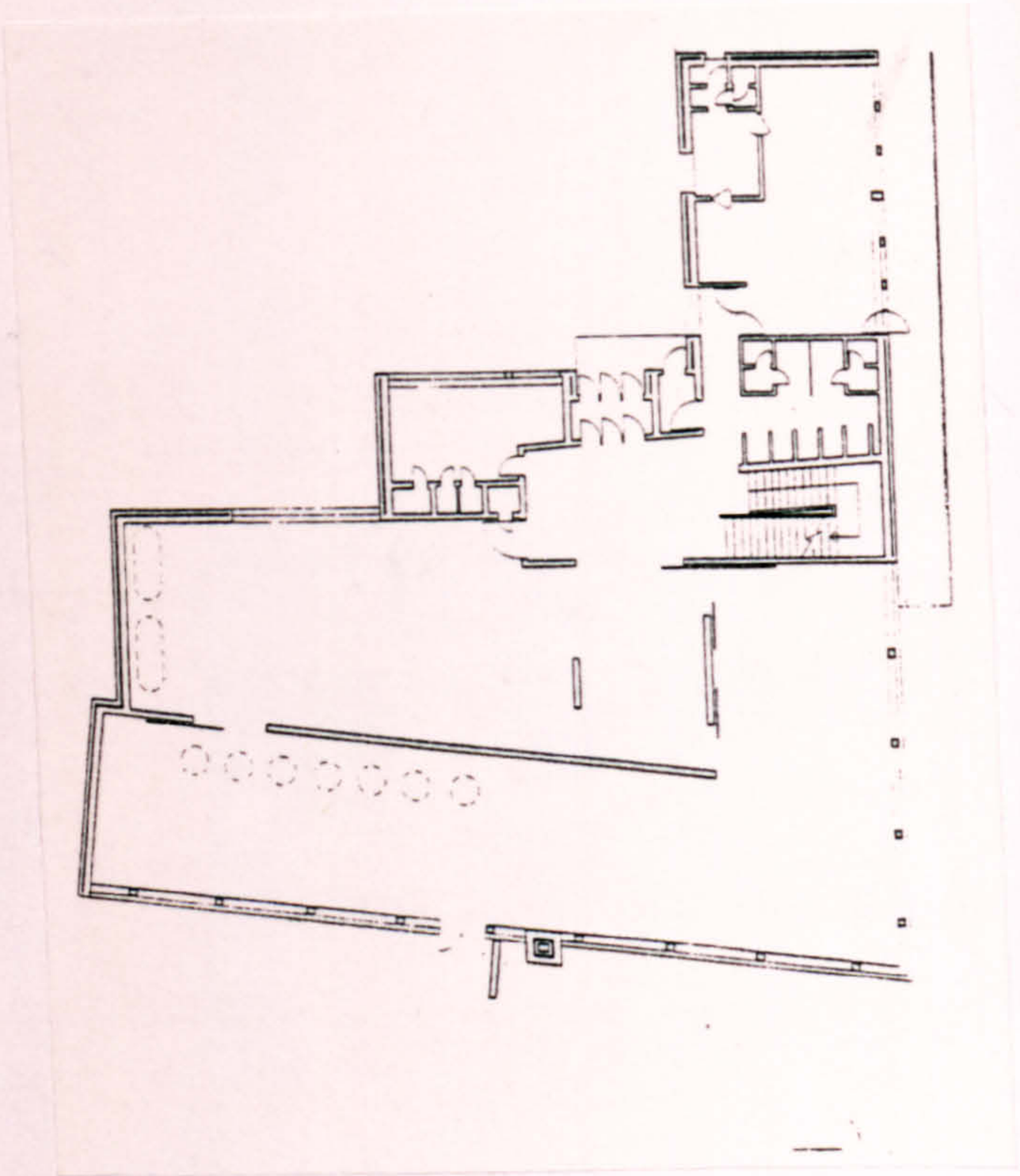
Fig.12.52 Plan of *Museum of Central Finland*; Aalto, 1959-62

Fig.12.53 Sketch plan of *Museum of Fine Art*, Chiraz; Aalto, 1970 (designed)



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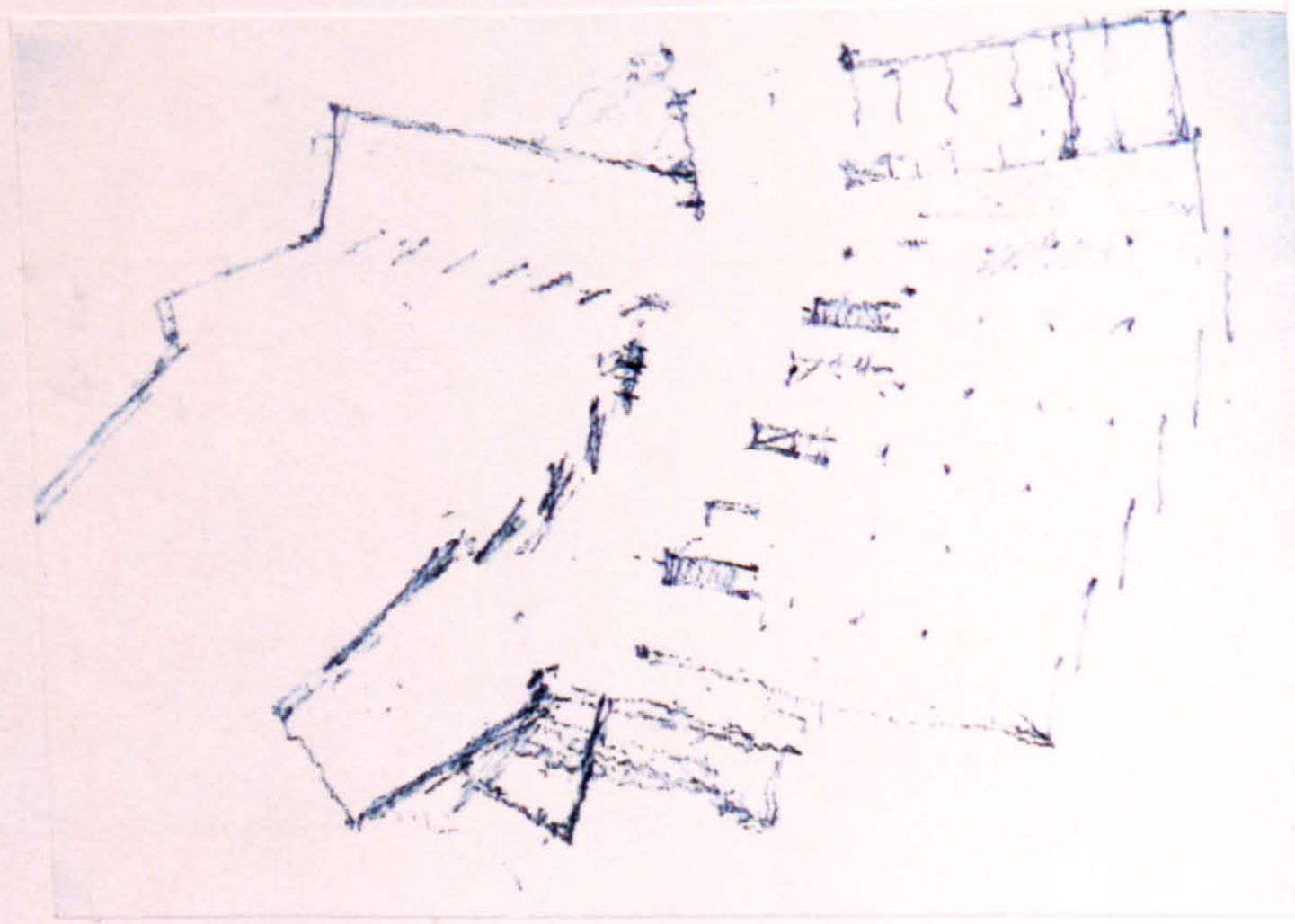

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Fig.12.52 Plan of *Museum of Central Finland*; Aalto, 1959-62

Fig.12.53 Sketch plan of *Museum of Fine Art*, Chiraz; Aalto, 1970 (designed)

CONTINUAL VARIATION AND FLEXIBLE STANDARDISATION

"[...] unity in multeity" (Coleridge, [1817] 1993:156)

"Everything is given, but everything is also possible." (Prigogine, 1985:60)

"So then always that knowledge is worthiest [...]
which considereth the simple forms or differences
of things, which are few in number, and the degrees
and coordinates whereof make all this variety"
(Francis Bacon, 1803b:104)

What is established as common to both Sibelius' and Aalto's way of forming is partly explicated in a comment of Paul Valéry; "Nature in her work does not distinguish the details from the whole; but pushes from all sides at once" (1956:127). Valéry identifies this with rejoining the grand design (1956:145), something which Sibelius sought; "If only one could always see the grand design in things" (1921;T2:111).

The discussion will now move towards a broader explanation of the "elastic system for orchestrating [...] growth" (Aalto, 1930c). The flexibility inherent in the integration of 'cells', kernels or episodes into a whole, or "cells tendency to group together" (Aalto, 1932), will be examined in a work by each artist.

It will be demonstrated that Aalto's concept of flexible standardisation may be equated with the idea of continual variation, a phrase which Salmenhaara has used to describe Sibelius' handling of germ motifs (1970). Utilising this "natural variability of theme" (Aalto, 1938) encourages as much internal and formal flexibility as possible, enabling Sibelius to engineer the growth of musical structure from the content of the small units of sound. Indeed, Salmenhaara has stated that *Tapiola*, "represents something that can be called organic process form, a kind of total variation form." (1970:124). The starting point is not a small theme, but an even smaller germ motif or tiny element of sound. From this the total variation process proceeds as a way of building music; what Salmenhaara discerns as "a principle form of construction rather than a form unit" in Sibelius (1970:124), and which, in Aalto's work, has been described as "flexible combination potential." (Schildt, 1988:34).

A WEALTH OF NUANCES: AALTO, INDIVIDUALITY AND MEIOSIS

"[...] there are possibilities of using standardisation and rationalisation for the benefit of the human being [...] We could make standards that raise not only the living standard but the spirit too [...] that would have human qualities." (Aalto, 1957a)

"How can the mass production of necessities be broadened in scope without detriment to people's natural individuality and the natural variations in their surroundings?" (Aalto, 1955a)

As cited in chapter ten, Giedion, Gropius and others wrote and spoke of the need for a biologically more satisfying, natural, individually variable architecture, while at the same time continuing to ostracise Häring (Šlapeta, 1981; St. John Wilson, 1995). Indeed, the limitations

of Rationalism were accepted and even extolled by the exponents of the style. Seeing the danger that human beings were becoming mere serial numbers as the process of mass production was taken to its 'logical' (if inhuman) conclusion, in 1930 Aalto wrote to Gropius, describing how he was "trying to make buildings for people into whose head the 'organic line' will not fit for another 100 years." (GS2:66).

The "organic line" was then a "means of creating freedom" in the machine age; "a question of the spirit, of the soul" (1957a). Aalto expressed his belief that,

> "The natural biological system seems to hold within it a clear example of what standardisation must be if it is to be in accord with the real character of architecture." (Aalto, 1941b)

This demonstrates that standardisation and organicism are related in Aalto's work. Indeed, around the time of Aalto's letter to Gropius, Moholy-Nagy had suggested that structure is the unalterable manner in which the material is built up, being unique to the particular material, or artefact, and that the whole must comprise a synthesis, rather than "mere addition" (1947:26); i.e., the whole is greater than the sum of the parts, be they episodes or cells, and that the sum is achieved by a method other than mere copying (i.e., mitosis or *mimesis*).[47] Indeed, Moholy-Nagy drew attention to the fact that, in human life, growth and development of form is not predictable, since the "seed" of uniqueness is discovered through progression and accretion of experiences and the manner of relationships. Aalto then articulated what sounds like a synthesis of Moholy Nagy's "matter" and Zuckerkandl's "emotional form",[48] believing that there was a,

> "possibility of interaction between man and his environment and his objects, where the environment fulfils the psychological need for constant regeneration and change." (Aalto, 1935)

It was not enough for Aalto that the Modernist tenets of standardisation be followed. He demanded that change, inherent in life (both psychological and biological) be inherent in buildings, and that a synthesis of the psyche, the social, the cultural and the experience of nature be sought;[49] i.e., the "shifts, movements, changes from one activity to another" so they may happen "organically", so that together, building and man may "form an organic whole" (Aalto, 1930d). Having, arguably, been equipped to meet society's demand for economy by his experience of the Finnish *'lack'*, of neo-classical simplicity, of his experience and knowledge of nature's inherent economy, and arguably by the poverty of his inner '*gap*', Aalto was also imbued with a deep desire to expand Rationalism to include "variability" (1935) and a potential for growth, by countering economy which produced "powerful and inhuman monotony", with standardised elements which were imbued with "a wealth of nuances." (1941b). His search for

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[47] Moholy-Nagy cited Raoul H.Francé (1920) who believed that "every process in nature has its necessary form".

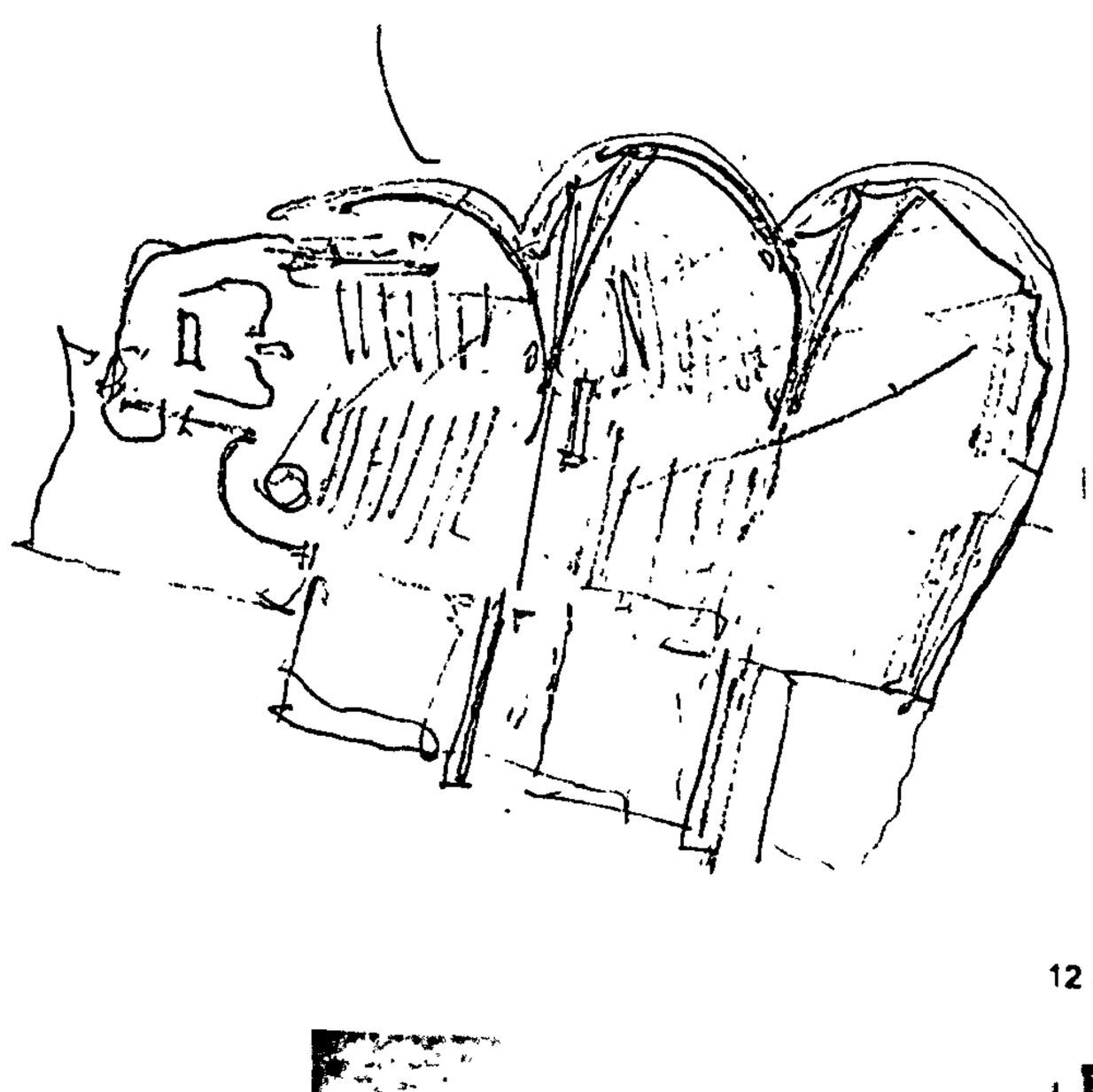
[48] Here Moholy-Nagy speaks of purposive, concrete form (i.e., matter) rather than fluid or intangible, emotional form which Zuckerkandl's notions of music infer.

[49] Here this Aalto was close to an outworking of Whitehead's philosophy (1920) in which Bergson's concentration on 'life' is met with the insights of the new physics. i.e., that matter does not have a fixed, static nature as classical physics had thought.



12.54

Fig.12.54 *Wood Experiment*; Aalto, circa 1940



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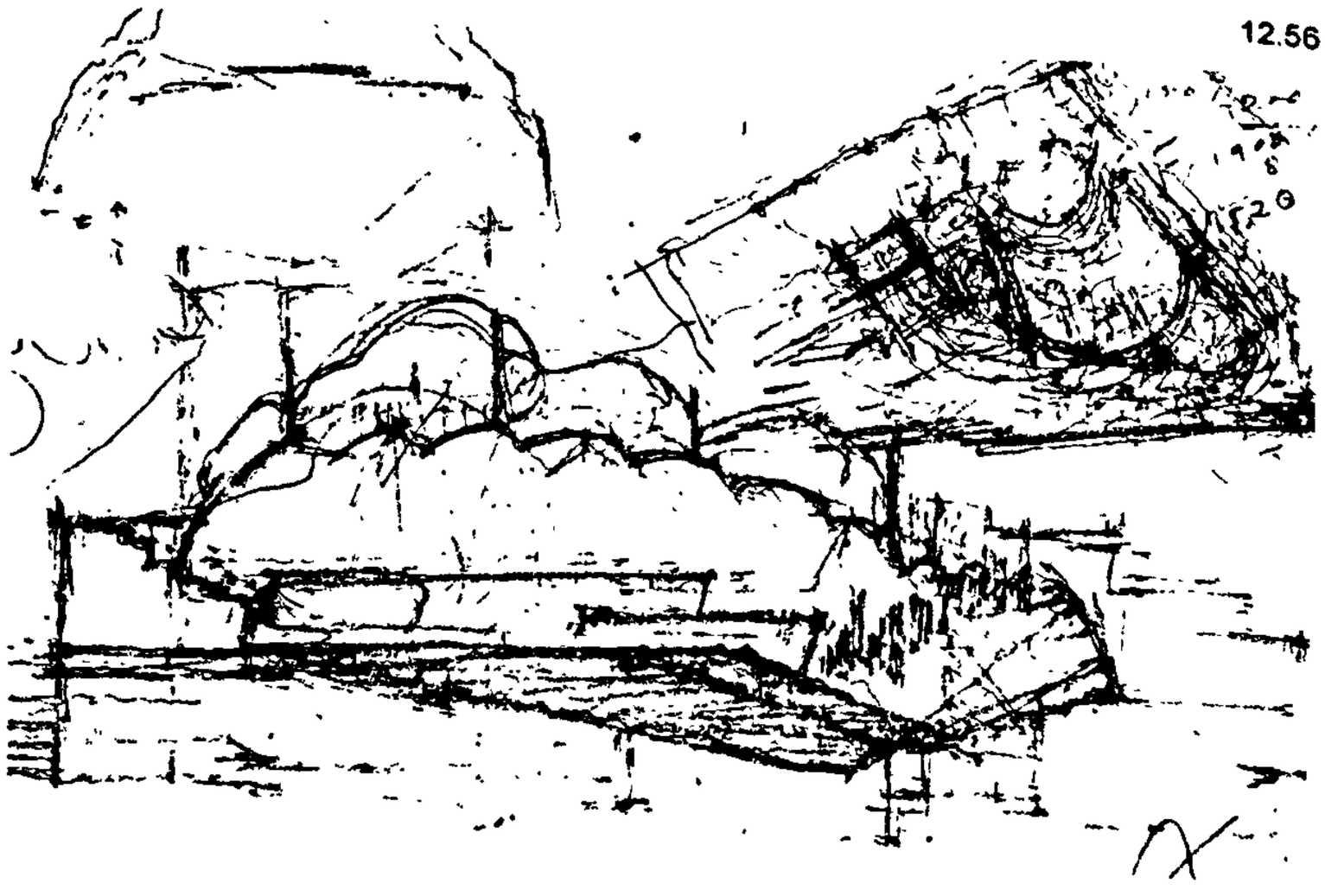

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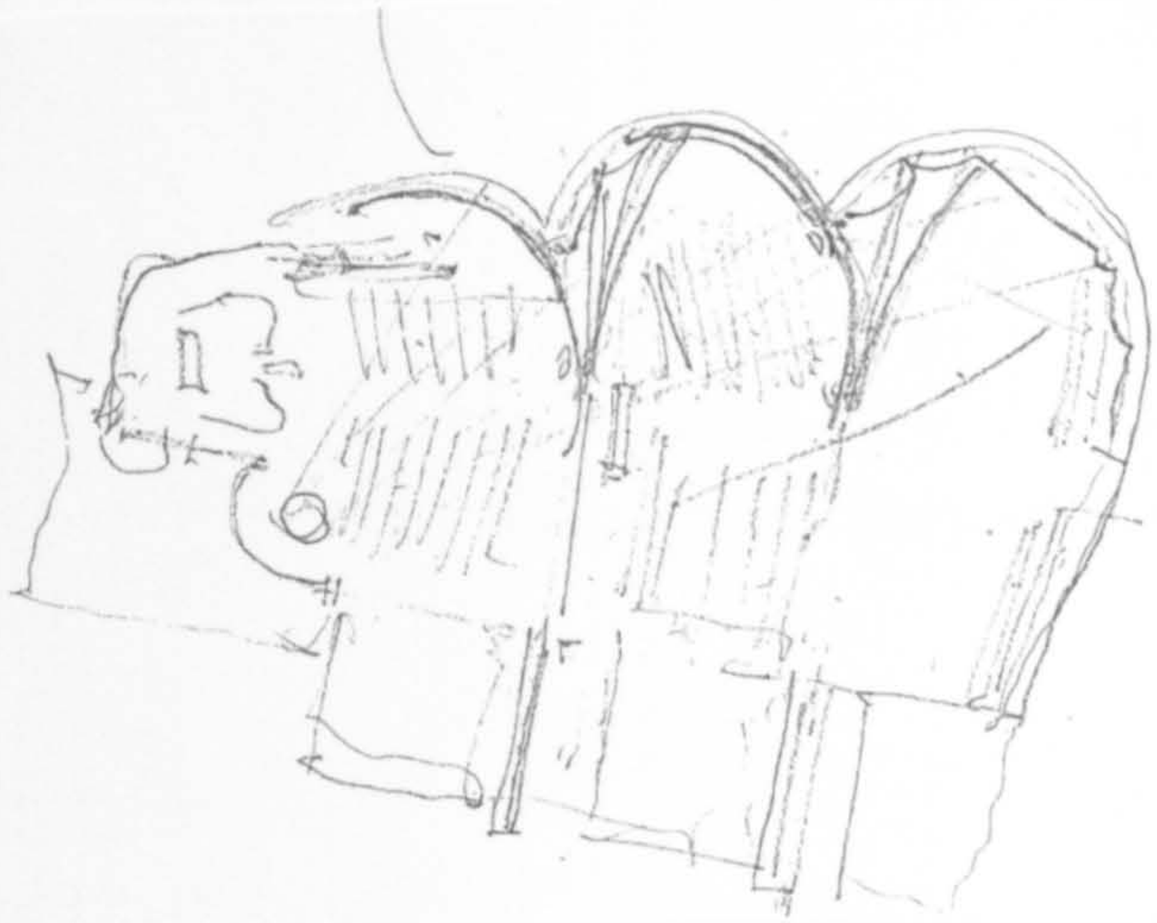
Fig.12.55 Sketch plan of *Vuoksenniska Church*, Imatra; Aalto, 1956-9

Fig.12.56 Interior of *Students Administration Headquarters*, Uppsala; Aalto, 1961-5

Fig.12.57 Sketch design for *Finlandia Hall*, Helsinki; Aalto, 1962-71



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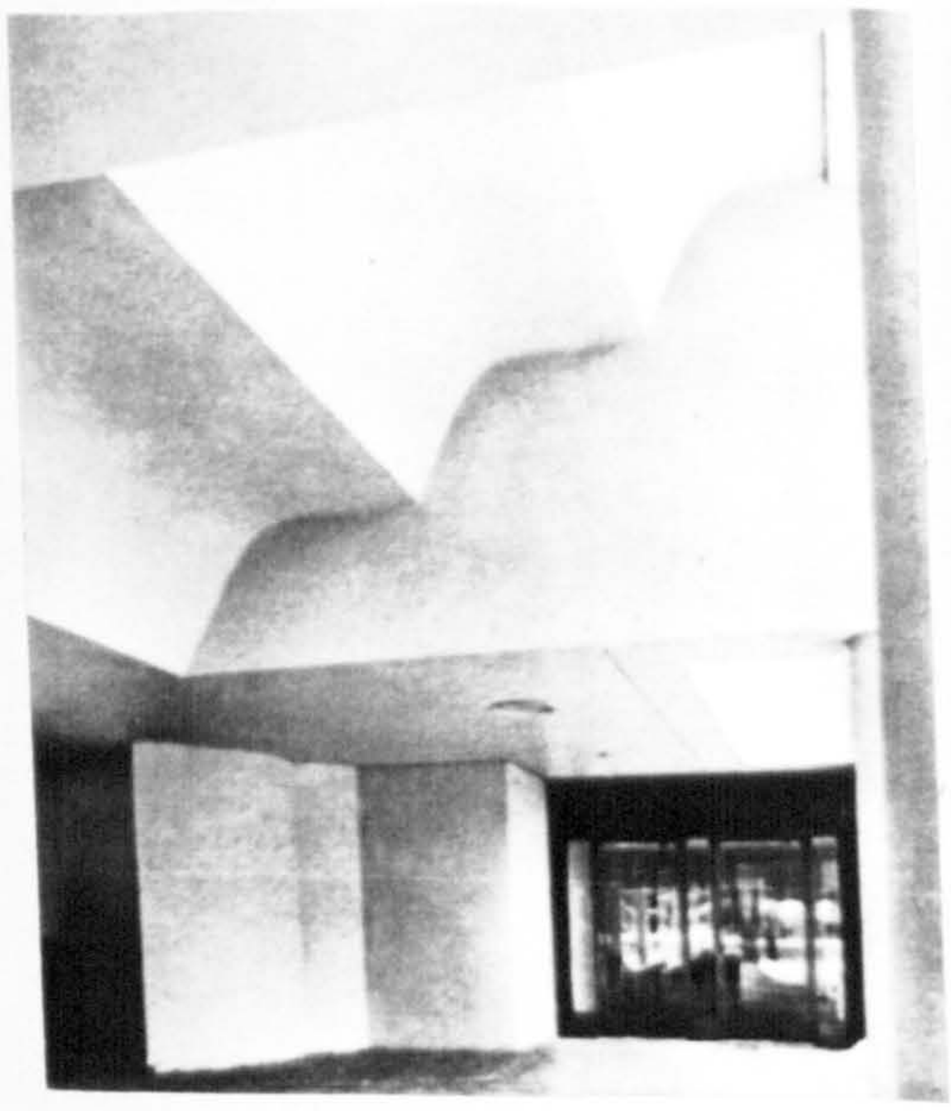

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Fig.12.55 Sketch plan of *Vuoksenniska Church*, Imatra; Aalto, 1956-9

Fig.12.56 Interior of *Students Administration Headquarters*, Uppsala; Aalto, 1961-5

Fig.12.57 Sketch design for *Finlandia Hall,* Helsinki; Aalto, 1962-71

an "organic architecture" had begun in the early thirties when he found hope in many new technologies like the phone system, which in its system of exchanges he believed to be close to "nature's biological organisation principles; communication between cells in local groupings" and facilitating the relation of parts (1931). By the mid thirties Aalto had reached a position at which he challenged a basic tenet of Modernism;

> "A standard article should be made so that the form is completed by man himself according to the individual laws that involve him." (Aalto, 1935)[50]

THE FLEXIBLE SOLUTION: *"SEMPER IDEM SED NON EODEM MODO"* (ALWAYS THE SAME BUT NOT IN THE SAME WAY).

> *"[...] there is immense richness and an endless variation of organically growing forms."* (Aalto, 1938)

Later, in the same inquiry about *Rationalism and Man* (1935), Aalto offered the important solution cited earlier; namely that,

> "Nature, biology, offers profuse and luxuriant forms; with the same constructions, same tissues and same cellular structure it can produce millions and millions of combinations each of which is a high level of form. Human life comes from the same roots." (Aalto, 1935)

This represents a further synthesis for Aalto, in which his personal life experience, his early interest in the processes of nature, in particular botany, and his passion for the creation of forms for life came together in pursuit of 'harmony', to be examined in the final chapter.[51] He recognised (1935) that the things that surround human life,

> "[...] are more likely to be cells and tissues, alive just as cells and tissues are, the building components of which human life is composed. They cannot be dealt with in a different way from biology's other units, otherwise they would be in danger of becoming unsuited to the system, of becoming inhuman." (Aalto, 1935)

Here Aalto suggests that no-one 'cell-like' unit could represent the essence of a building; vicariously recalling the musicological challenge to Cherniavsky. The different nature of each of the functional units demanded careful treatment and "differentiation" (1953a); "a systematic, continual changeability" (1938). Indeed, as has been suggested and will be demonstrated below, this "natural thematic variation" (Aalto, 1938) is also central to Sibelius' composition technique, and, as chapter three inferred, is in a degree of accord with mechanisms of building and rune traditions of Karelian culture. This is a "variegated process of development that, thanks to an internal reciprocal action, constantly leads to new solutions [...] and constant changes in the ideology of construction" or composition (1938), for instance evinced in Sibelius' challenge to the concept of the symphony, and Aalto's to the notion of harmony, to be examined later.

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[50] Thus, Aalto's ideas accorded with Moholy-Nagy's insistence on the inclusion of "psychological, social and economic conditions, which are all elements of nature, calling this "organic (functional) design" (1947:29): the crystallisation of function. Moholy-Nagy's central idea, that, "biotechnics lies in a more conscious approach to inventions which are generally believed to be the results only of intuition", was close to Aalto's own. Aalto was later to articulate this in *The Trout and the Mountain Stream*, (1947b).

[51] Schildt describes Aalto's ideas of flexible standardisation as having "a measure of fantasy" (GS3:91), a notion which is apt and speaks of fantasy as a positive Transitional Phenomenon.

Aalto believed that the "inner process" demanded "internal [...] formal flexibility", coupled with the fact that,

> "in nature standardisation is practised almost exclusively in the smallest possible units, the cells. This results in millions of flexible combinations in which one never encounters the stereotyped. Another result is that there is immense richness and an endless variation of organically growing forms." (Aalto, 1938)

Although Aalto continually explored the permutations and elasticity of combinations of "the smallest possible units" in any creation he undertook, his buildings and sculptures are concerned with the process of composing various combinations of planes and relations, which are themselves "striving towards a whole" (fig.12.55, 12.56 & 12.57), a crucial motivation central to which is a need to relate; i.e., *logos*. For instance, his multi-cellular buildings are formed in such a way that the smallest possible units give the overall (serpentine or fan) composition its form (fig.12.43). The accretion of overlapping edges and mingling of these "cell-like" units has been shown to be a byproduct of the need to understand and master the relationship of parts, however potentially conflicting or contradictory they are (fig.12.57). The relation rather than the cell itself and the process of amalgamation into a whole, rather than the existence of standard, discernible parts is key. Indeed, it may be said that both Sibelius and Aalto sought the aesthetic and functional facilitation of the "internal relationships" (Aalto, 1938) in the building and the music; the profound *logos*.

The invention of a spatial mechanism which offered "the possibilities for growth and inner variation" will be demonstrated through an examination of what Aalto intended for *Baker House* and the form of the final building. This will be augmented, in the next chapter, by the story of the important and tortuous process whereby this "harmony" was achieved.

ELASTIC STANDARDISATION AND THE ORGANIC LINE

> *"The most remarkable standardisation institute of all is nature [...] Let us take a plant or a tree. We find that every blossom on the spring-flowering fruit tree differs from all the others [...] we realise that this difference is not fortuitous. The blossom faces different directions [...] shaded by different branches, leaves. This determines the variety of forms [...] Every blossom is made up of innumerable apparently uniform protocells, but these cells have a quality that permits the most extraordinary variety in the linkage of cells. This leads to a tremendous wealth of forms [...] all based on a specific system."* (Aalto, 1941b)

The foregoing citation offers an important glimpse of the thinking behind the generation of *Baker House*. After investigating some thirty different building plans (fig.12.58) the general solution of the curved lines arose.[52] This obtained a great many more south facing rooms on the same site than a straight-line arrangement could,[53] while at the same time avoiding the

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[52] In an article (1941b) Aalto claimed that he had worked with students for a three month period in an architectural laboratory exploring miniature components of a variety of house types, exploring the notion of flexible standardisation. In truth, Schildt indicates (GS3:48), Aalto left them to it after ten days.

[53] The *élan vital* of a work may be equated with a genetic code, referred to above. Yet no genes carry an image of how, for instance, to place wrinkles in old age; no genes remember the shape of the shell; they only permit or encourage faster growth at the perimeter than the centre (Stevens, 1974:9). What we observe in those examples is that differential growth determines the shape or the curvature of a surface. If the large organism is to function like its small cousin, it must compensate for its preponderance of volume by selectively increasing its critical surfaces (Stevens, 1974:19). This may be what has formed Aalto's distinctive fan-form plans; the expansion of the critical surfaces, usually to maximise sun and views, and to give a sense of identity to the spatial units therein.

second-class quarters that would ensue from an H or echelon plan (fig.12.59). The undulating form also gives the practical advantage of views up or down the river, rather than straight across, at the same time avoiding 'look-in' from one room to another.[54]

No Dark Halls

The dormitory was to have no north facing study rooms. Instead the ablution and storage facilities, and open, well-lit, lounges were to be located to the north of the single loaded corridor. Aalto conceived that there would be sufficient natural light from these lounges to light the winding corridor; i.e., "no dark halls" (15.7.1947).[55]

As with any multi-cellular building, the designer faces the problem of what degree of standardisation to adopt. Aalto's belief in nature's provision of "the smallest possible units - cells" (1938) resulted, in this case, in 22 out of 43 rooms on every floor having a different shape. The typical plan shows the variability generated by the undulating form (fig.12.13); an example of the "flexible combinations in which you never", or at least as rarely as possible, "encounter the stereotyped". Thus, room provision comprised singles, doubles and triples.[56] In addition to the provision of views and good lighting, Aalto provided students with the raw material with which they could create their own environment;

> "A standardised object should not be a finished product, but on the contrary be made so that man and all the individual laws that control him, supplement its form" (Aalto, 1935).

Adding further "variability" to the planning of the whole, Alvar and Aino Aalto specially designed sturdy wooden furniture (made by Artek in Finland, fig.12.60 & 12.61), capable of fitting both rectilinear (fig.12.62) and tapering rooms (fig.12.63).[57]

Affection for the building is only tempered on two counts. Although the undulating plan creates some interesting room shapes, there are seven conventionally rectangular rooms per floor (three at the west end, and four at the east), which are known as 'coffins' (fig.12.62).[58] The second shortcoming is blamed on M.I.T. authorities who squeezed in extra 'box' rooms since the building opened;[59] an issue to be revisited later. However, in the early eighties the dormitory's student government succeeded in the removal of these additions from the third floor, regaining the valuable naturally-lit 'lounge' space, which vicariously illuminates the corridor.

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[54] The building was to have had metal trellises on the undulating south side on which ivy would grow, protecting the building from the severe summer sun. The popularity of the extant trees, which give the rooms the impression of private tree-houses in summer, suggest Aalto's trellis idea would have contributed to the individuality and privacy within the mass housing solution.

[55] Letter from William Wurster to Aalto, 15 July, 1947.

[56] The number of rooms per floor grew towards the top of the building as the cantilevered stair took up less space.

[57] The desk can be fitted under the window in a number of positions, and is thus both flexible and permanent. Similarly the tree-like room divider (fig.) can be fixed in more than one way, and, with the subtly staggered side walls, enables the small study bedrooms to be divided into their two distinct functions, should the student want this. Storage is provided in drawers beneath the bed, in large wardrobes, known amongst students as the 'elephant', and a small bedside trolley-box, affectionately called the 'armadillo'.

[58] These are dreaded, being described as "claustrophobic" and "boring". These are allocated to unsuspecting Freshmen.

[59] This increased the provision of singles, triples and quads.

The rooms in the west branch of the building, added after the foundations were laid, are deficient only in their lack of view. Otherwise these late additions are a masterful generation of form through a synthesis of user requirements and client increased demands. From the outside the staggered end wall appears to buttress the building (fig.12.64), while offering internal spatial subdivision, and therefore a degree of privacy, in the shared rooms (fig.12.65).[60]

The combination of the flexibly standardised rooms, elastic flowing circulation (including the huge cantilevered stair; fig.12.66),[61] and open communal areas had avoided an institutional ambience. These techniques break the tradition of enclosed, identical rooms, allowing areas of different functions to be related. It is helpful to recall the derivation of this, demonstrated in Aalto's explanatory sketch of a branch splaying towards the sun (fig.12.67)

Shapes or Processes?

St. John Wilson has recently denied that Aalto is "proposing the adoption of particular 'organic' shapes." (1995:72).[62] In light of this study it appears that this position is correct, since it is not the particular mimetic recitation of nature's organic forms which Aalto uses, but rather the process of allowing the expression of particular functions and then of relating the different, purposive forms according to an understanding of the how the threads of their purposes may overlap, or be woven. It is for this reason, it seems, that Aalto sketched the end of a branch alonside an explanation of the new west end of the building, as cited earlier.[63] Rather than it being his idea that the building should look like a branch, it seems to have been his intention that it should use the branch as a model of how to turn towards the sun and absorb light. Citing Cuvier's notion that every organised being is a whole whose parts mutually correspond (1808), St. John Wilson seems to draw, vicariously, on Aristotle's teleology, from which Cuvier took the attitude of the unalterable functional integrity of the organism; an idea which corresponds with the attitude of the necessity of functional interrelationship which Häring and Aalto shared.[64]

In *Baker House* Aalto first found a design mechanism which made manifest his ideas about flexible standardisation which he had expressed, perhaps in Moholy Nagy's stead, some ten or fifteen years before.[65] In making these ideas his own he offered a building which was humane, encouraging the continuous synthesis of individuality and community. He achieved

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[60] Since the extra beds have been added one student must go without this well lit working space. In 1979 the Alumni, who had given a grant for the building in 1946, were invited back in an attempt to raise funds for repairs, all of which degraded Aalto's design. The dormitory master wonders "Why is M.I.T. always levelling down? Why don't they level up for a change?" (1985: pers.com.).

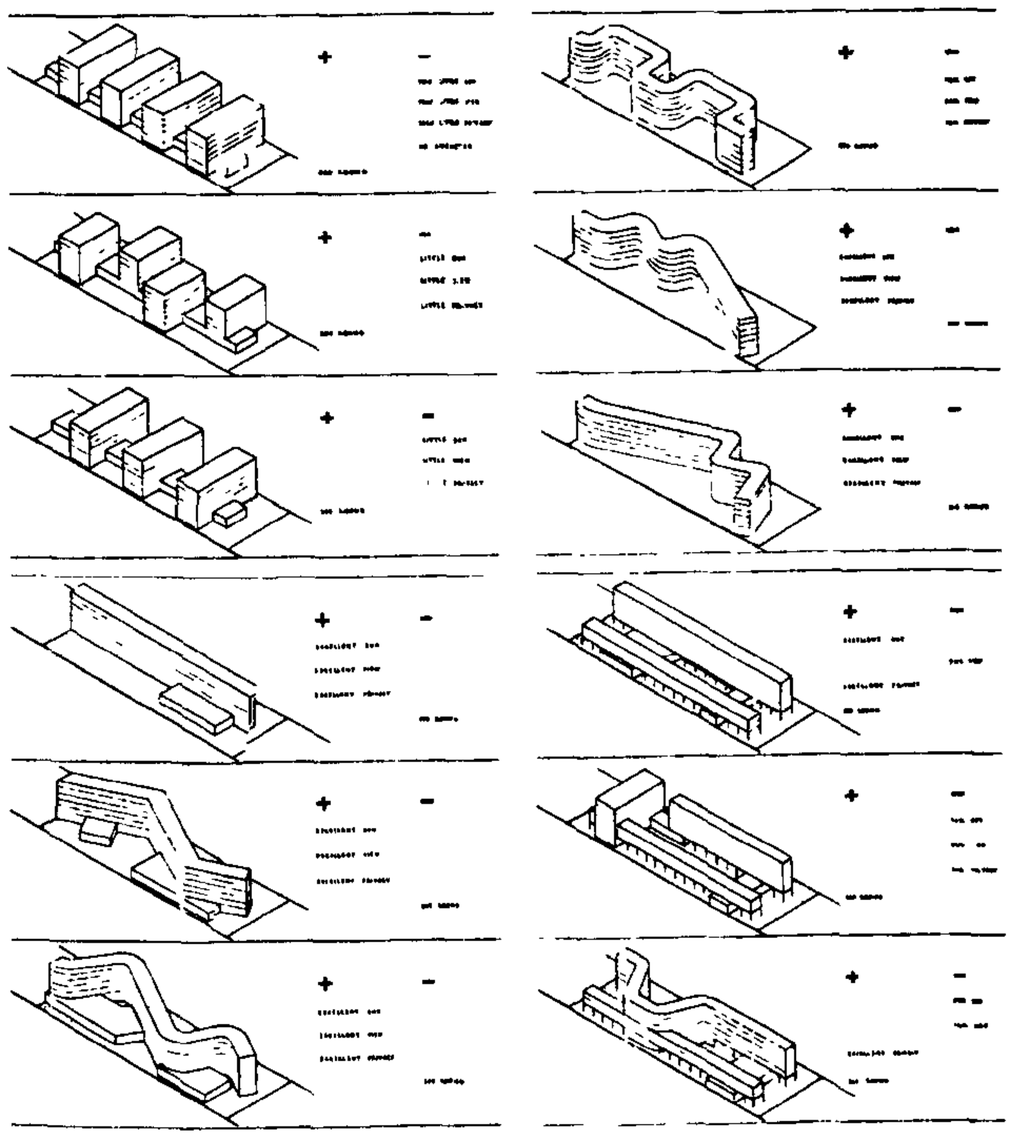
[61] On a typical floor the corridor expands into the lounge area before again passing the toilet/bathroom facilities.

[62] St. John Wilson correlates Aalto's ideas with those of D'Arcy Thompson and Cuvier, cited in the same connection in the last chapter.

[63] The sketch (fig.12.67) was found in the M.I.T. Archive, in 1985 by the author.

[64] It must be noted, however, that Cuvier died in 1832, the same year as Goethe, and his theory was largely superseded, by Darwin and others. Steadman, (1979:41). The anatomical-structural analogy is not appropriate in connection with Aalto, whose references to nature were largely botanical. It is interesting to note that Michel Foucault (1973) cites Cuvier extensively in *The Order of Things*, the text from which Porphyrios drew the notion of *heterotopia* (1982).

[65] The significance of Aalto's reluctance to recall the nature of his discussions with Moholy-Nagy has been noted above.



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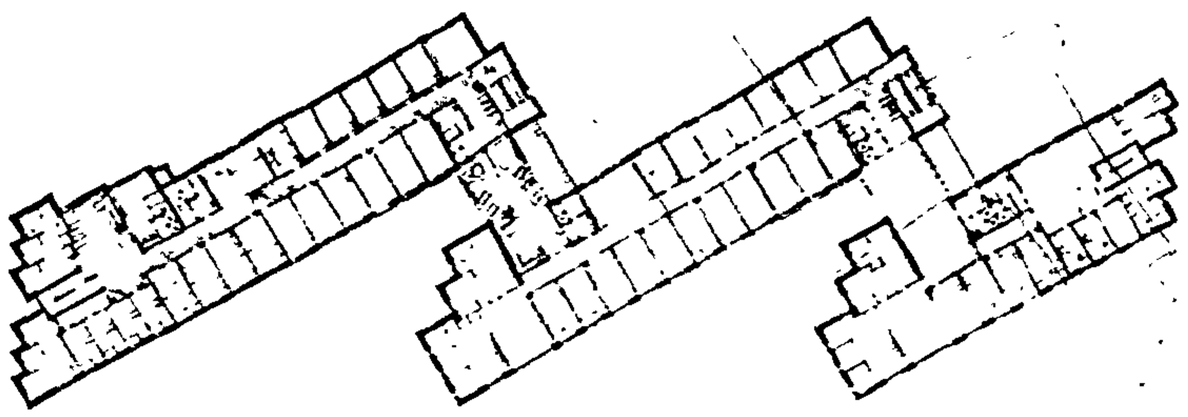

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Fig.12.58 Experiments with building forms for *Baker House Dormitory*; Aalto, 1946

Fig.12.59 Undulating plan superimposed upon 'H' plan from *Baker House*; Aalto, 1947



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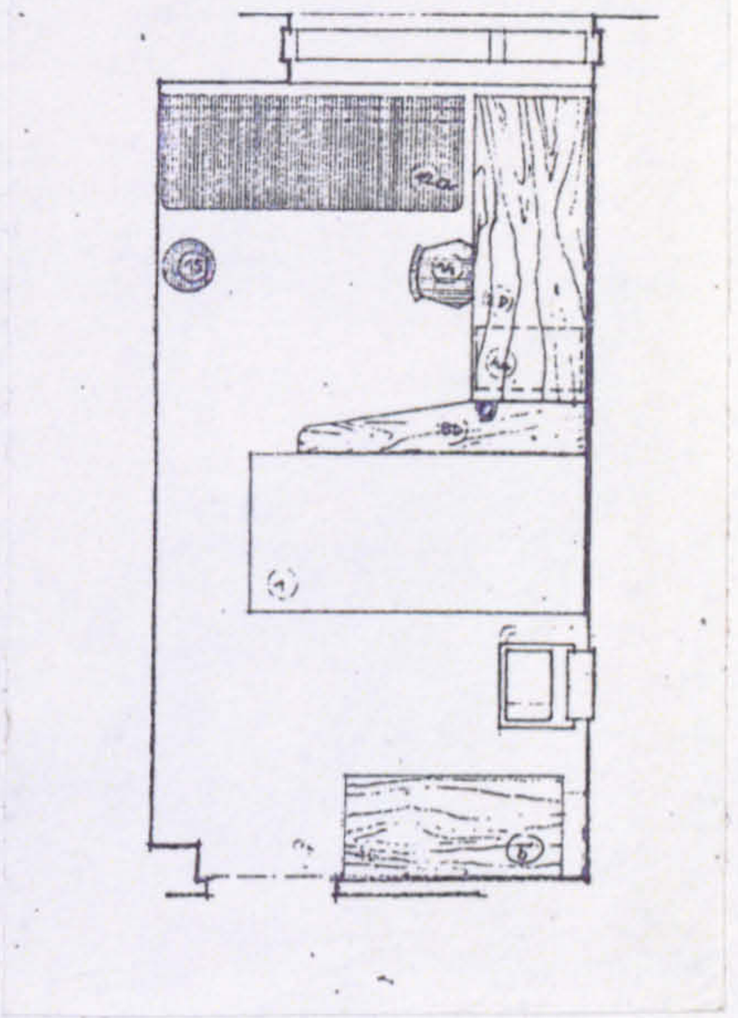
Fig.12.60 'Elephant' room divider, *Baker House*; Aalto, 1948

Fig.12.61 Artek book shelves, *Baker House*; Aalto, 1948



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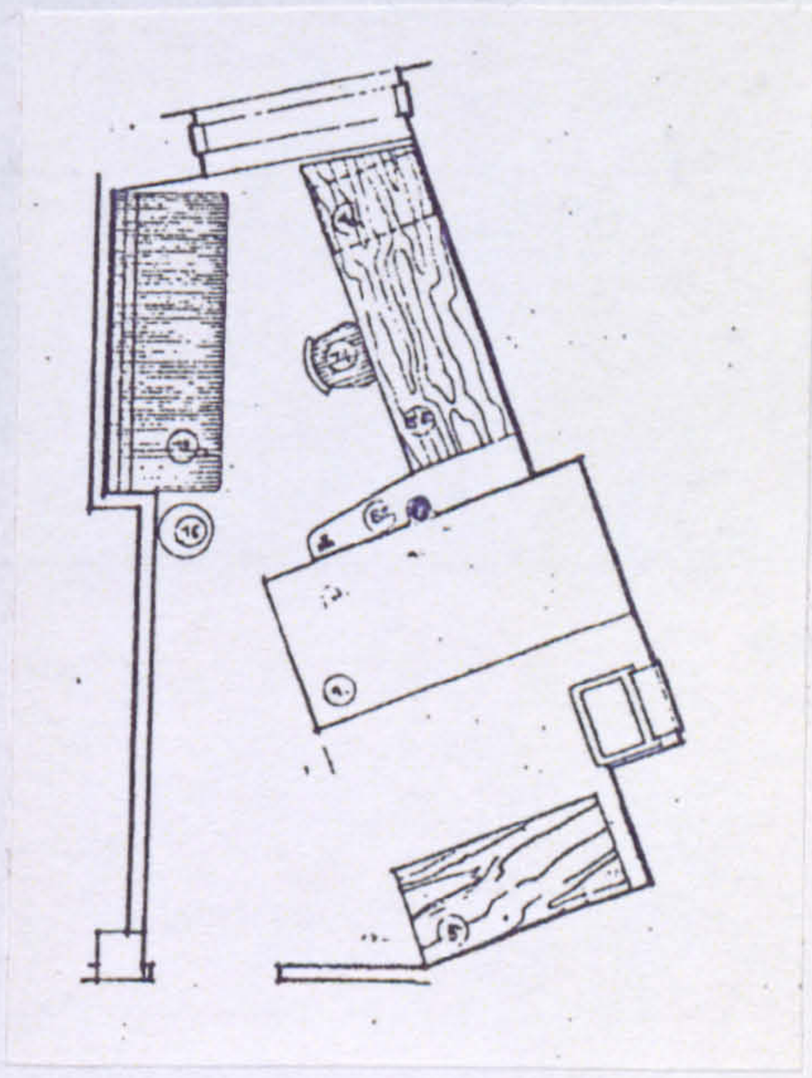

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Fig.12.62 Plan of rectilinear study-bedroom, *Baker House*; Aalto, 1946-9

Fig.12.63 Plan of wedge-shaped study-bedroom, *Baker House*; Aalto, 1946-9



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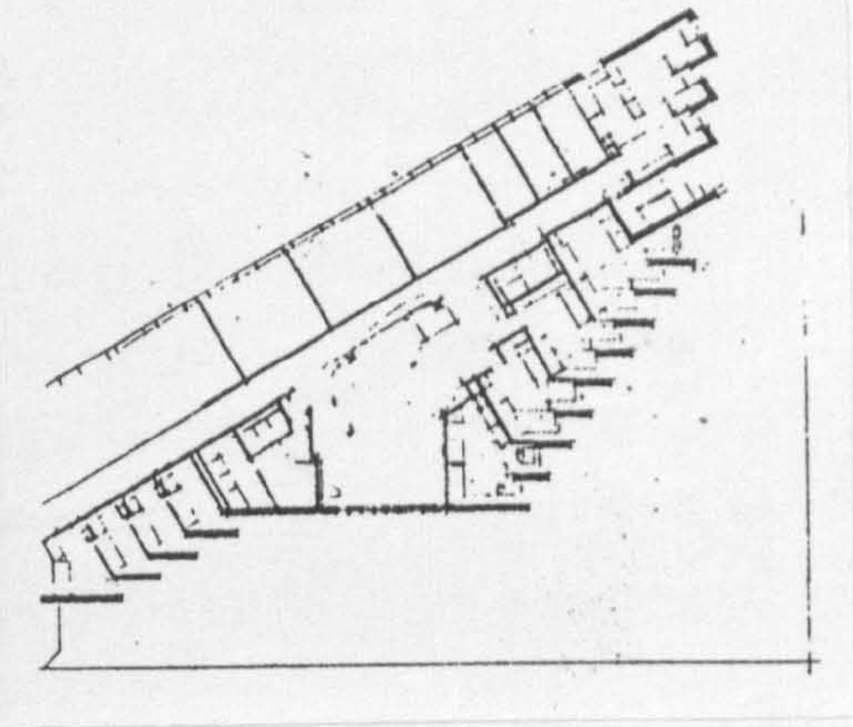
Fig.12.64 End of *Baker House* with staggered windows to absorb light; Aalto, 1946-9



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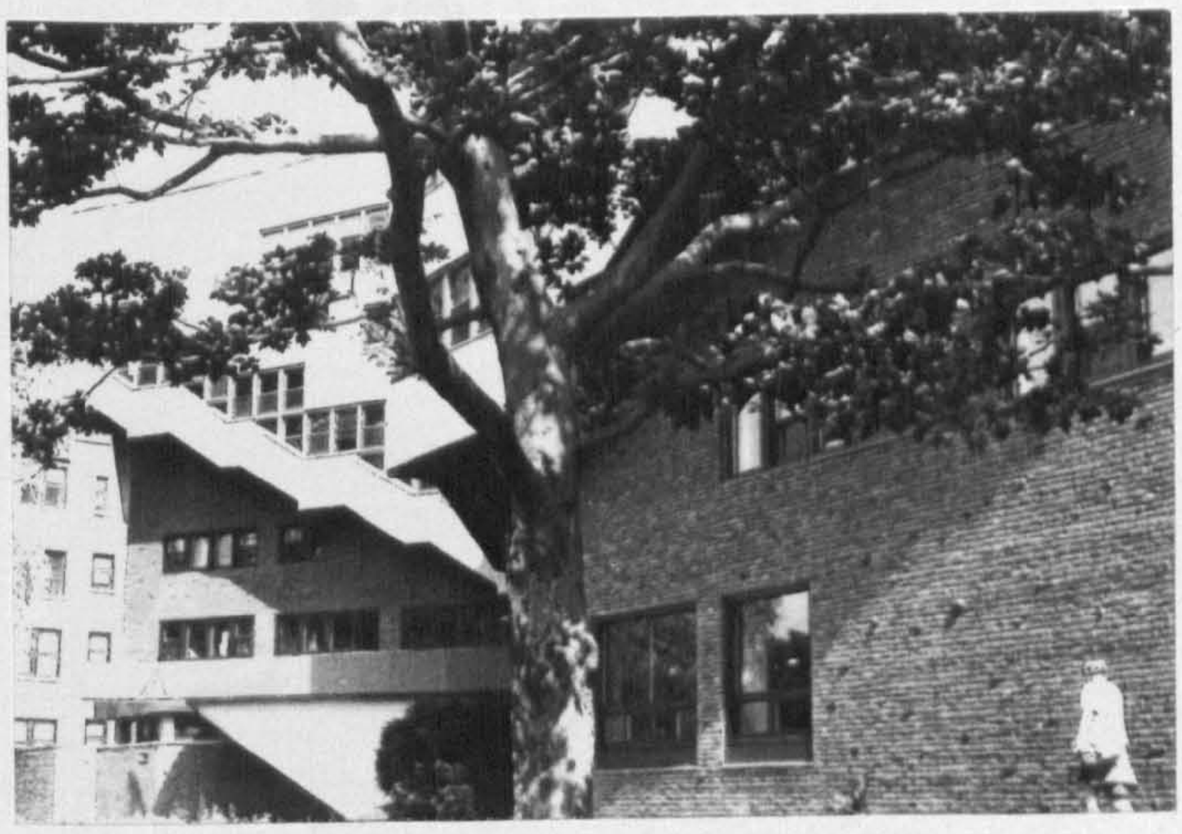

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Fig.12.65 Final plan of splayed end of *Baker House*; Aalto, 1947

Fig.12.66 View of cantilevered stair

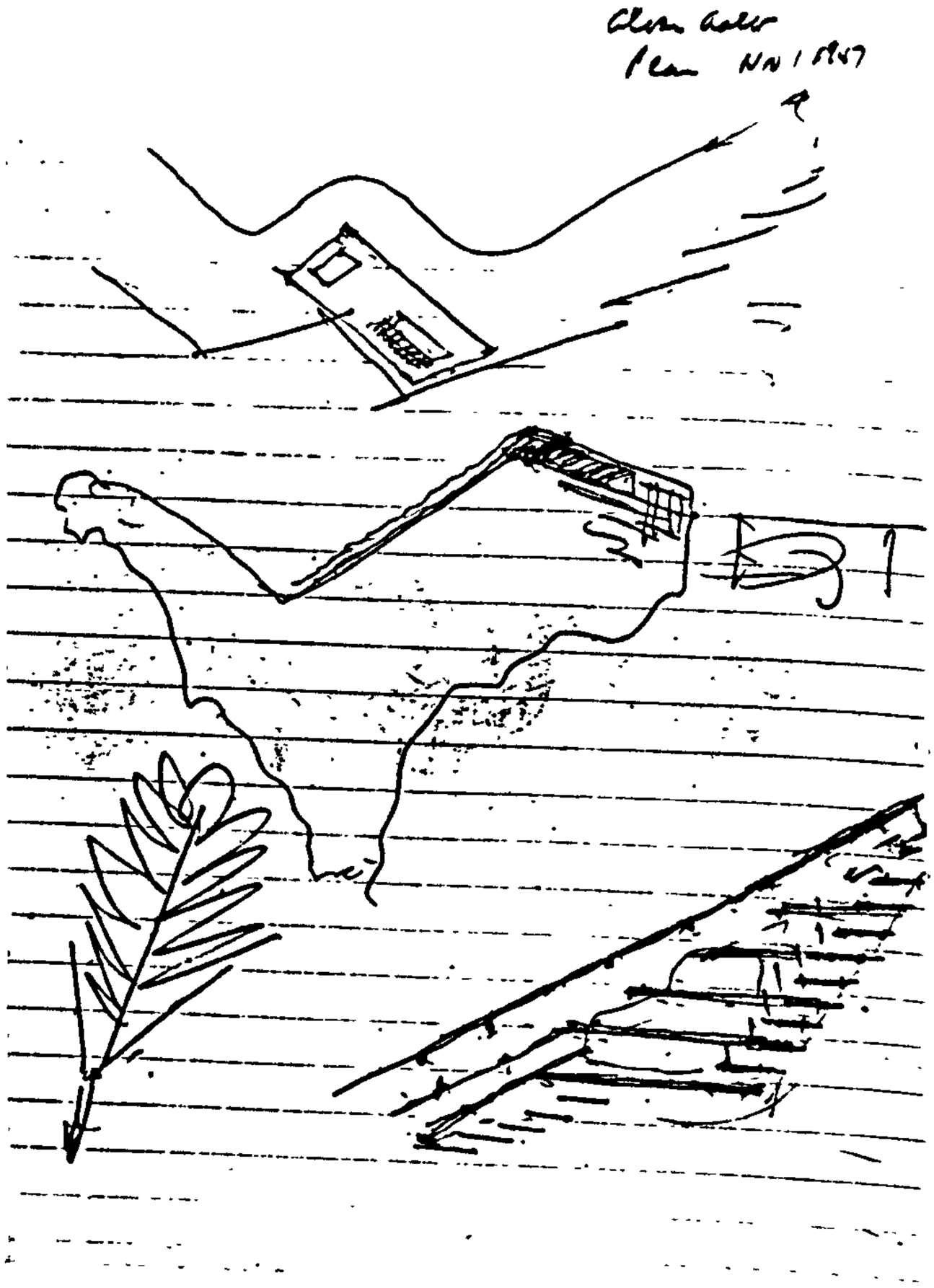

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Fig.12.67 Sketch of branch and end of dormitory accommodating more rooms, Aalto, November 1947

this through the manipulation of 'cell-like' spaces, to use his expression, within a certain vision of life in the building, not for the sake of mimicking nature. This demonstrates a manipulation of spatial episodes which are alike, but not identical, into a whole which is unique and is not monotonous.

PROCESS AND GROWTH OF FORM IN SIBELIUS

"When I consider how musical forms are established I frequently think about the ice-ferns which, according to eternal laws, the frost makes into the most beautiful patterns." (Sibelius; in Levas, 1972:82)

"The kind of symphonic thinking that we encounter in all the late symphonies [...] eludes the conventional analysis [...] the music is essentially non-episodic, and is so highly integrated that the outward course it takes does not illuminate the vital organic processes that compel it on its path" (Layton, 1978:53)

Chapter three suggested that there may be a congruence between the direction of Sibelius' composition technique and the "total variation form" of the oral poetry of Finland; i.e., the rune form or the weaving of Kalevalaic fragments. The idea that "the growth of themes is the structure of the movement" will be further explored through the example of *Tapiola* (1926), in which maximum economy was isomorphic with "growth [which] must be continuously integral from first to last" (Mellers, 1948:179). In *Tapiola*, for instance, Salmenhaara has suggested that "the starting point for total variation is not a theme unit but a germ motif", which comprises Sibelius' cellular construction; "a way of building music, a principle of form construction rather than a form unit." (Salmenhaara, 1970:124).

TAPIOLA AND ORGANIC PROCESS FORM

"The form is just the logical correlative of the ideas. It is a form that relates only to that idea: it would be inapplicable to any other" (Newman, 1932)

Hepakoski describes how, "[f]rom August 1914 until June 1915 the composer was preoccupied with creating and ordering the thematic kernels [...] 'natural mystical' seeds that were suitable for generating the content-based form" (1993:32);[66] the basis of not only the *Fifth* (1915,1916,1919), but the *Sixth* (1923), *Seventh* (1924) and *Tapiola* (1926) too.[67] In the latter three of these there is no preconceived mould or formula, rather this thesis contends that there is *Leistungsform,* wherein, "expression - content - and structural thinking - form - are an integral part of one another" (Salmenhaara, 1970:122). Pike suggests that *Tapiola* has "the sense of logical growth of ideas" and that "[t]hematic unity is evident in the use of closely interrelated material" (1978:116).[68] Indeed, in December 1926 Walter Damrosch wrote to

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[66] Hepakoski writes "To judge from Sibelius' diary entries, he associated most of the themes with mystical nature experiences at Ainola." (1993:33). Many of these diary entries have been cited during this study; particularly in part two.

[67] For instance, Murtomäki notes that "In the *Sixth Symphony* the movements are tightly interrelated variations of the same basic idea." (1993:240). Hepakoski speculates that, as such, *Tapiola* can be understood as the "overarching title" of these symphonies, yet is itself a fantasia (1993:36), "in the sense of an emphatically non-normative, content-driven symphonic structure" (1993:40).

[68] Pike also believes that the conflicts inherent in the material are explored, though not to the extent of Sibelius' symphonies (1978:116); the resultant tension of which will be explored later. To a certain extent, letter G to be precise, he also sees *Tapiola* as an organism. Up to this point the piece is conceived in perfectly logical symphonic terms, with "each new development clearly linked with preceding ideas" (1978:115). But from here after programmatic ideas take precedence, expanding in a slow manner until the end of the Scherzo section, after which the logic returns (Pike, 1978:115). Layton, too, revisits Newman's suggestion that *Tapiola* may be symphonic, arguing that this appellation is fitting due only to its extraordinary degree of cohesion (Layton, 1978:79).

"a dynamic force [...] movement towards some kind of a goal [...] continuity is achieved by this sense of procession rather than through the subtle metamorphosis of the thematic substance." (Tawaststjerna, T1:254)

To recall, the Greek notion of natural change was of a cyclical nature. Indeed, revisiting the ideas of the Greek world, Hegel conception of natural change is of a progressive dynamic process of becoming (Collingwood, 1945:122). It will be recalled, too, that Sibelius challenged formulaic compositions, saying that "content is always the primary factor, while form is secondary, the music itself determining the outer form."(Levas, 1972:82). Although not using either Goethe's *Urphänomen* or Bergson's *élan vital,* one scholar believes that this "particular kind of musical integrity and expansion" indirectly forces the "growing elements to bring their own "secret power" to "sum up" the whole symphonic subtlety of involvement", which shapes the "sublimated reflection of unity" (Sundberg, 1990). This scholar uses the example of the symphonic prolongation in the *Fourth Symphony* (1911) and contraposition of the telescoping motives, an "order" (i.e., *kosmos*), or process, which moves the musical parameters into regression in each movement, back into a "single" germ of anatomic substance. It may be said that Sibelius developed elastic management of form, a phrase which draws to mind a different translation of the concept of flexible standardisation which was vital to Aalto; i.e., "elastic standardisation".

In the *Sixth* (1923) there is a radical break with sonata form which invites what Hepakoski calls "process analysis" as opposed to formal analysis, defining a process of "rotational form".[72] As cited, such concern for process rather than resultant extant form has also recently inspired Howell to reassess *Tapiola* (1995b). It is suggested that this birthing of form arises when "a mere motivic gesture or hint is planted unobtrusively in an early rotation; it then grows in later rotations and is ultimately fully unfurled - as the *telos* - in the final one" (Hepakoski, 1993:26).[73] Hepakoski describes a form in which the "motivic ramifications" (i.e., what is vital in the motif of sound becoming manifest as the music progresses) occasions a continued growth and further accretion. This revisits the outworking of the notion of flexibility in, for example, Aalto's *Neue Vahr* apartment block in Bremen (1959-61, fig.12.14), where the unique form derives from just such motivic ramification.

Pike believes that work beyond the thematic, tonal and formal nature of *Tapiola* was inconceivable (1978:213). Indeed, it should also be remembered that the ambience of *Tapiola* is often chilling, it is not the naive growth process of a flower in spring. On the contrary, it intimates "not oneness or identification with but contemporary civilised man's alienation from nature" (Burnett-James, 1983:112; Mellers, 1948).

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[72] Hepakoski defines this as "[a] structural process within which a basic thematic or rhetorical pattern stated at the outset of a piece (the initial 'rotation') is subsequently treated to a set of immediate, though often substantially varied, repetitions [...] In such a process the end of each rotation reconnects with (or cycles back to) its beginning - that is, to the beginning of the next section." (1993:23-26).

[73] These rotations can be described with the Greek word συμπλοκη(*sumploke*, a process of interweaving or entwining).

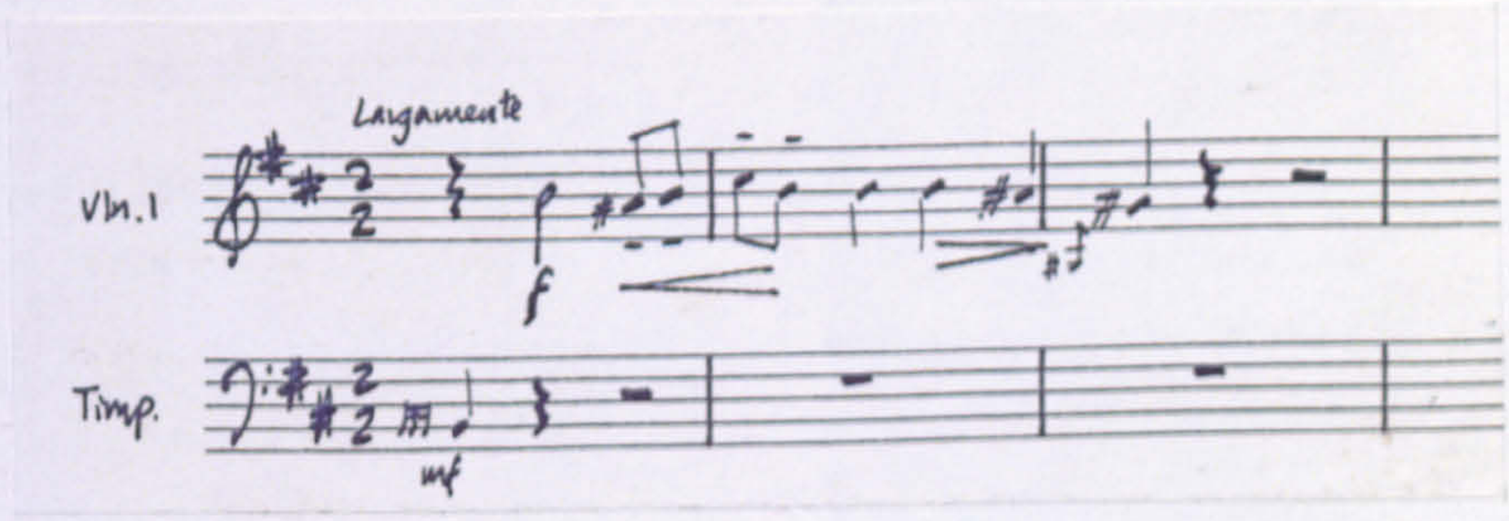

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Fig.12.68 'Avowedly slight' motivic idea behind *Tapiola*; Sibelius, 1925

Fig.12.69 Sibelius Monument, Helsinki; Eila Hiltunen, 1961-7

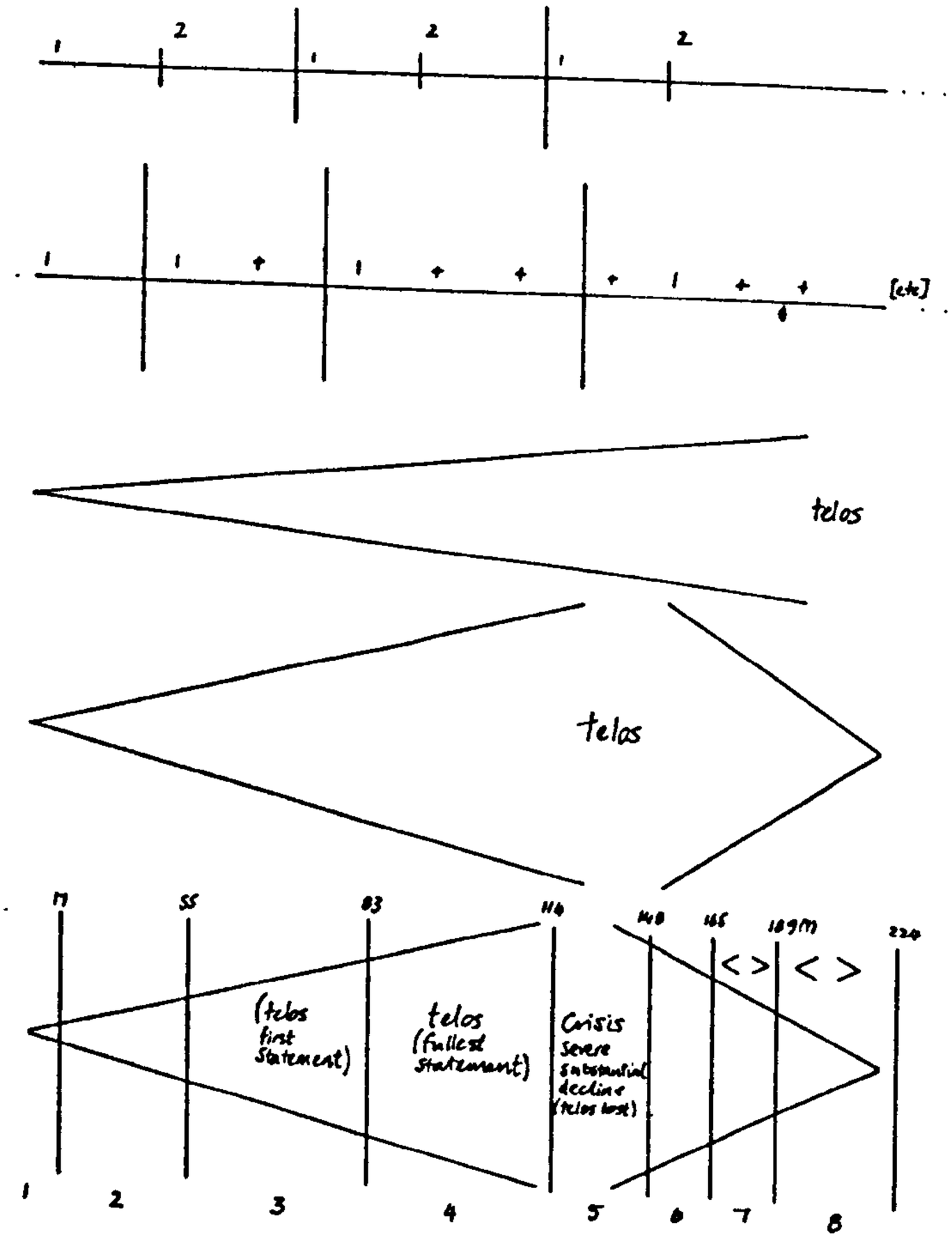


Fig.12.70 Hepakoski's illustration of teleological processes in Sibelius' work

Visiting the subject of the next chapter's inquiry, one scholar believes that the relationship to germs, motives and final themes had unique consequences regarding Sibelius' reflections on a logical symphonic process (Sundberg, 1990). He suggests that Sibelius' deep understanding of formal progression enabled him to handle a number of technical musical elements simultaneously, which, in turn, facilitated the creation of a personal "musicaesthetic" speculation of an "inner 'metaphor' ", or *élan,* which urged Sibelius to proceed to a totally new dimension of symphonic transformation from a progressive kind of classicism to a more "universal symbolic transformation" through well built organic balance (1990).

CONCLUSION:
FLEXIBILITY AND THE GROWTH OF FORM

"[Flexible standardisation] must go deep into the inner system of building components and elements [...] to form an infinite number of different combinations [...] a system in which variable entities of almost infinite function and form can be produced out of the same parts." (Aalto, 1941b)

"Could form be a contrapuntal phenomenon in that the importance of the different levels on which the music exists keep on changing, thus forming a spacio-temporal organism of tones [...] ?" (Murtomäki, 1993:280)

" [...] we discover that the 'first telos' has not been the true end-point of the symphonic process. Rather once secured as a stable, but still 'volitional' sound-object, it now opens with stress and trembling to give birth to something beyond itself." (Hepakoski, 1993:84)

The potential for flexibility demonstrated in this "natural thematic variation" and "fluctuation" (Aalto, 1938) revisits something of Heraclitian flux. Indeed, challenging the approach to reality of Newton's classical determinism, Bergson founded the *élan vital* to provide a harmony, a unity even, that random variation lacks, by over-arching the potential chaos of change's flux (1911a). In other words the *élan* implies "a kind of intentionality, however vaguely defined, in the evolutionary process", or transformation (Kolokowski, 1985:57-8). This thesis contends that the vital force (*élan vital*) is the vital (literally life enhancing) need to relate to the past (the profound *logos*) which Sibelius and Aalto shared. Organicism became the model for their formal processes (an elastic management of form) which offered a *paradeigma* (pattern) that could offer realistic content-generated wholes in which '*gaps*' between the inner (content or true self) and the outer (structure or false self) were inherently avoided; the psychological corollary of which was demonstrated in part one.

Thus, from small scintillating fragments, "the germ motifs need time to coagulate and form an organic whole" (Newmarch, 1939:61), each note of which "serves a genuine artistic purpose." (T1:187). This chapter has demonstrated that there is a process in Sibelius' and Aalto's work in which the "smallest possible units" (Aalto, 1938) 'grow' or develop into the whole forms, guided in part by their own nature. Indeed, Sibelius strove to create as "a slave to my themes" (T3:ch.2), and Aalto to respond to "the content of the work" (1928).

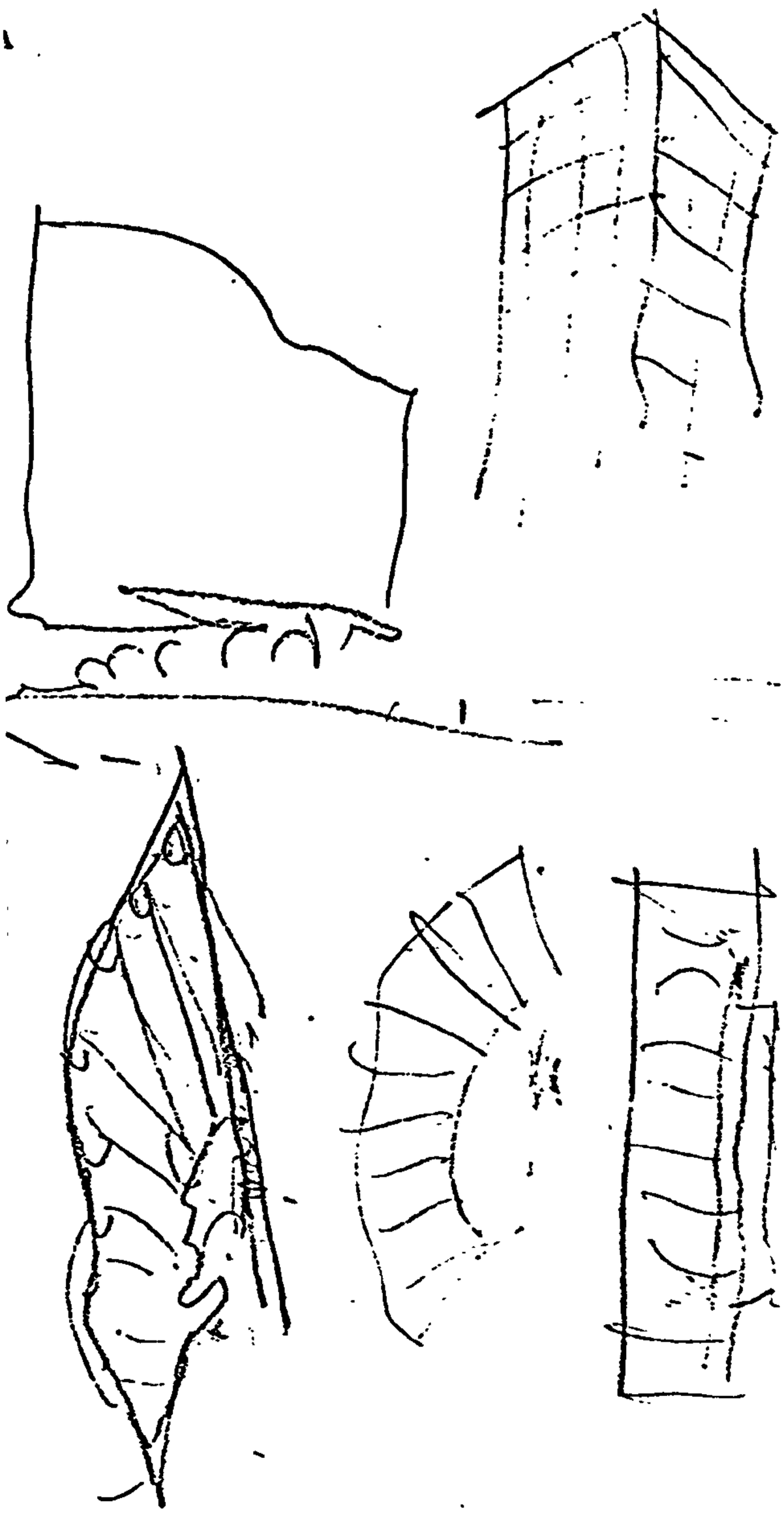
The final chapters will explore how Aalto and Sibelius addressed their own disharmony, how the potential chaos in the work of Sibelius and Aalto is reined in by formal mechanisms,[74] and how these facilitate the coming of *Leistungsform* in their work, and the maintenance of the works' *kosmos* (order).

[74] Sibelius' creation of the equivalent of the 'pedal' enjoyed by the piano, an extended bass line, acts as a foundation from which the often hectic activity processes above grow. This element can be likened to a temporal stasis, in that it is a still, yet continual element of sound. Aalto's equivalent of the 'pedal' is the anchoring of the rectilinear from which either fragmentary or fluid forms can grow (fig.). The 'pedal' is often an economic domicile for ancillary functions. To be a central discussion in chapter thirteen.



12.71

Fig.12.71 Sphagnum moss



12.72

Fig.12.72 Sketch of *Neue Vahr Apartments* and rectilinear block; Aalto, circa 1958

Chapter Thirteen



13.1

CREATING *KOSMOS* IN THE *'GAP'*:

Essence and Technic as Cloth and Weave

Fig.13.1 Melting ice, Lehtisaari, Helsinki

Introduction

"We should begin speaking of the lost promise of the future and those lost attempts of the past" (Reima Pietilä, 1981:81)

"The most characteristic feature of [Aalto's] work - the striving for unity." (Andrei Gozack, 1979:67)

"Follow your own star and stick to the symphonic path [...] listen to your own inner voices" (Carpelan to Sibelius, 30 July, 1914, T3:ch1)

Believing Sibelius to have failed in programme music, Johnson suggested that the Finn "found himself driven in the direction of the only large form that he had not tried - the symphony" (1960:73).[1] This section will seek to challenge this view, explaining that Sibelius' symphonic work is of much greater significance than Johnson suggests, being an attempt to forge wholes from determined yet disparate elements, and that this correlates with an essential aspect of Aalto's work.

Following chapter eleven's explanation of Langer's notions of image and model (1988:98), and having explored the notion of nature's growth process as a model (in chapter twelve), it is now appropriate to examine the manner in which the Sibelius' and Aalto's works of art may be images of the "forms of feeling" (imbued with the phenomenal character of what they signify); an examination of what underlies (i.e., the deeply rooted motivation for) their use of the latter model of nature's growth process.

Imaging the Pattern of Harmony

Significant ontological relationships exist between Langer's use of image and the Greek word τεχνη (*techne,* letting the essence appear), and between model and παραδειγμα (*paradeigma,* pattern or standard). It has been suggested that in the making of order, an image may represent external form, abstracting the object's phenomenal character which relates to its essence, which through *techne* comes to appearance (McEwan, 1993). In other words a phenomenal essence, such as harmony, may be the transfused into a piece through the *techne* (art - having come to mean 'technique'). This challenges modern notions of the divorce of technology from the essence of art, recalling Aristotle's distinction between 'Fine Art' ('whose end is to serve only itself') and 'Practical Art' ('that serves an end other than itself'), cited earlier. Yet, as this thesis maintains, within practical art the end and the means can be fully integrated; because the *techne* and the *paradeigma* cannot be separated. It is Langer's dichotomy between model and image alone that remains, and which therefore invites integration.

[1] Such ideas had been challenged by Legge (1935) and Newman (1934).

The argument will examine the Ancients' concepts of *harmonia, kosmos,* and *paradeigma* (pattern). This will progress towards a discussion of the roots of technology and technique, and its role of bringing something to 'being'. Herein, Goethe's experience of Palladio's compositional freedom within the classical tradition (Goethe, 1995) will be revisited, leading to a discussion of Aalto's amalgamation of *harmonia* and αναρχια (*anarchia*) in terms of both philosophical and formal order; both of which are brought together in preparation for their application to the work of Sibelius and Aalto.

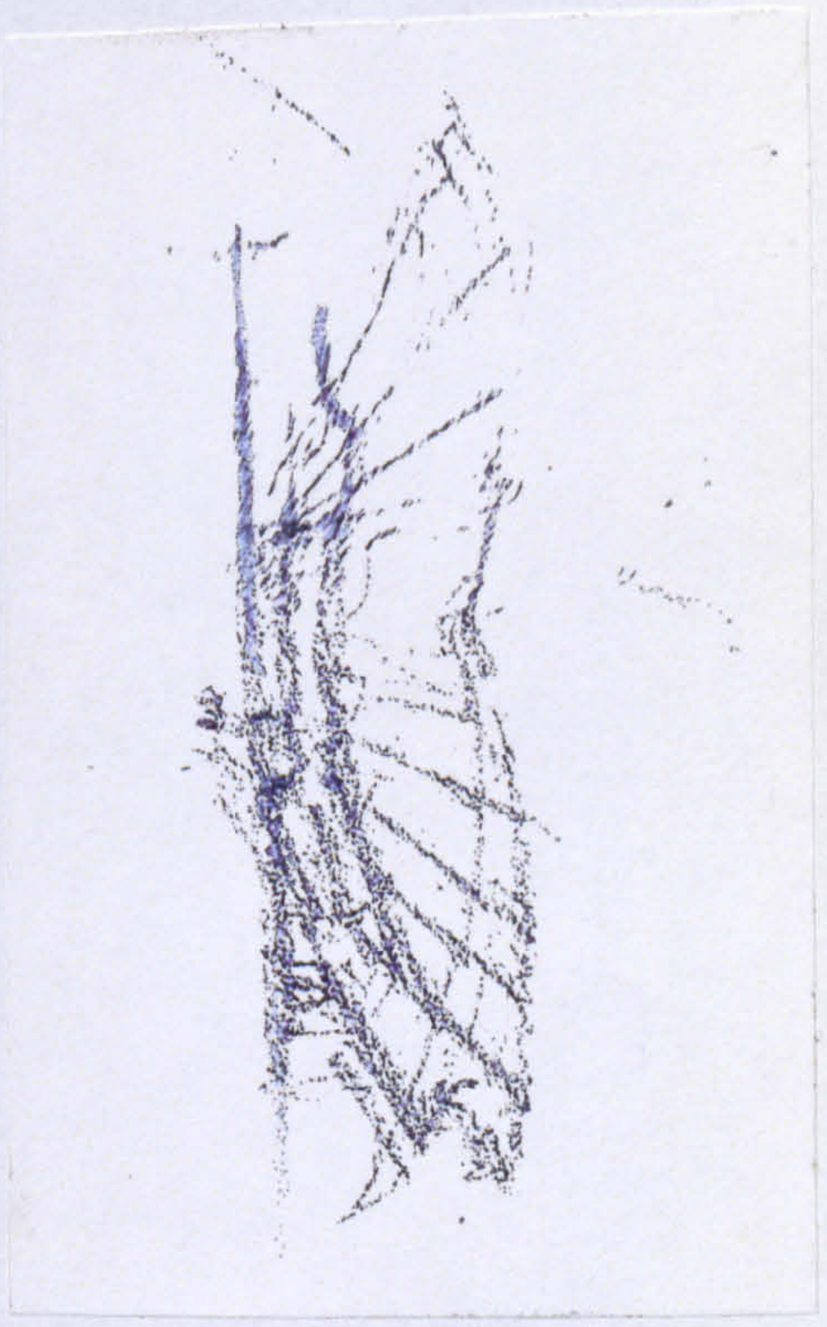
Moving to examine the inner relations of form, the argument will examine joints (αρμοι, *harmoi*) as a key aspect of *harmonia*, emphasising the role of the Pedal and the Wave in Sibelius' and Aalto's work. After explaining the root of the notion of 'symphony', and its connection to the latter joining mechanisms (through which *harmonia* and *kosmos* are ensured), Sibelius' path to symphonic unity will be explored through the creative process leading to his *Seventh Symphony* (1924) and the creation of form from content. The equivalent in Aalto's equivalent creation of *harmonia* in unified building forms, grown from distinct functions, will then be demonstrated through the continuing story of the creation of *Baker House* (1946-9).

> "[Unity in art] can be traced in the lattice [...] at the roots, in their nascent form, not at the surface." (Aalto, 1947b).

This chapter seeks to understand the unity within the works, and at root in the lives of Sibelius and Aalto.



13.2



13.3

Fig.13.2 Birch leaf growing from trunk

Fig.13.3 Sketch plan for *Neue Vahr Apartments*, Bremen; Aalto, 1958-62



13.4

Fig.13.4 Wood sculpture, *Institute of International Education*, New York; Aalto, 1963-5

CLASSICAL *LOGOS*: RELATIONS MAKING HARMONY

"Through and through the Greek ideal is Unity" (Dickinson, 1951:250).

"Harmony dominates, but a harmony which comprehends strife and antagonism as a synthesis is beyond thesis and antithesis (an idea for which Hegel is indebted to Heraclitus)" (Spitzer, 1963:9)

"[...] our efforts towards a harmony between work and the various forms of life." (Aalto, 1941b)

This section will investigate the coexistence of Heraclitus' flux with the idea of unified forms, revisiting both the pre-Socratics' notion that strife can turn into *harmonia* and elements of the arguments which led to the definition of 'organic unity' in Sibelius' and Aalto's work. The argument will then move towards the inner need for *kosmos* (i.e., continual order and balance to maintain self-regulation or homeostasis)[2] and its reflection in and through the art of Sibelius and Aalto.

Towards Certainty?

Religion, which had brought Greeks into *harmonia* with the world by relying on imagination not intellect, then passed into philosophy which promised a new, rational certainty.[3] The intellect grew in its enquiry and scepticism, banishing the irrational and the emotional, and bringing on the downfall of the civilisation (Dodds, 1951:253). This transition devastated the 'balance' of Greek life.

DISCORDIA CONCORS: THE RELATION OF INNER AND OUTER

" [...] virtue [...] was the free expression of a beautiful and harmonious soul" (Dickinson, 1951:221)

"The healthy soul is 'symphonic,' i.e., harmonious" (Spitzer, 1963:17)

The idea that the Greek notion of *kosmos* signified a system of great stability is fallacious. The unity of *kosmos* was in 'flux', being a natural system, and therefore constantly changing (Darwin, [1859] 1994). Admittedly the individual's relation to the State, the inseparable relation of ritual and idea in religion, the balance of body and soul had all attested to the Greek preoccupation with the harmony in all aspects of life, but this harmony was informed by both order and disorder (Plato, *Laws*, 654b). This was an intrinsic 'fusion' of the ethical and aesthetic spheres in the pursuit of representation of the excellence of 'Man' and the constant readjustment of opposites (Dickinson, 1951:210). Indeed, Jacob Burckhardt, whose ideas tutored Aalto in classical and Renaissance culture, did not sanction the notion of inherent unity

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[2] It will be recalled that homeostasis (taken literally from the Greek, same-state) was introduced by Cannon to describe any process which modifies an existing condition, which triggers other processes which function in a regulatory manner to re-establish the initial condition (Rebber, 1985: 326).

[3] With the development of the Greek mind came monotheism, i.e., the shedding of the supernatural in the pursuit of belief in natural science and philosophical questions of causation.

(1963:155),[4] but his writing evades the depth of understanding or *harmonia* and precarious unity of the pre-Socratics.[5]

According to Harmony

Harmonia was 'induced' between people and the world. It was a vital impulse to reconcile divergent elements (i.e., Heraclitus' mutual adjustment).

> "architecture is [...] a complex process of development in which internal interactions constantly produces new solutions, new forms" (Aalto, 1940b)

The more divergent the parts the stronger the *harmonia* must be, such as a *harmonia* which engaged body and soul. Indeed, Plato's belief that a man must attune his body to the harmony of his soul (*Republic*, ix:591d), may be examined in terms of the creative act, suggesting that the creative act must be attuned to the αρμονια (*harmonia*), or clearly the δυσαρμονια (disharmony) of the soul. *Harmonia* or disharmony would then be reflected in the art, as in the man; the outer reflecting the inner. It is such a striving process towards harmony (a mutual adjustment, even, of art and life) which is reflected in Sibelius' and Aalto's work which will be demonstrated in these last two chapters.

Pagan ideas and Christian enthusiasm combined as early Christian thinkers absorbed much of the Greek world view of *harmonia*, with love replacing cosmic order as being identifiable with music; henceforth 'order' is love, as the "all-binding, invisible harmony of the contrasting elements in this world" (Spitzer, 1963:20).[6] Augustine, for instance, challenged the Heraclitian notion of *harmonia* as forcing together the inimical ("*concordia discors*" Horace, lb. xii.19), preferring the ability of *harmonia* to smooth apparent discord, hearing unity underlying diversity (*discordia concors*). Although such a semantic argument is interesting, since it draws the notion of *harmonia* away from difficult discord, it is subordinate to the establishment of the common centrality of *harmonia* in the work of Sibelius and Aalto.

The Grecian undertones of concord in discord, and discord in concord, can be heard in Goethe's writing when he called the Greeks' single idea 'the good, the beautiful and the whole'; i.e., "the perfect relation of the inner and outer" (Dickinson, 1951:250). This is not the subordination of parts to the whole, but rather that in the whole the Greeks found their realisation (1951:254), which, incidentally, Goethe understood to demand purposeful interaction with nature.

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[4] Jacob Burckhardt saw art as independent of the demands of religion, yet perhaps not of ethics (1963:130-33). He cites Socrates constant taunting of the limitation of the artist's realm, stating that "philosophy and art were at daggers drawn", with the battle for and against myths as the rationalists gained ground (1963:155).

[5] Renaissance humanism laid emphasis on order and was the enemy of chaos and inhuman order (Scott, [1914] 1980:244).

[6] Spitzer cites the writing of Ambrose, *Hexaemeron* (iii:5:21-3) as a soul absorbing pantheistic fullness leading to catholic polyphony, and Augustine *De ordine*:III:xix:50-1) as a linear soul leading to monotheistic monody.

In essence this is the employment of *harmonia,* one which commandeers the essence of *logos* or relation. That Goethe, a critical source for Sibelius and Aalto, believed such unification to be entwined with nature adds additional value to the notion of "the perfect relation" and Greek (or self) realisation, through the connection, joining or harmonising (*harmos* meaning joint) inside and outside. This brings the discussion to the heart of the thesis of Sibelius' and Aalto's common mechanisms of relating both the historical past and their own past.

As suggested, there were internal contradictions and limitations within the Greek ideal which speeded its decline. However, in this chapter traces of the Ancient system of self-regulation are recorded, and modernised. Indeed, like the lives described in chapter five, Greek *harmonia* was precarious. However, the perpetual search for such a state of being (balance, wholeness) in the content of the art, and vicariously in their own lives (i.e., at least homeostasis) resulted in their being drawn through the perpetual dynamic (i.e., mutual adjustment) of the search for *harmonia* and the establishment of unity. However, much has been invested in a post-rationalisation of the concept of *harmonia* over the last two millennia which has tended to offer certainties and banish this precariousness. This thesis seeks to reinvigorate the formal preoccupations which return to an Ancient understanding of the richness and vulnerability of integrating the disparate.

GROWING KOSMOS IN THE '*GAP*'

"In living things [...] disparate components are joined in a unity that "has life of its own" overriding the private tendencies of those components. Something of this is in Heraclitus' harmonia" (Hussey, 1972:131)

"[...] allowing kosmos to appear through the making" (McEwan, 1993:75)

"The irrationalistic lackey-language of the twenties prattled on about 'body-soul' unity" (Adorno, 1986:143)

To explore whether Sibelius and Aalto might have translated their philosophical attitudes towards *harmonia* and *kosmos* (order) into artistic form in order to assist their requisitioning of psychological balance, the relation of *kosmos* (order) and *paradeigma* (pattern) inherent in both Classical philosophy and indeed in organic phenomena, will be examined with the foregoing Heraclitian insights.

ERGON KOSMOS: TRACING THE PATTERN OF UNIFIED ORDER

"We should then pursue an understanding of the parallel relation in art, specifically, the holding of the external work of art up to the inner world of feeling, or of, in short, comparing the form and the feeling." (Hagberg, 1984:333)

"In few composers has the Apollonian taken such controlling charge of the Dionysian as in Sibelius" (Newman, Intro. to Ekman, 1938:x)

The Archaic Greece of Homer, in which Western civilisation is rooted, was a civilisation of the artisan (Vidal-Naquet, 1975:12; Burford, 1972). Sibelius and Aalto turned repeatedly to this Homeric and pre-Socratic spring, as source which informed their process of making form, and indeed living.

The Genesis of Form

To lease and modernise the early Greek perception of εργα (*erga*, craft) as the revelation of *kosmos* (order),[7] can inform the discussion of order in Sibelius' and Aalto's work. In Homeric Greece the γενεσις (*genesis*, coming-to-be) of *kosmos* was rooted in *erga* (craft), so the process of the crafting (εργον, *ergon*) and application of a pattern (*paradeigma*) or design (to use a concept which post dates the Ancient conception) leads to *kosmos* (order).

The idea of organic art (i.e., processes of growth of artistic form) in Sibelius' and Aalto's work, can be shown to be in the image of the pattern of natural phenomena of renewal, change and flux towards natural order (*kosmos*). In this way they may be said to have been producing images of the most natural of processes; the essence of *genesis* (coming-to-be). The resultant art may then resemble the phenomenal character of that natural order, which was also a model for something of the structural pattern of natural growth, as the last chapter

[7] McEwan proposes the thesis that this perception was first articulated by Anaximander, but was later discovered by Daedelus. (1993:79).

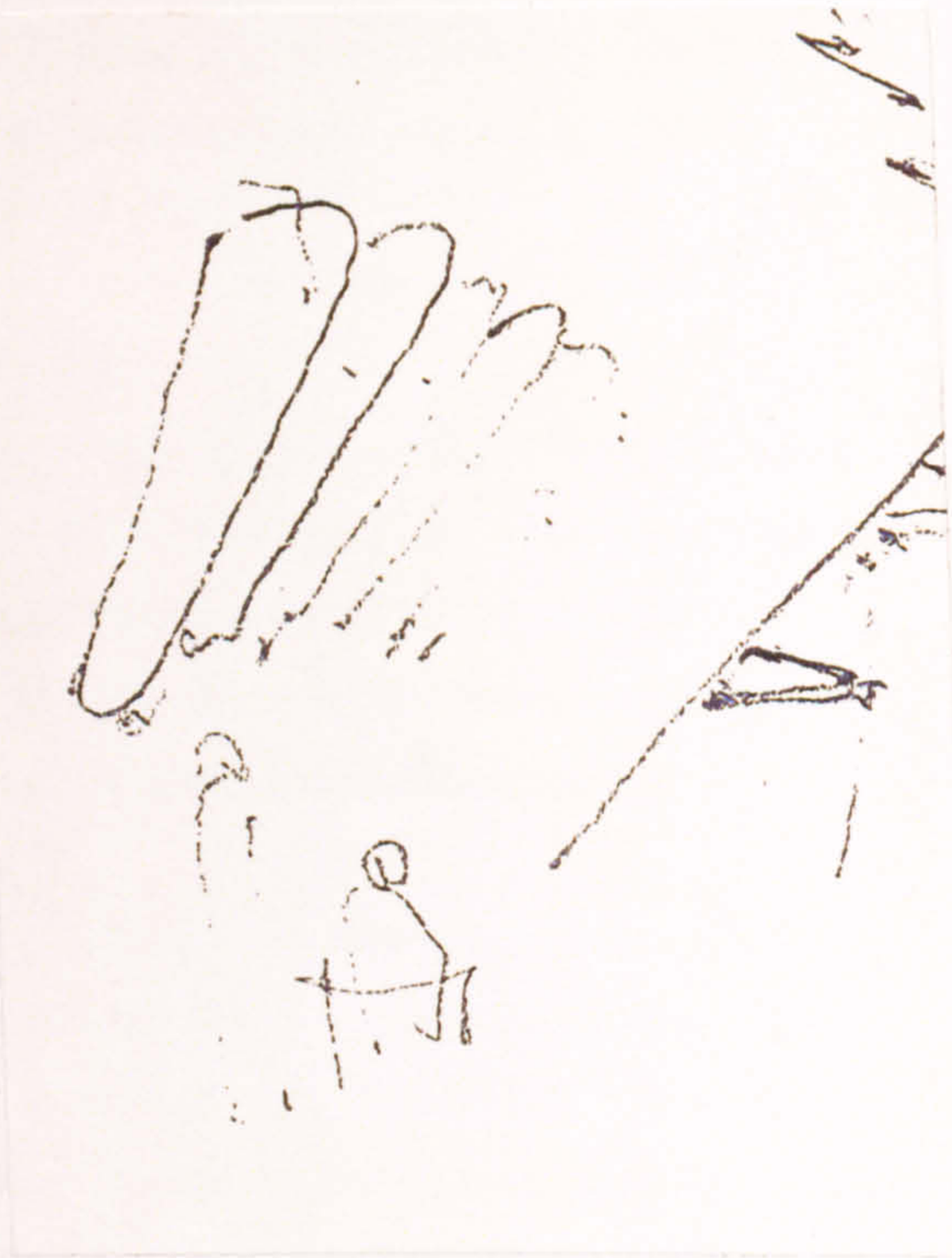


13.5

Fig.13.5 Surveying the forest; circa 1920



13.6



13.7

Fig.13.6 Willow woodland

Fig.13.7 Sketch for interior of *Vuoksenniska Church*, Imatra; Aalto, 1956-9

demonstrated.[8] The image of the unity and *harmonia* in nature (and therefore in life) is concerned with the symbolism of nature's phenomenal character.

Since a symbol is the projection of what it symbolises, with the projection resting on the recognition of one and the same logical form in different exemplifications (Reber, 1985:580), different examples of art exploring the same symbol may be experienced as similar. Thus, without seeking to replicate nature, Sibelius' and Aalto's work can be understood as an exploration of the order and process of being and becoming (and even dying, as the final chapter will indicate), since, as Langer explains,

> "(a)n image may be - and usually is - built up on entirely other principles than the phenomenal character of its object, and its own construction may be utterly different, while the created semblance confronts us like the phenomenon itself." (Langer, 1988:30).[9]

Weaving Threads of 'Becoming'

There is a vital connection between the being, becoming and making of art here, which in turn is related to the process of weaving both threads of unrecorded reality (the personal experience of 'being') and knowledge of technical matters (τεχνικος, *technikos* from τεχνη, *techne*, art) through which art finds being in form (ειδος, *eidos*).

McEwen explores Plato's assertion regarding pattern in eternal creation (*Timaeus* 38b), in which the entire universe is constructed, "according to a *paradeigma* by a craftsman" (a *demiourgos*); a projection of a human system onto heavenly craftsmen (McEwan, 1993:41). This is anthropocentrism which, as cited above, was equally demonstrated in other areas of Greek life. Such a human system of creativity is inevitably informed by human experience of intra- and extra-personal creation. The Greek word *paradeigma* (pattern or standard) suggests the way that, in making something, the person assumes an order or rightness, "that transcends all recipes and rules of composition" (1993:42). Sibelius and Aalto assumed a natural order, whether it be in the foregoing model of organic form, or image of *harmonia* of the natural *kosmos*. Such a *paradeigma* will be shown, among other things, to seek a deep psychological balance. In being so directed, both men dismissed methods or modules, rather rooting their art in the content (*Leistungsform*), their creative ingenuity, their scepticism and, in turn their deep need to harmonise (to joint) the complexities of their human experience into a manageable order.

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[8] It will be recalled that Image and model are distinct, as Langer explains. An image "sets forth what the object looks or seems like" (1988:25), representing external form and abstracting the phenomenal character of something, and a model shows "how something works" (1988:xiii).

[9] Langer believes that images alone "made us aware of the wholeness and over-all form of entities, acts and facts in the world; and [...] only an image can hold us to a conception of a total phenomenon" (1988:xii), here allying the investigation with Aristotle's *poiesis* concerning issues of wholeness and universality rather than detail *Poetics* (IX, 51a35-b11). Although *poiein* meant to make or compose, Aristotle concentrated on its representation of universals (i.e., plots, wholes) rather than particulars (i.e., verses, parts) which might be the realm of *mimesis*.

LOGOS AND TOTAL RELATIONS

> *"[To] face reality and probe deeper into its possible spiritual significance [...] I believe to be the function of all the greatest art."* (Fry, 1932:21)
>
> *"The essence of a complex thing is identical with its structure [...] its pattern"* (Collingwood, 1945:165)

Inherent in such a *paradeigma* (pattern) is the phenomenon of relations; i.e., of *logoi*. Crucially, in seeking what she contends is the "unsayable" meaning of art,[10] Langer understands logic to mean the "primacy of relations" as opposed to qualities (1993:55), believing a pattern emerges when art is viewed "in its total relation to other terms about it", linking this pattern to function, and therefore to meaning (1993:55).

> "It would appear [...] that it is the musical form itself, such as the themes and variation structure, that carries the aesthetics significance or meaning" (Hagberg, 1984:336)

However, although helpful in discerning the centrality of "relations", Langer actually encouraged detachment from the function in order that aesthetic qualities may be appreciated (Hagberg, 1984). In so doing Langer is said to have put aside important keys (e.g., content and patterns such as the musical form of symphony) where it opposes the notion of pure form (Hagberg, 1984:335 & 334). In other words Langer contended that it is not possible to give any discursive account of, or explain any particular case of artistic meaning, shrouding the feeling and intuitive (i.e., non-discursive) in the notion of the "unsayable". Such detachment in which content is judged to be irrelevant to the question of meaning, is far from Sibelius' and Aalto's *Leistungsform*, since it admits no aesthetic relevance beyond discursive projection;[11] it is important to note that Häring (from whom the idea of *Leistungsform* is taken) did not find a place for aesthetics in his organic work. In the forthcoming example, the analysis of the significance of the form of symphony to the content and meaning of Sibelius' work will demonstrate the central question of the relationship between pattern (*paradeigma*) and the human process of making (*erga*).

PATTERNING A PERSONAL *KOSMOS*

> *"[...]a rhythm or order* (kosmos) *that is rediscovered with each new tracing of the figure"* (McEwan, 1993:42).

Concurring with this thesis, and armed with Aristotle's notion of practical art, St. John Wilson has defended the unity of the aesthetic and the functional (1992 & 1995). The search for relations which allow the unity of the formal and the emotional, and of the practical and aesthetic, may find bounty in the foregoing explanation of early Greek thought in which natural order was the order which other (crafted) *paradeigma* sought to replicate.

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[10] Langer cites Wittgenstein's *Tractatus*.

[11] This detachment recalls Clive Bell's ideas (1914), described in appendix seven.

Plato understood *paradeigma* as existing to be copied (*mimesis*). However McEwen believes it can alternatively be conceived of as "a rhythm or order (*kosmos*) that is rediscovered with each new tracing of the figure" (1993:42). In the work of Aalto and Sibelius, the *paradeigma* of nature's growth process is traced through the *technikos* (i.e., the form and structure of their art) into and through its *eidos* (idea), its *élan*, or its essence, which (being from the depths of the artist) is closely related to a psychobiological, or natural human-organic *paradeigma*.[12] In other words this growth and development process is not other than their own human growth and development process (i.e., Winnicott's primary human creativity), as Sibelius indicates when he described the way he "allowed the musical thoughts and their development in [his] psyche determine the form" (23.4.1912), producing the decisive tension of, for example, the *Fifth Symphony*, with its highly organised first movement; the "totally unprecedented formal construction which constitutes the symphonic centrepiece of the whole work" (T3:ch.2).

In other words, the use of such an organic, even teleological pattern offered Aalto and Sibelius both a process, and subsequently the resultant creative forms, which were congruent with something of the *paradeigma* on which their own life could be built, or at least reconstructed. Their incapacity to weather strife or prevent their psychological (and often physical) breakdown suggests that the natural *paradeigma* of self-regulation (i.e., homeostasis) was prevented from working by aspects of the '*gap*'. Therefore it was imperative that they found a model or image of a harmonic *kosmos* in their lives which would act as a model for the creation of the balance and harmony which they vitally needed, and which they were preoccupied with in their art; i.e., the "mutual adjustment" of parts of their divided selves to a 'place' in which order is maintained.[13]

Universalising the Pattern

In Archaic Greece the *paradeigma* (pattern) was 'allowed' to appear through 'making' (fig.13.8 & 13.9), and thus became universalised. Over two millennia later both Sibelius and Aalto were open about their desire to constitute their art (*techne*) in the Ancient *paradeigma* (i.e., the preoccupation with the search for *harmonia* of *kosmos*), and for this reason their mature works have been described as universal (GS1; Quantrill, 1983; T1; Levas, 1972; Murtomäki, 1993).

Personalising the Universe

McEwen concludes that, "it is through making that *kosmos* appears, or does not" (1993:43), and in this case, if not, breakdown, and arguably even "psychosis" (GS3:16) resulted.[14] Here, in agreement with the conclusion to chapters five and six, a goal of creativity and the nature of

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[12] Langer explores such issues in detail in *Mind: An Essay on Human Feeling*, (1988).

[13] This need for homeostasis and psychological balance can be seen to challenge Plato's notion that "Life must be lived as play"; *homo ludens* (Laws, viii:803; Steiner, 1970; Huizinga, 1970). For a discussion and refutation (introduction by George Steiner) of the theory of *Homo Ludens* see Huizinga, J. (1970). (See also Burckhardt, 1945 & 1963; Hirn, 1900; St. John Wilson, 1992).

[14] As chapter five indicated, Schildt (and Alanen) use the term 'psychosis' to describe Aalto's depressive state. Storr suggests that at this distance the description of Aalto's regression does not seem to be psychotic (pers.com. 26.6.1996).

order begin to share identity; i.e., being the need to relate divided realities through a *paradeigma* which, arguably, was modelled on natural processes of growth which are essential to all human beings. This invites the conclusion that by undertaking to create art using their skill of *technikos* Aalto and Sibelius may have discovered that the process of seeking the growing into being (i.e., the *genesis*) of the work highlighted that which was essentially lacking in themselves (i.e., the implicit relation of form and content towards a unity).

Yet, importantly, the *paradeigma* "both measures the work and can be measured by it" (McEwan, 1993:42), so the work simultaneously gives form to the *élan*, or life drive, and is formed out of it. This is true to experience. In other words in the process of making (or thinking) new understandings both of what is being made and the process of making is gained. Put another way, things are made and discovered through the making (McEwan, 1993:47).[15] If it gives form to what seeks expression, the process of creating the work is both bringing the expression into material form (i.e., a musical or architectural artefact) and feeding back the processes of the 'growth into being' (*genesis*) into the creator through the process of creativity. Therefore, it may be concluded that Sibelius' and Aalto's work may comprise characteristics of their psychological dysfunction in terms of formal relations, in for example a) the interplay of parts, b) the creation of precious, yet precarious *harmonia*, c) or the building of the whole from fragments.

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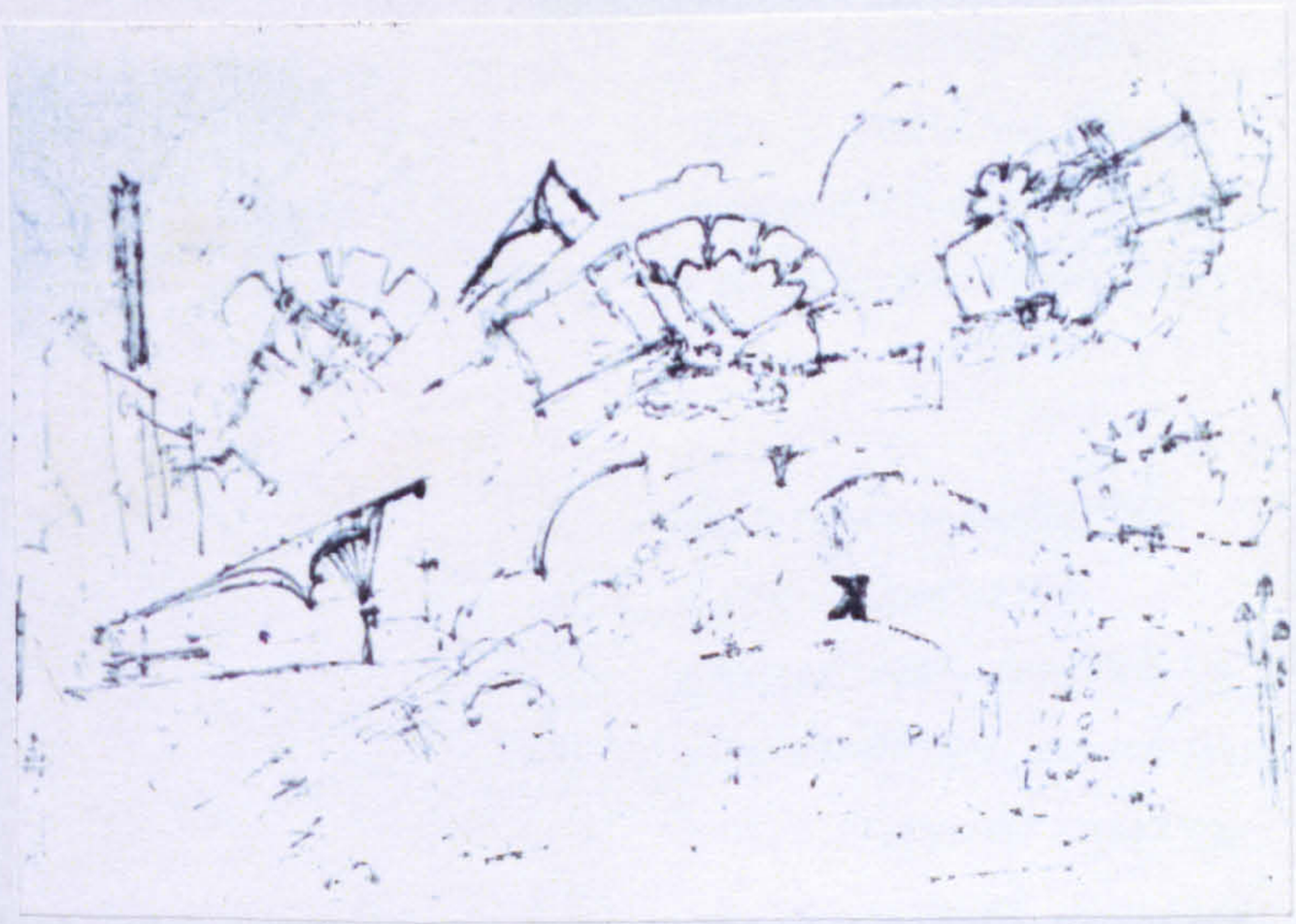
[15] Victor Zuckerkandl cites *Human, All too Human* (1909 -1913, vol.6-7), in which Nietzsche writes; "In the presence of perfection, we seldom ask how it came about" (1974:299). The artist wants the public to believe his work was pure inspiration, "it is the art historian's duty" he continues, "to dispel this illusion and to expose the fallacies and bad habits which lead the intellect into the net spread by the artist". Thus, perfection may, after all be something grown. Clearly artistic patterns are man-made, yet any appearance of growth therein is nevertheless rooted in human, and therefore, arguably, natural activity. It appears therefore, that the 'spirit' of the musical tones and the architectural spaces are derived from the 'spirit' of their makers, which this study seeks to explore.



13.8



13.9

Fig.13.8 Male fern

Fig.13.9 Design sheet; Aalto, circa 1956

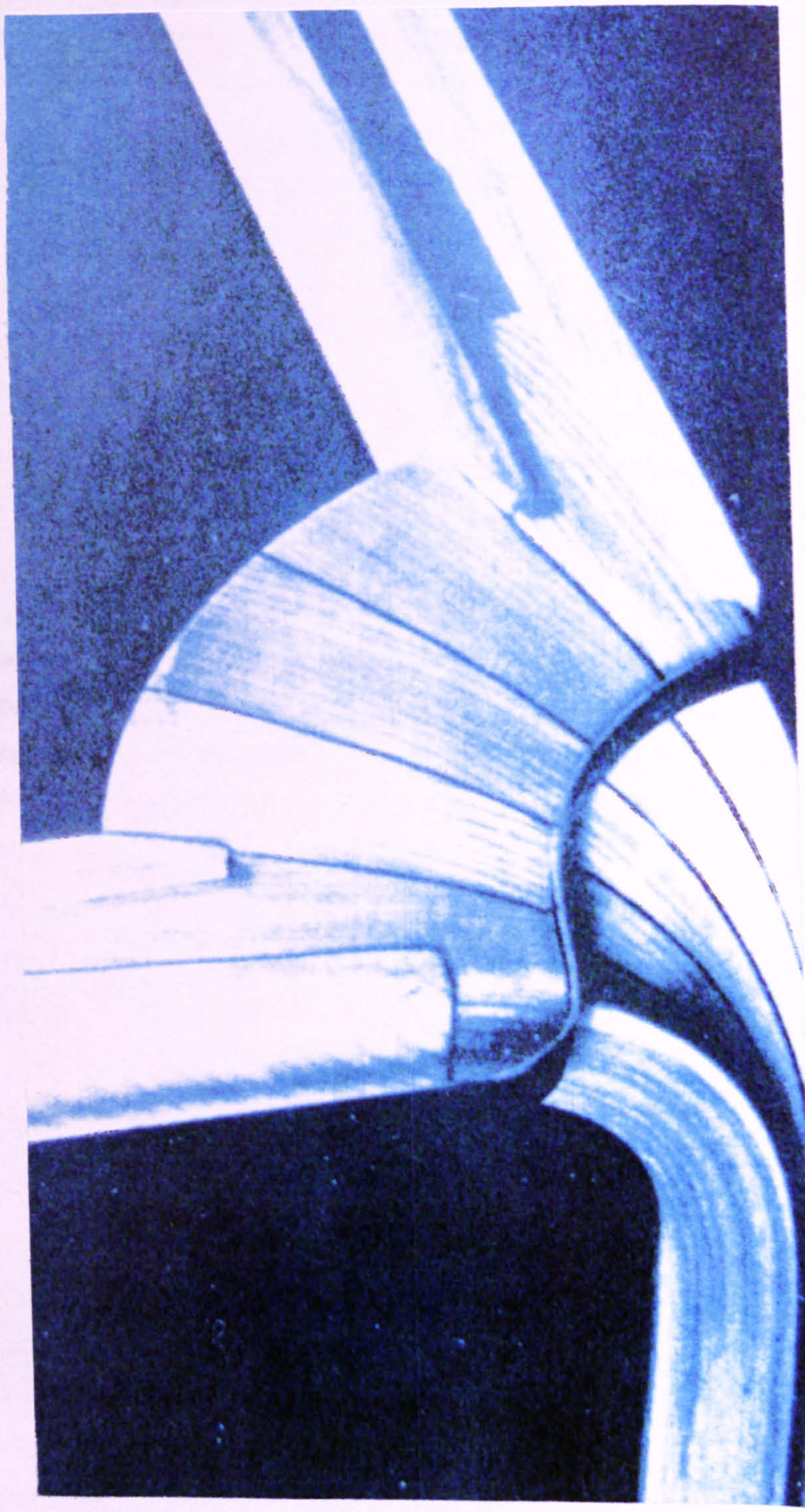


Fig.13.10 The 'X' leg; Aalto, 1954

CHALLENGING *TECHNIKA* : THE APPEARANCE OF *KOSMOS*

"[...] architecture cannot be solved at all with the methods of modern technology [...] architecture uses technology, but [...] its principal goal is to bring these technologies into harmony." (Aalto, 1941b)

"Kosmos *appears through* techne" (McEwan, 1993:129)

"The content is always the primary factor, while the form is secondary, the music itself determining its outer form" (Sibelius; Levas, 1972:82)

This section will address the determination to let the content grow into the form; cited above under the term *Leistungsform*. This manifestation of content in form is entwined with nature of *technikos,* the technical in art by which things are made to appear (Heidegger, 1971:159).

ABSOLUTELY *TECHNIKA* : COMING TO BE, FUNCTIONALLY

"[...] there are many cases in life where the organisation of things is experienced as too brutal. The architect's task is to make our life patterns more sympathetic." (Aalto, 1955b)

"I myself have had to battle with strict rules." (Sibelius; Ekman, 1938:136)

Exploring how essence and *technikos* (technical matters) are as cloth and weave,[16] this section will discuss how the essence or "deeper conception" (Langer, 1993) and the modern understanding of the technical are brought closer through an understanding of the etymology of technique and technology in *techne*, i.e., "conception" and emergence (letting appear) imbued with the fulfilment of a purpose. It is imperative that the latter is examined, since it was the etymon commandeered in the industrial revolution, which became central to the Modernists, and eventually led to what Sibelius and Aalto saw as the strictures of the modern Methods and Modules.

In the Greek word *techne* something is allowed to appear by letting it come to being. The notion of letting things appear through-the-making challenges restricted ideas of the 'technical' which are too often confused with the notion of the 'functional' which may now be seen in the light of 'emergence', since Greek *tek*-words (in which Latin *texere* (to weave) is rooted) refer both to skilled making and to giving birth (the Greek τικτειν, *tiktein*). Therefore, it is no accident that *techne* (letting appear) is related to τεκτειν (*tektein,* to build), giving the notion of birthing a creation an etymological justification. In the current case given power by the drivenness and "striving", which Sibelius and Aalto themselves associated with their creative tasks, the emphasis moves from product to process.

Words like technique and tectonic may now suggest the etymon *techne*, and their root in a more 'natural' cyclical, or rotational process; thus revisiting Hepakoski's rotational analysis referred to in chapter twelve (1993 & 1995).[17] The *telos* (goal) of bringing form to life (relating

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[16] The Latin *texere*, meaning to weave, is rooted in *techne*. (*Technikos*, sing. *technika*, pl.) Brown, (1993:3234).

[17] The relationship of what has been described as the 'feminine' in Sibelius' and Aalto's work is examined in brief in appendix ten.

purpose, means and context) is enriched by the foregoing etymology of *techne*. Indeed, in Aristotle's notion of practical art (as opposed to fine art for its own sake), virtue and function are related in form which meets all requirements (*Physics*, III:ii).[18] In pre-classical Greece *episteme* meant knowledge-as-skill, not simply conceptual ideas (McEwan, 1993:59),[19] suggesting that experience of life was accepted to be as important as purely discursive philosophy.

THE BECOMING: PURE FORM OR PURELY FUNCTIONAL ?

> ***"Technique in music is not learned in school from blackboards and easels."*** (Sibelius, 1.3.1928; T3:ch.20).[20]

Just as Sibelius found himself floundering in his attempts to steer through a debate about the 'pure' or programmatic nature of his ideas (Legge, 1958:121; Newman, 1934:121), talk of absolutes and purity is alien to the architectural agenda and its resultant form, which, as well as being stimulated by the *élan* of creative inspiration (e.g., Aalto's agenda of "harmony"), results from concern for ergonomic, physiological and technical requirements amongst other agendas. If, as this study attests, Sibelius and Aalto commonly sought to relate their material (i.e., content) in a way which promised a complex, but profound *harmonia*, the realm of their (common) *technika* becomes an important vehicle for its expression, borrowed in part, it is suggested, from the their shared experiences of the processes of nature.

Intuitive Technikos

In Archaic times επιστημη (*episteme*, knowledge) and σοφια (*sophia*, wisdom) were closely associated with *erga* (making, craft), from *ergon* (work).[21] It is significant that the Ancients recognised that the process of producing something was a process of the pursuit and making of wisdom, since this thesis contends that the production of Sibelius' and Aalto's art facilitated their psycho-spiritual maintenance. It is such *episteme* (knowledge)-through-making which this thesis contends is common to Sibelius and Aalto, being rooted in their similar '*gaps*', given intellectual structure through their interest in Ancient ideas, and formal process through the unity of these with their inspiration from nature's processes of growth (fig.13.12).

This assists the argument that (personal) experience-centred knowledge informed Sibelius' and Aalto's craft and making, as *technika* (technical matters), rooted in *techne* (letting appear, and therefore *tiktein,* birth) connote the functional aspects of design as the designs very nature and being, appearing through its creation and crafting, and imbuing something of

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[18] Indeed, the synthesis which brings Aristotle's four causes together (material, formal, efficient and final) into a 'thing' is that in which the 'thing' comes into being; what can be understood as the process of *techne* (letting appear, or bringing to appearance through making). St. John Wilson recognises the *telos* of bringing form to life (which relates the purpose, the means and the context) (1995:41) , but neglects the etymology of *techtonik* in the etymon *techne* (making appear) (Heidegger, 1971:159), thus missing the associated creative phenomena which would strengthen his important argument. Concurring with this thesis, and armed with Aristotle's notion of practical art, St. John Wilson has defended the unity of the aesthetic and the functional (1992 & 1995).

[19] McEwan (1993) also understands Daedelus' *sophia* to mean skill-in-craft, and not conceptual wisdom alone.

[20] Sibelius, letter to Aino.

[21] Like the English, work, *ergon* is both the process and the product.

the natural process of growth into Aalto's, and Sibelius' work. As suggested the form is (imbued with) the meaning. To repeat;

> "I intend to let the musical thoughts and their development determines their own form in my soul" (Sibelius, 8.5.1912; T2:218)

Inferring intuitive *technikos* (knowledge from experience which indwells the content), Sibelius once wrote that "Technique in music is not learned in school from blackboards and easels." (1.3.1928; T3:ch.20). Aalto sought to extend the notion of literal *technika* (technical matters or function) to include the psycho-social (e.g., 1935 & 1940), manifesting his building with 'metaphorical meaning' (Langer, 1988) and thus promoting a functionalism in which the technical becomes affiliated with the human *techne*, letting appear or the coming to be (i.e., continuing life) within a building.

It has not been the intention to explicate a complete formal or structural similitude between the arts of architecture and music here, however, at a simple level the technical apsects (*technika*) of any two genres may be analogous if, for instance, the creators desire (or need) a common essence (or *élan*) to imbue the form; and there have been shown to be many other congruences between Sibelius and Aalto thus far. The consequent congruence of such an essence (what a thing wants to be) can at least provide a concomitant congruence of the process of how a thing comes into appearance (*techne*). It is this which was examined in the last chapter.[22]

As demonstrated, Sibelius and Aalto repudiated formulae, but repeatedly suggested their desire that content should forge its own form; Sibelius ascribing this content to a divine '*logos*' ("call it God") - a fundamental relation - , and Aalto to the need for "harmony" - a fundamental jointing or relation. Indeed, therefore in the work of Sibelius and Aalto it is particularly difficult to separate the essence and the *technika*; a synthesis between the conception and the means by which their work was made. Recall that both repeatedly stated their desire to let the content literally <u>inform</u> the design or composition.

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[22] This may be seen across the boundaries of discipline, being a one-to-one congruence or logical relation. Equally, for example, if an architect who leans on the parameters of design regulations or standards, the given *technikos* becoming a template, and is analogous with the composition student who is given, say, binary form around which to frame a composition.

HARMONIA THROUGH *HARMOS*: THE PEDAL AND THE WAVE

"Conjunctions: wholes and not wholes, the converging the diverging, the consonant the dissonant, from all thing one, and from one all things." (Heraclitus, frag. 10)

"In every case one must achieve a simultaneous solution of conflicting problems" (Aalto, 1955a)

"You may find thematic connections in my symphonies when you study them. I myself call these the 'symphonic necessity' ". (Sibelius; Johnson, 1960:158)

In addition to the "indiscernible transitions" within and between sections (Parmet, 1957:6), (i.e., distinct and "semi-distinct spaces" - Hewitt, 1989:175), the quest to discern the significance of Sibelius' and Aalto's ability, and indeed their need to relate to the past, this section will explore a single linking mechanism common to both Sibelius and Aalto. It will be referred to as the Pedal and the Wave. Here there is a meeting of the *logos* (relation) and the *harmos* (joint); i.e., *harmonia* is woven as the disparate are related through this mechanism.

This interpretation expounds Heraclitus' notion of *harmonia;* the mechanism through which the disparate are joined (joint - *harmos*). To recall, Heraclitus thought that "what is at variance is in agreement with itself: a back-turning (*palintropos harmonia*)" (frag:51). This concept of *harmonia* calls for a form or structure to translate the *harmonia*, comprising "mutual adjustment" and conjunction (frag.10), where the consonance and the dissonance together illuminate different aspects of God (*logos*) (frag:67) (Lippman, 1964; Hussey, 1972:44). It is important that neither for Heraclitus nor any other Greeks were self-moving systems law-like in their behaviour, since *kosmos* (natural order) was the scene of a constant struggle between opposed forces (Kirk, et.al., 1957; Lippman, 1964; Hussey, 1972).

THE PEDAL AND THE WAVE

"[...] the harmonisation of many disparate forms of activity is central to [architecture]" (Aalto, 1941b)

"If you don't create an artificial pedal for your orchestration there will be holes in it" (Sibelius; Törne, 1937:30-1).

The plans of Aalto's buildings and the scores of Sibelius' music indicate patterns of "mutual adjustment" in the relations of compositional elements. Predominant among these is the relation of the linear and the curved, or of stasis and of activity.

The Bow and the String

This meeting can be directly related to Heraclitus' curved bow striking a straight length of string (fig.13.11 & 13.13) in his definition of *harmonia*, of which tension (to be examined in the next chapter) is an essential part. Such 'relation' in pursuit of *harmonia* may are not be imbued with the characteristics of subsequent more shallow understanding of harmony (sometimes simplified to the symmetry of a temple facade or that which infers comfort and stability), rather



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Fig.13.11 The bow and the string



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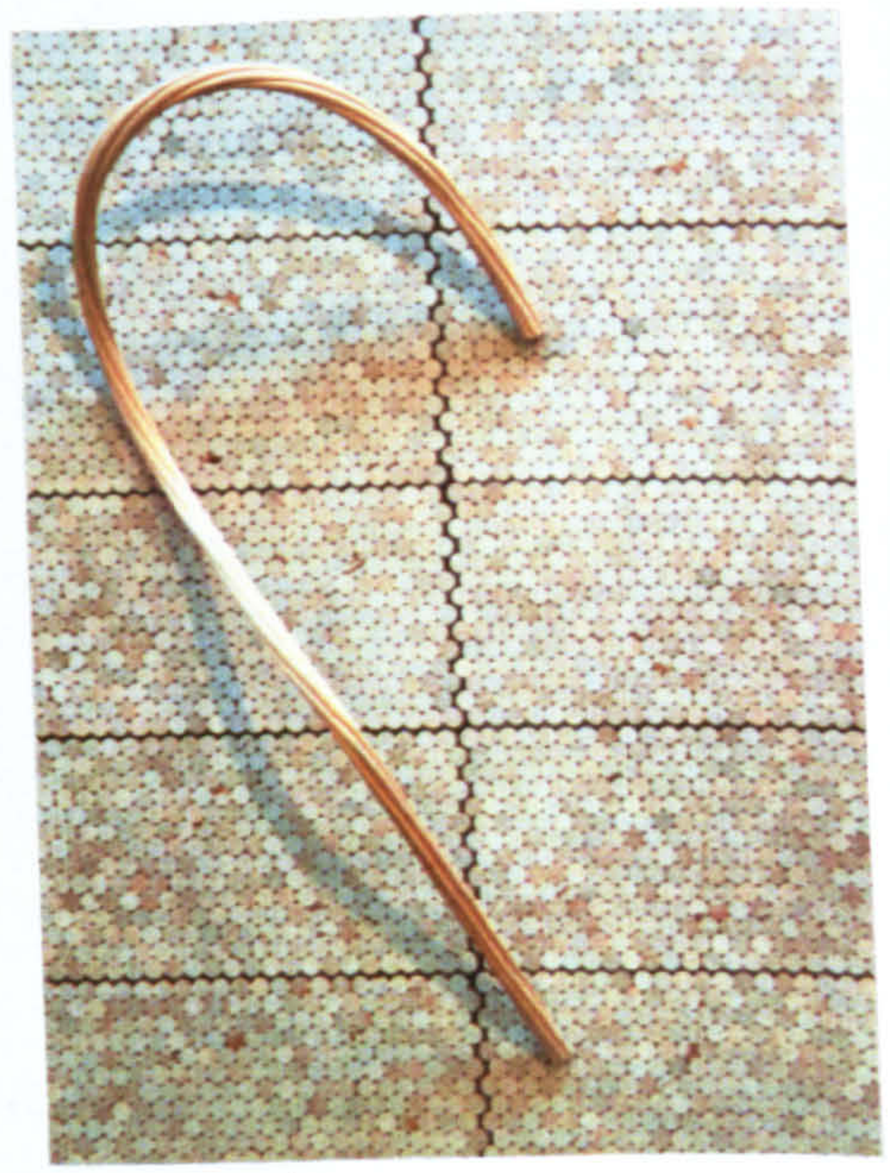

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Fig.13.12 Intermingling of holly, honeysuckle and willow

Fig.13.13 Wood experiment; Aalto, 1930-40

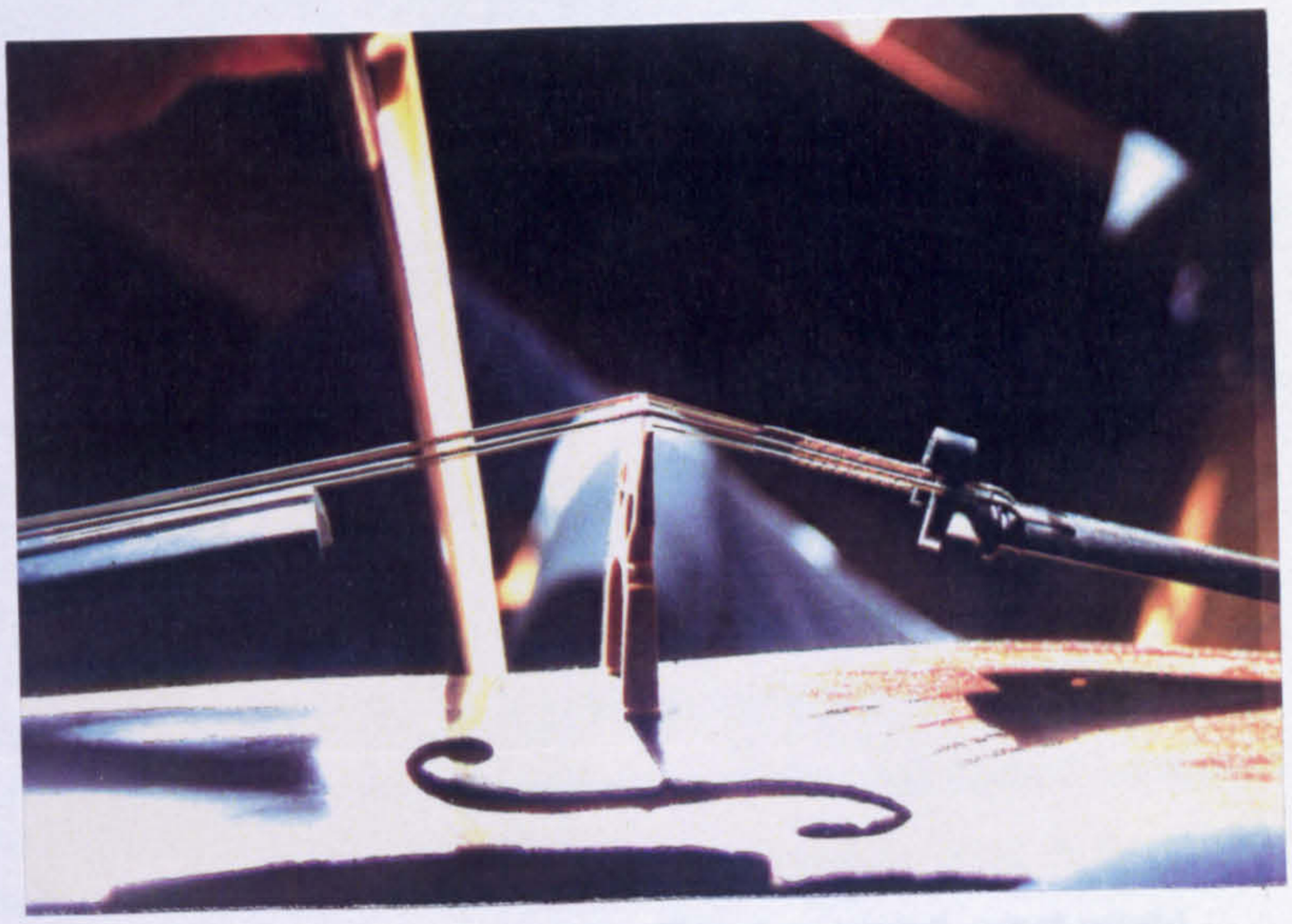

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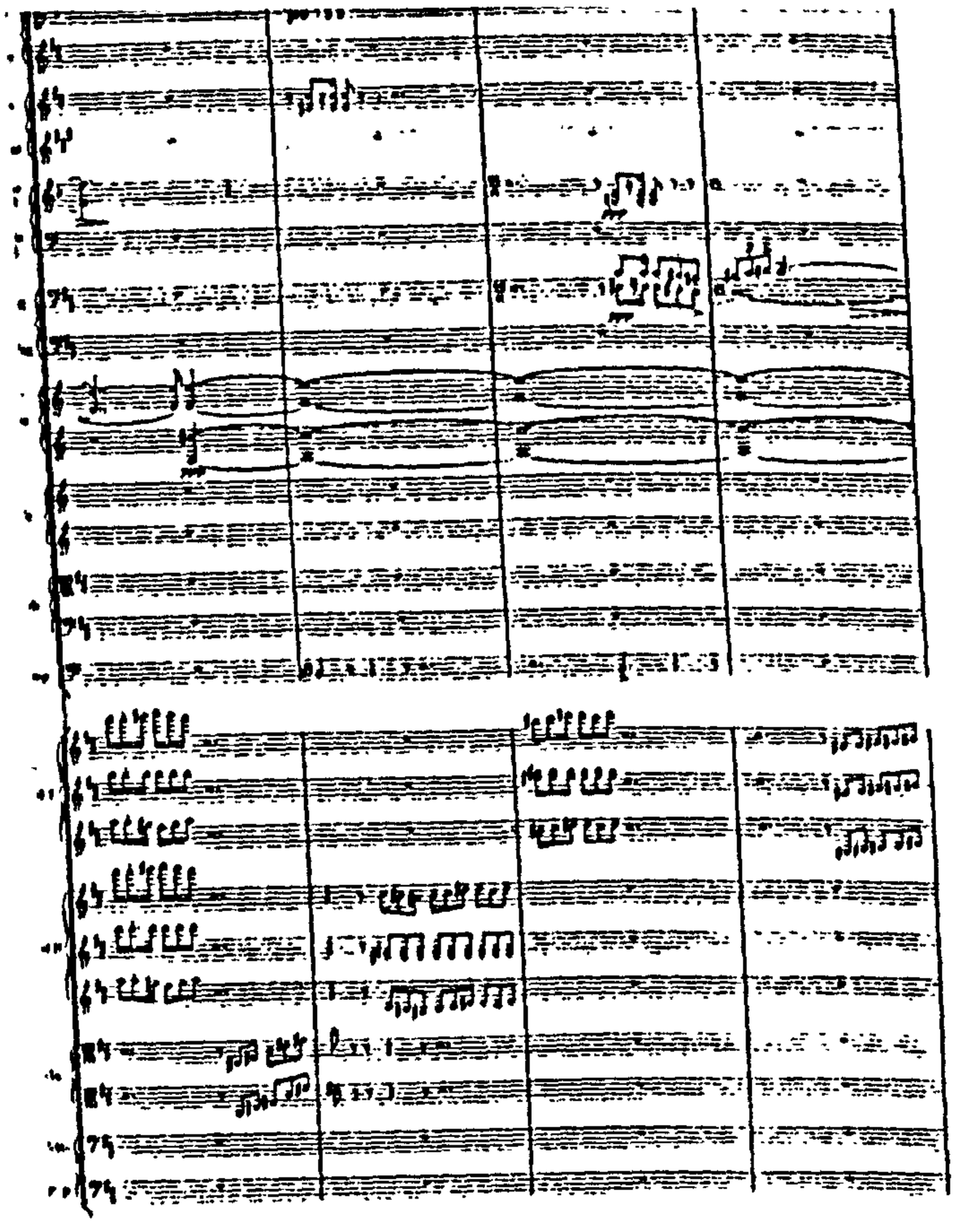
Fig.13.14 Bow striking the string

Fig.13.15 Pedal and Wave at *Seinäjoki Library*; Aalto, 1963-5



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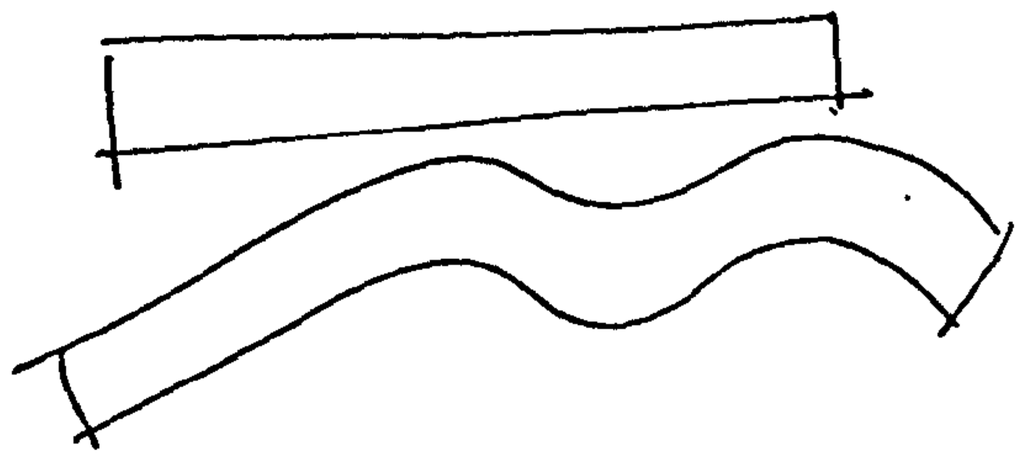

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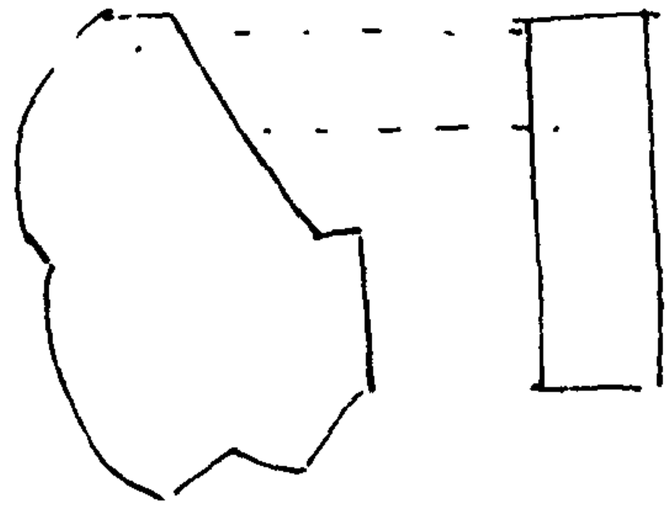

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Fig.13.16 Motivic 'germs' above Pedal in *Tapiola*; Sibelius, 1925

Fig.13.17 Pedal and Wave in *Baker House* plan; Aalto, 1946-9

Fig.13.18 Pedal and Wave in *House of Culture* plan; Aalto, 1955-8

having asymmetry as a common feature and yet still fulfilling the definition of the harmony as "combination or adaptations of part, elements or related things so as to form a consistent and orderly whole." (Brown, 1993:1192) (fig.13.14).

The Pedal

Sibelius explained that,

> "The orchestra [...] is a huge and wonderful instrument that has got everything - except the pedal. [...] If you don't create an artificial pedal for your orchestration there will be holes in it, and some passages will sound ragged." (Sibelius, in Törne, 1937:30-1).

Törne understands Sibelius to have sought to replicate the sustaining pedal on a piano, seeking to "avoid the holes and [obtain] the effect of the pedal" by establishing a low, temporal ground; a mechanism of prolongation (1937:31). This facilitated "the continuation of sonority" and "plasticity" through a technique not addressed in the great musicological works on the orchestra (Törne, 1937:31-3). This technique has been referred to as the 'pedal point' by many scholars.[23] The long sustained notes - the prototype for other such anchoring 'bars' or Pedals - appeared in Sibelius' childhood work, above which hovered the 'Sibelius triplet', what might signify the early ripples of the "wave" (T1:50). As Sibelius' 'basic formula' of scalic and arpegiated motives (Howell, 1985:120) and "circling motives" or impulses (Väisälä, 1990:189) developed, they were heard against such a 'pedal point'.[24] Hepakoski has suggested that Sibelius' late music has a Finalistic tendency to reach forward, but avoid closure, wherein long dominant pedal points assist the sense of unity and stability, above which both the organic and detritiverous activity of the "ubiquitous circling impulse" occurs (Hepakoski, 1993:280; 1995).

Sibelius sought to root the activity inherent in the constant combination or growth of 'cell' or 'kernel' episodes (music which is often fragmented and which oscillates and undulates) by underlining the overall tonal progress in the bass. Such 'waves' are apparent in virtually all his work, equating with the strong horizontality (the base lines) in Aalto's work.

Throughout Aalto's oeuvre there are 'whole' compositions comprising disparate forms, where what are often called "Aaltoesque" (i.e., wave-like) elements are tied to a more angular, often rectilinear element reminiscent of modern Rationalism (fig.13.15). However, neither element is ever self-sufficient, although often the linear facilitates or sustains the function of the dynamic area. Aalto demonstrated that in vernacular building, and indeed, in his architecture,

> "the affinity to nature and functional accommodation that doesn't worship the straight line, plays a decisive role." (Aalto, 1941a).

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[23] Jordan dedicates a chapter to its exploration (1984), identifying uses of the pedal in symphonies *One*, *Three* and *Four* as:- tonal-harmonic stability beneath tonal ambiguity; a dominant pedal leading to the conclusion of a section or movement; and as a link between tonal areas, in which the function of the pedal changes (Jordan, 1984:206-7).

[24] Layton believes that *Tapiola* exhibits the most "thorough-going and imaginative" use of the pedal-point (1978:79).

This led to "formal diversity" (Hewitt, 1989:176) in which the anchor element (what is referred to here as the Pedal, but which has also been described as a 'bar' - Graf, 1991; Griffiths, 1995:150), acts as a "plane of analysis" (St. John Wilson, 1992:91) (fig.13.16). The Pedal is demonstrated most clearly in *Baker House* (1946-9, fig.13.17), the *House of Culture* (1955-8, fig.13.18) and the *Neue Vahr* Apartment Block (1958-62, fig.13.19) to be demonstrated below.

PEDALLING PROLONGATION

"[...] avoid the holes" (Törne, 1937:31).

From *Viipuri Library* (1927-35, fig.13.20) onwards, Aalto explored the relationship of waving and straight lines as expressions of the diverse functions in buildings. In *Vuoksenniska Church* (1956-9) the Pedal episode of a long, straight wall, roots the dynamic of the Wave within the building mass, rather than between disparate masses (e.g., *House of Culture*, fig.13.21). In the church both plan and section are active in creating *harmonia* between the different spaces (fig.13.22), relating to facilitate the enlargement of the space through unification of the three elements; the conversion of the plastic plan into a three-dimensional plasticity (Quantrill, 1983:200). The geometric straightness of the south-west wall - the Pedal - offers a unifying grounding edge (fig.13.23), a rationale from which the tangential walls may grow (fig.13.22). Indeed, it could be argued that the wall, like a strong ego, permits the undulating form of the waving wall; an anchor which avoids chaos (fig.13.24).

Sibelius' *Seventh Symphony* (1924) abandons traditional key conventions in favour of "the prolongation of C major" (Jordan, 1984:123-4), creating a monotonal work which denies tradition its capacity to instil primary tonal opposition, anchoring the work more or less continuously in C: a tonal Pedal. When, at the end of the exposition, classical technique would be establishing a new key, Sibelius is still establishing the tonic; the "play of line" (Parmet, 1957:29).[25] Therein Sibelius blurs the distinction between harmony and line, he carefully controls instrumentation, spacing and dynamics to draw the trombone figure to the fore within the texture of the whole. This too may be understood as an anchoring element.

Changing Pedals?

Just as Aalto's anchoring horizontality changes levels with the content (function) of the space, Sibelius' Pedal mechanism is not inevitably rooted at one pitch, but may vary in its tonal position. The function of the Pedal is constant whatever the change in its position relative to the activity around it. In other words it is an element of stasis in relation to which other activity is dynamic (fig.13.25; tape e.g., 41).

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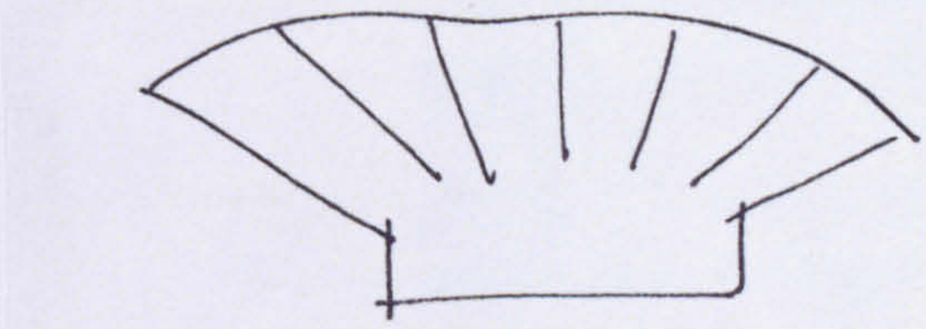
[25]Made in reference to the *Third Symphony*.. Tawaststjerna believes that Sibelius' first real cadence (ii7-V7-I) enables the full establishment of the C major 'base' or 'pedal' and the first sounding of the "Olympian" trombone theme (bar 8:2) (Sw,T4:199). Note: References to Tawaststjerna's musical analysis of Sibelius' late works are given in the Swedish numbering of the biography, because Layton has omitted these from his English translation.



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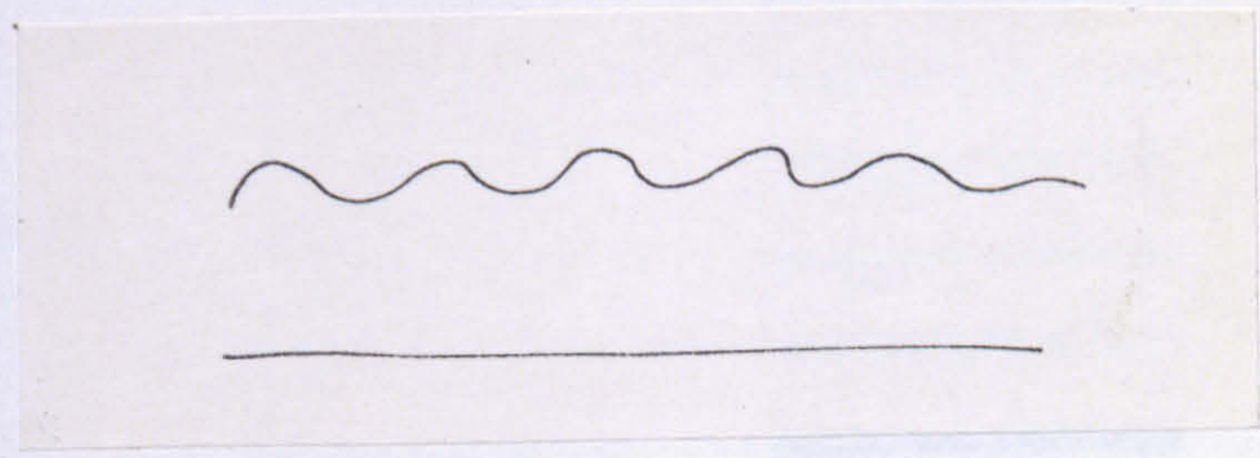

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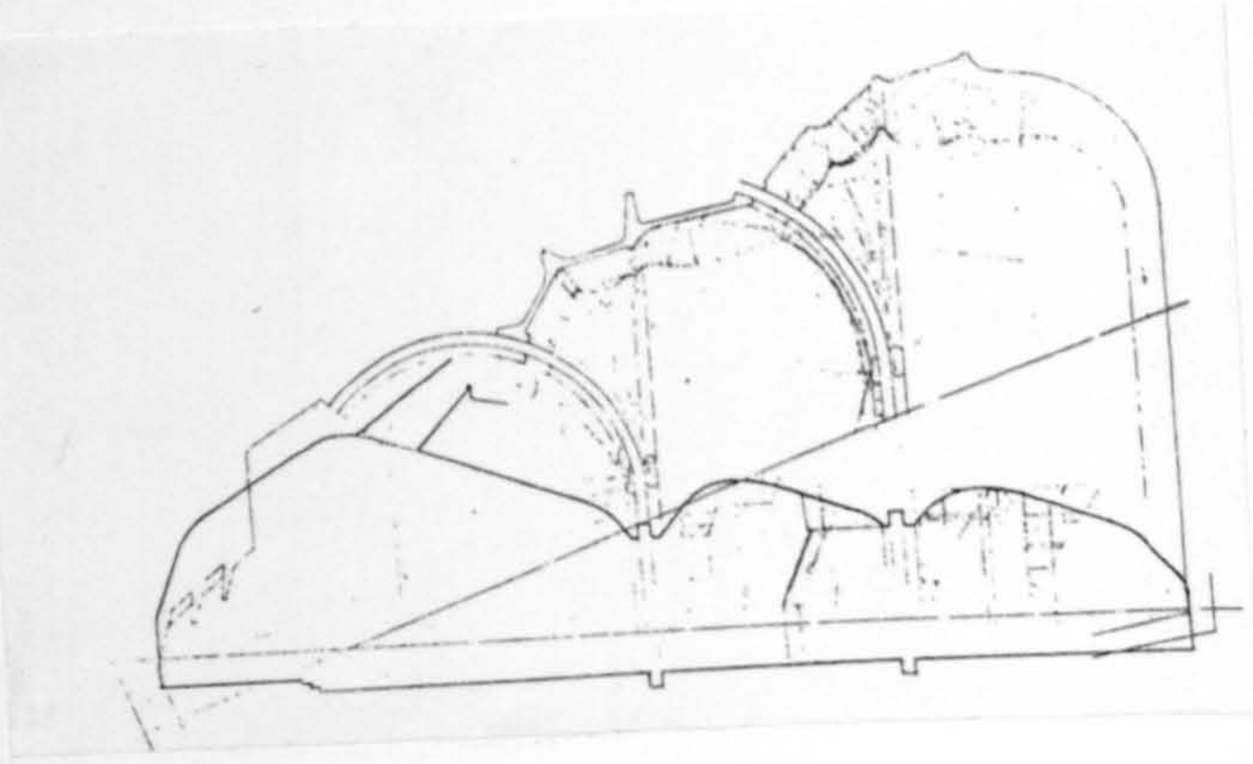
Fig.13.19 Pedal and Wave in *Neue Vahr* plan; Aalto, 1958-62

Fig.13.20 Pedal and Wave in *Viipuri Library* auditorium section; Aalto, 1927-35

Fig.13.21 Anchoring Pedal of covered canopy , *House of Culture*; Aalto, 1955-8



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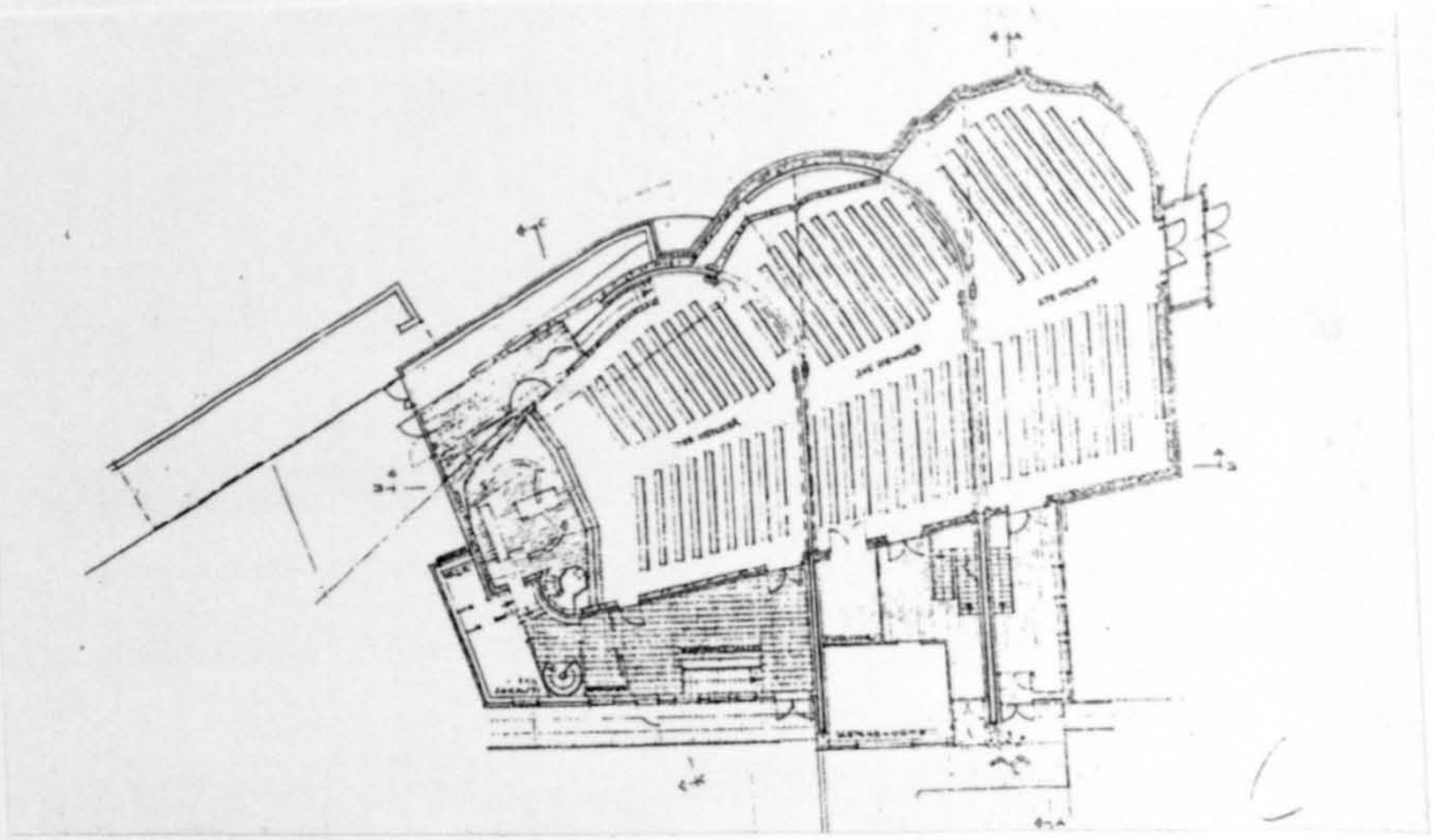

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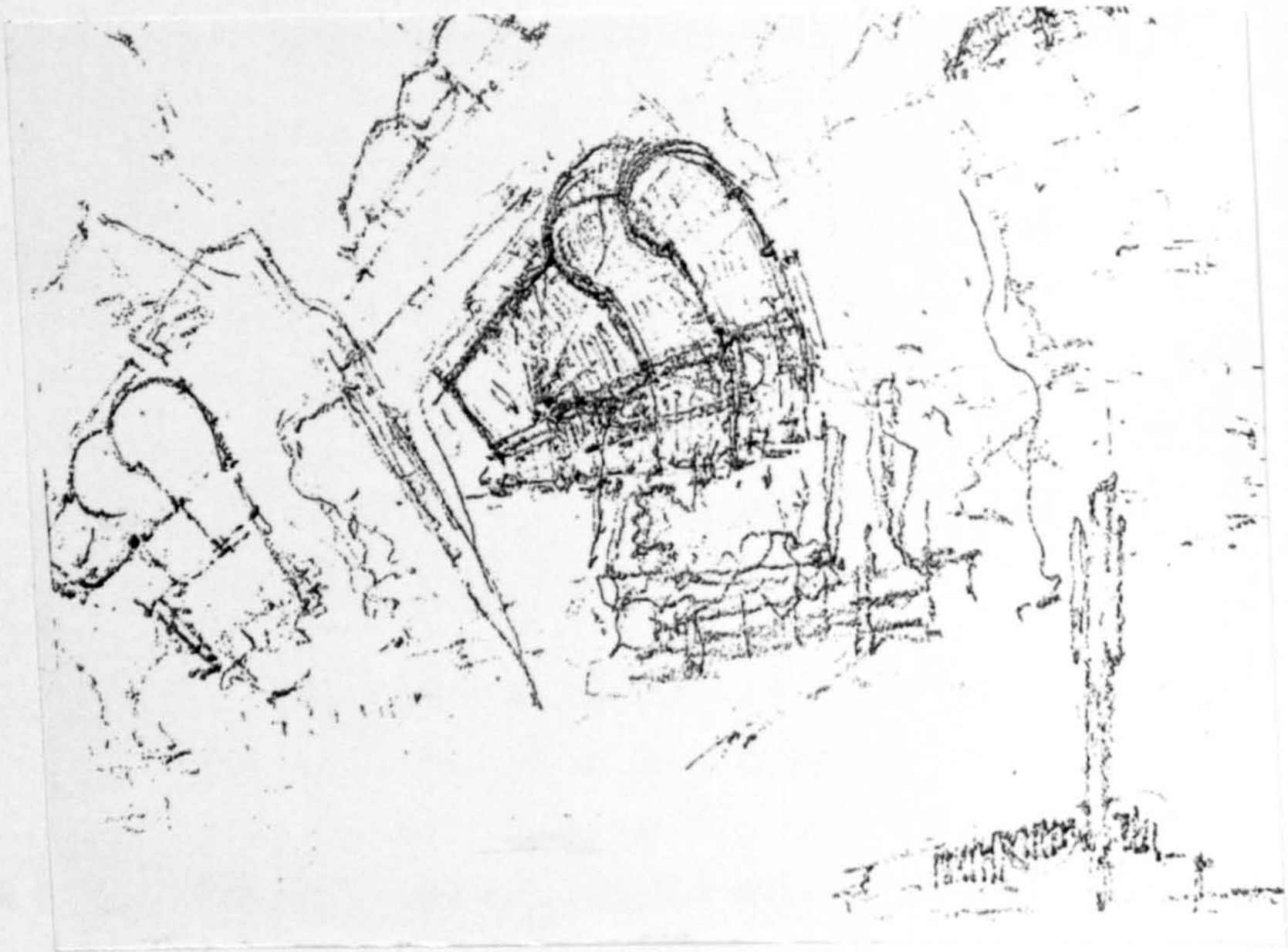

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Fig.13.22 Plan and section showing 3D integration of *Vuoksenniska Church*; Aalto, 1956-9

Fig.13.23 Final plan of *Vuoksenniska Church* showing Wave elements rooted in stright, Pedal elements; Aalto, 1956-9

Fig.13.24 Design sketches of *Vuoksenniska Church* showing growth of spatial elements from a rooting Pedal; Aalto, circa 1956

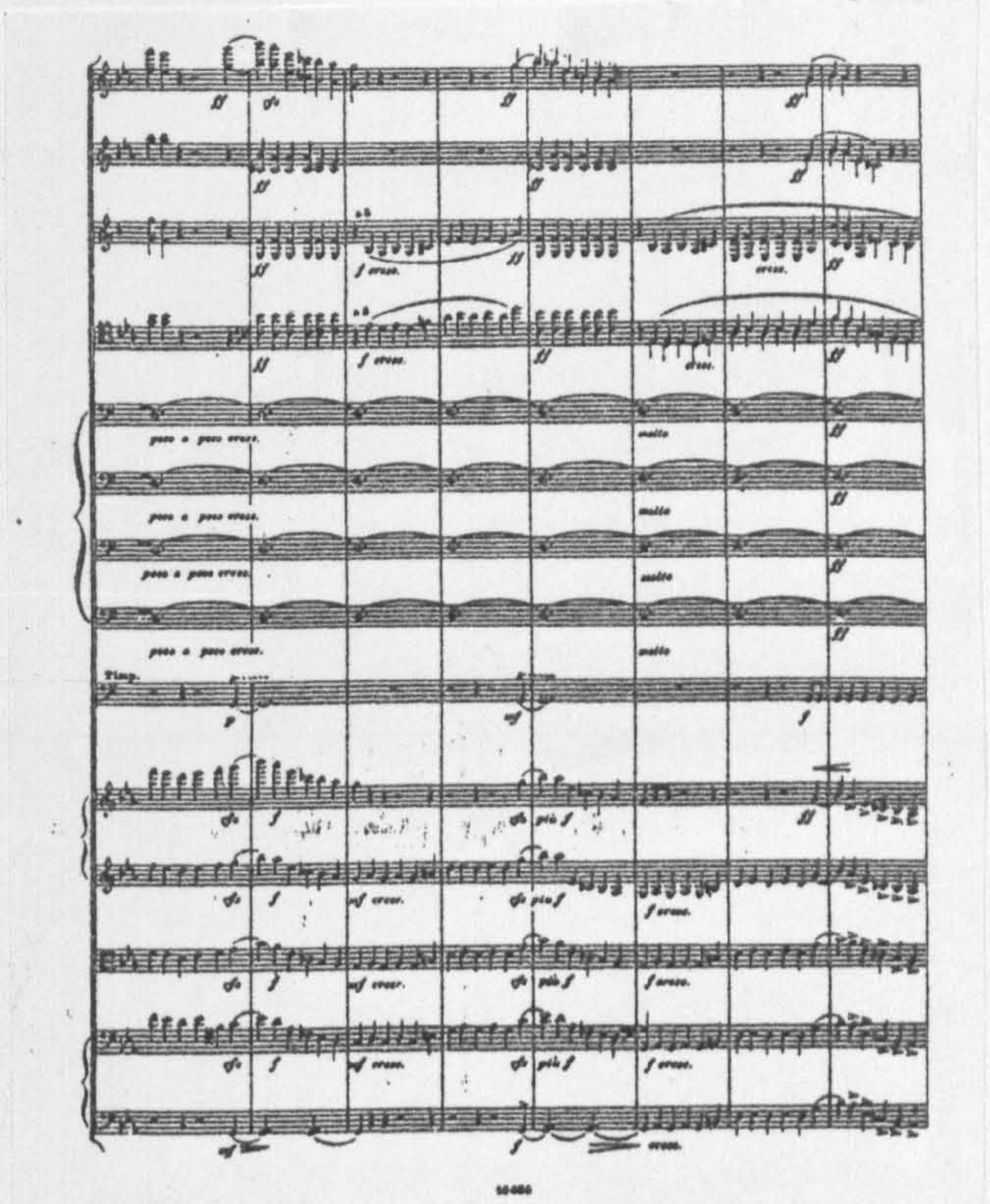

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Fig.13.25 Stasis in relation to activity in *Seventh Symphony*; Sibelius, 1924

Fig.13.26 Brass Pedal rooted in dissonance in *Seventh Symphony*; Sibelius, 1924

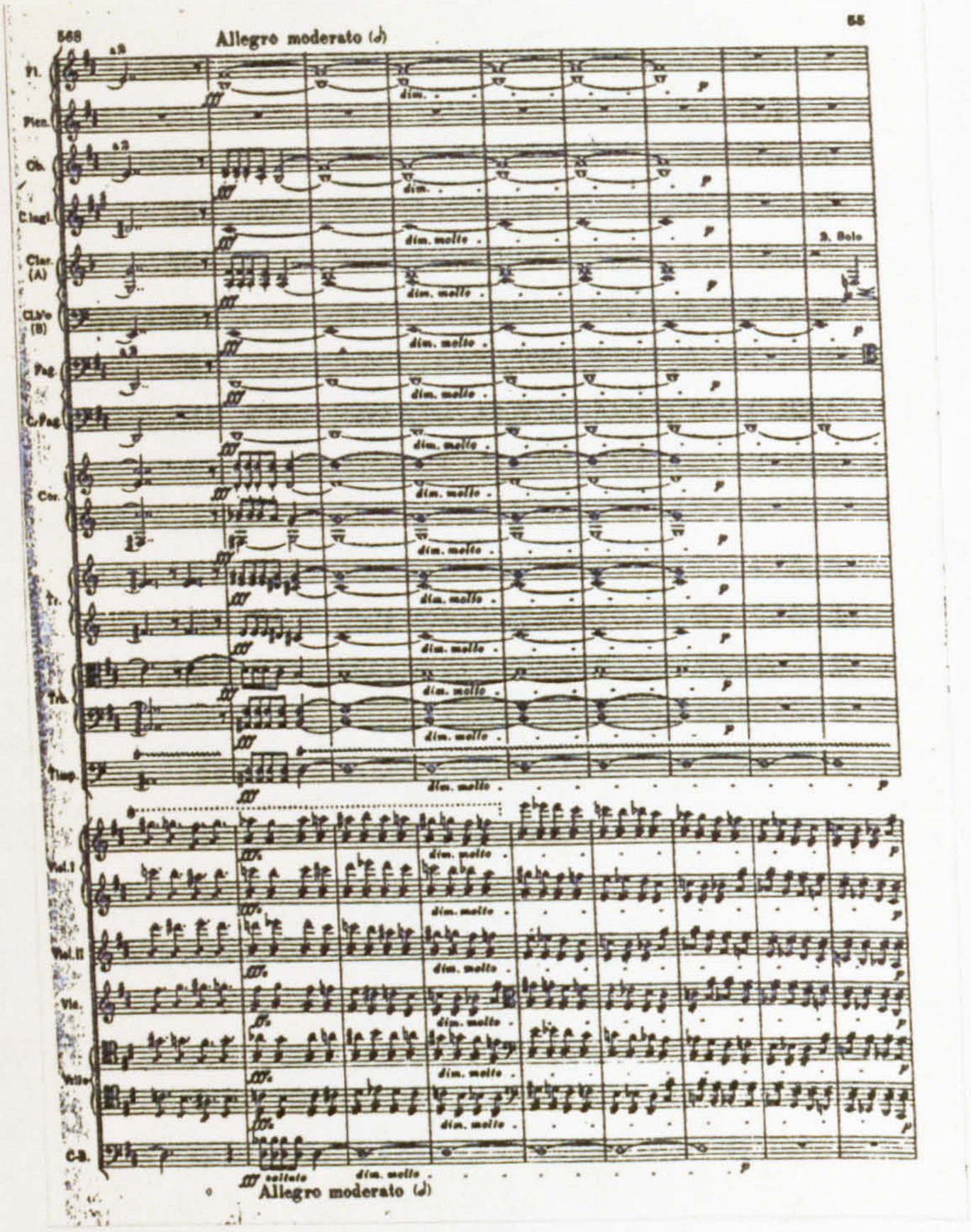

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Fig.13.27 Wind Pedal against rushing strings in *Tapiola*; Sibelius, 1925

Fig.13.28 Level changes between the entrance and living area, *Villa Mairea*; Aalto, 1936-9

Mention of the C-centrality of the *Seventh* as a bar or rooting base should not suggest that the Pedal is always in the tonic. Between H and I in the *Seventh* the brass offer a Pedal which is itself ambivalent in tonality, but is 'firm' (i.e., rooted) in its dissonance (fig.13.26). Indeed, in the *First Symphony* it appeared in the mediant over which is suspended a dominant ninth chord without a tonic root,[26] creating harmonic tension. On the contrary in the *Third,* Sibelius sustains a 'pedal point' on C, as tonic then mediant, then dominant through the exposition and restatement. In the development, however, there is no Pedal base beneath the quickly shifting tonality. As Sibelius increased the fusion of small episodes, so his mechanisms for securing these both spatially and harmonically increased. For example, in *Tapiola* there are long passages of undulating strings "weaving their magic"[27] above the long Pedal bass line which changes pitch (fig.13.27; tape e.g. 42).[28] In addition, the *Seventh* clearly demonstrates both the 'pedal point' mechanism and his manipulation of opposing characters of form, tonality and rhythm; the "land of shadows" between the perpetual oppositions of the classics.[29]

Most cross-sections through Aalto's buildings indicate his manipulation of the heights and depths; i.e., of the section. He used changes in floor levels to emphasise the distinct symbolic character of spaces within open plan areas (fig.13.28). Following *Viipuri Library* (fig.13.29) the reading areas in his libraries are sunk beneath the general floor level (fig.13.20), above which the ceiling is manipulated so that direct light does not shine of the page (fig.13.31). The plans indicate the dynamic element of the building (the shelving which accommodates the books) against the ancillary functions which form the planar Pedal or 'bar' (fig.13.32). The lowered floor emphasises the importance of the activity of reading within the dynamic (fig.13.33); the sectional Pedal of the floor level is lowered as if pausing (fig.13.34).

Butterflies and Scissors

In both Sibelius' and Aalto's work there are butterfly, scissor- or contrary motion features. Aalto's work is characterised by spaces which are expanding and contracting in section, whether or not they are 'waving'. Changes in the floor level (the anchor or Pedal in section) is often in response to a shift in another level of the form. For instance, in his library sections Aalto manipulates the roof line in accordance with the requirement for light in the shelving and reading spaces below (fig.13.34 & 13.35). In other words, the differentiation of the functions of spaces is articulated at both roof and floor level (fig.13.36).

Sibelius' music is also characterised by musical episodes which grow and contract, often at an extremely fast tempo. In some instances this occurs through contrary motion (the "scissor

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[26] Tawaststjerna points out that this chord resolves to a minor third which sounds like the tonic 6-3 position because of the pedal base. (T1:210).

[27] Taken from Sibelius' quartain at the head of the *Tapiola* score.

[28] Part of the poem which Sibelius supplied with the score of *Tapiola*, 1926.

[29] Likewise, activity in *Tapiola* and the *Sixth* is under-girded by extreme stasis; "a deep-current slow motion" (Hepakoski, 1993:28; Parmet, 1959:89).

technique"), the simultaneous rising and falling, crossing of instrumental lines over the securing, under-girding Pedal. For example in the *Sixth;* the activity in the woodwind 3 before letter J (fig.13.37; tape e.g.43), against the sustained notes in the trumpets and violins. In the Allegro at the end of *Tapiola*, a hectic oscillating motion begins in the strings, to which a crescendo rises from the brass at letter Q, attempting to establish an anchoring Pedal episode (fig.13.38; tape e.g.44). There is no resolution, and the strings continue their searching; a fantasy-like frenzy. They are again challenged by an enlarged Pedal. After being anchored, they are yoked back into a long falling resignation passage when the whole of the orchestra's power is launched into a Pedal leading to letter R (fig.13.39).

ABSENCE AND ACTIVITY : STASIS AND SOUNDS OF SILENT FORM

> *"Mount Olympus is shrouded by dark clouds."* (Sibelius, Sw.T4:200)

This section will examine examples where parts of a work are joined in or through a gap, or seeming absence of form.

Interrupting Motion

It has been argued that the composition of architecture "should" emphasise the "motion-effect" (Stenros and Aura, 1987:137); something implicit to music. In architecture the impression of movement may be reinforced, prevented or delayed by the composition of elements. In the facade of *Baker House* the movement of the undulation is countered by the spaces between the windows, being larger (slower) at the convex than the concave moments (Menin, 1986) (fig.13.40). The full height banisters of the stairs in *Villa Mairea* emphasis the sense of movement, but "if the gaps between the banisters are great enough the configuration of continuity is broken" (Griffiths, 1995:115), when each element then takes on its own identity at the expense of the continuation of motion (fig.13.41). This concerns hierarchies of "filledness" and "emptiness", the latter deferring to man's imperfections, inferring disturbance (Griffiths, 1995:118).

Thus, the design of stasis or emptiness is a tool for the creation of mediation between elements. Indeed, moments where a lack of activity (even ammetricality) relates different forms (Parmet, 1957:39) are common in Sibelius' work. Such moments which lack formal expression or intervention 'live' or take activity from those who enter them (bodily or aurally), mingling in the potential dynamic implicit in such stasis, the potential for unity implicit in dissipated mass, the potential for social interaction in open space. In other words the 'presence' of a compositional lack or gap draws identity and potential towards itself and its vacuum, from the nature of the forms which border it. For instance, such mediation allows disparate entities to imbibe the same whole in the plan of *Finlandia Hall* (1962-1971, fig.13.42), which indicates that within the outer 'skin' the piazza-like spaces both allow the disparate auditoria to relate and fulfil the vital function of facilitating human meeting and movement by

inferring the welcome "anarchy" of the spatial accident, common, for example, in both Italian towns (fig.13.43), disparate Niemelä-like farmsteads (fig.13.44), and the inner 'yard' of Karelian farm houses (fig.13.45), all of which were an inspiration to Aalto.[30] The dialogue between the natural and the built topography is continued (i.e., recreated) within the building in the space of formal stasis; i.e., the space which is without formal interventions (fig.13.46). This also recalls the economy of chapter four, to which 'little man' was invited to bring his riches. Weston suggests that there is a dialogue of the "rock-like masses" (1995:217-221), however, it seems that the dialogue is between such masses and the users, who defy spatial stasis by their enlivening of the in-between space.[31] Porphyrios, on the other hand, finds this "an empty buffer that neutralise[s] the tension between dissimilar geometries" (1982:2-3).[32]

Pedal Pauses

In Sibelius' work too, there are innumerable episodes of vertical "meditative" stasis (Hepakoski, 1990 & 1993), or even tacit moments into which the music either crashes, tumbles, as in the *Seventh Symphony* as it searches for the tonic of C (fig.13.47), or bleeds (fig.13.48).[33] Yet these are not the "holes" Sibelius feared when the orchestra lacked the pedal (Törne, 1937:31), rather being spaces, seeming gaps, harmonic prolongations, or moments of stasis in which there is actually great activity, brought to the space by what surrounds it. These are compositional elements which may facilitates the mental digestion of the musical and emotional memories of what has gone before, the process of association of such elements, or anticipation of what will follow, or episodes when the frantic fiddling is subordinate to the ambience of security created by the Pedal (fig.13.49; tape e.g., 45). Such a "gravitation-less void", as Tawaststjerna discerns in the *Fourth Symphony* (T2:180-200), is marked by the difference between the harmonic motion and harmonic stasis, and their synthesis in harmonic ambiguity - a place of musical tension (Jordan, 1984:16). For example, in *Tapiola* the hectic rushing of the undulating strings is underpinned by the steady pedal instruments. Far from the overriding sense being one of rampant activity, the passages actually seem to evince a deep stasis, as if representing a deeper awareness of another way than the futile scramble in search of the tonic above; i.e., a greater, rooting truth (fig.13.50; tape e.g.46).

There are also episodes of virtual stillness between musical areas of great activity. In the *Sixth* there is a static quality of the modal-system; the asceticism and "modal-polyphonic taciturnity" (Murtomäki, 1993:216) examined in chapter four. For instance in the third movement of the *Sixth,* the constant brass and timpani Pedal rides the gap in the rushing string activity (fig.13.51; tape e.g.47). Similarly in the last movement there are such pauses albeit between less rampant

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[30] Indeed, *Finlandia Hall* was the only one of his Venetian Palazzi , as Aalto put it (Fleig, 1971:208), to be realised, a derivation which may explain the response, evident from the early sketches on, to external elements such of Mannerheimintie and Töölö Bay .

[31] Goethe describes exactly this sense of people enlivening the amphitheatre in Verona, (1995:12).

[32] Incidentally, the expansiveness of the piazza space also recalls the dichotomy of the Finnish landscape in dialogue with the level of detail of rock surface, lichen and leaf.

[33] Hepakoski explains that this contrasts with the horizontal, "teleological" process (1990).

passages, and therefore being less acute moments of silence (fig.13.53; tape e.g.48). These episodes are virtually, or even completely tacit moments in which the music's motion stops. Indeed, Jordan identifies the Pedal as a method of tonal unification in the second movement of the *Third Symphony* (1904-7) amidst the motivic thematic material, explaining that this is achieved through "interrupted Pedal points; that is, there are no extended pedal points [...yet] the harmony is so static that is seems as though most of the piece is one long pedal point." (1984:184).

MAKING HARMONIA: RELATING THE PEDAL AND THE WAVE

> *"[...] the harmonisation of many disparate forms of activity is central to [architecture]"* (Aalto, 1941b)
>
> *"The meditative, inward slow movement shows just how skilled Sibelius has now become in the art of dramatic contrast"* (Tawaststjerna, T2:70)

What have been described here as the Pedal and the Wave have been examined as equivalence and difference in Aalto's formal dichotomies (Griffiths, 1995:106). Between the "bar" (i.e., Pedal) and its distinct formal partner (i.e., Wave) "an axis of difference" is established (Graf, 1991) in which Aalto explored "the simultaneous reconciliation of opposites" (Aalto, 1955a); i.e., opposites which bring the dynamic and auxiliary functions of life together.[34] This is the essence of Heraclitus' "mutual adjustment" of divergent parts (i.e., *harmonia*) for which Aalto and Sibelius strove.

St. John Wilson has epitomised this dynamic-static dichotomy, believing that it,

> "can be epitomised by drawing two forms - an ideograph of two lines - one straight, the other serpentine; we can transform the lines into planes, and whether we view it as a plan or a section it will recall to us the archetypal Aalto space, in which the juxtaposition of a strictly flat plane with a rhythmically wave-like surface seems to charge the air of the space like the beating of a giant wing. (St. John Wilson, 1992:91)

The Pedal - Wave mechanism of juxtaposition (or *harmonia*) is a technique Sibelius uses to challenge musical tradition or *Formenlehre*; i.e., a mechanism to relate the content and to overcome the standard constructive limits (Baranova, 1995). For instance, the boundaries between sections in the *Second* are not distinct, but are deliberately hidden (Baranova, 1995).[35] This "compositional ellipsis" inevitably forms an illusion of "improvisation and peculiar poetic freedom" (Bobrovsky, 1970:181; 1978:232), which is driven by the "dynamic energy" of the content towards the whole. As demonstrated above, Sibelius' technique of formal manipulation is rooted in the needs of the content, and is led by tonal development. For example, despite the C-rootedness or Pedal in the *Seventh*, there are, at times, four keys in a single bar (a tonal dynamic, or Wave) (Tanzberger, 1962:137). These do not succeed in

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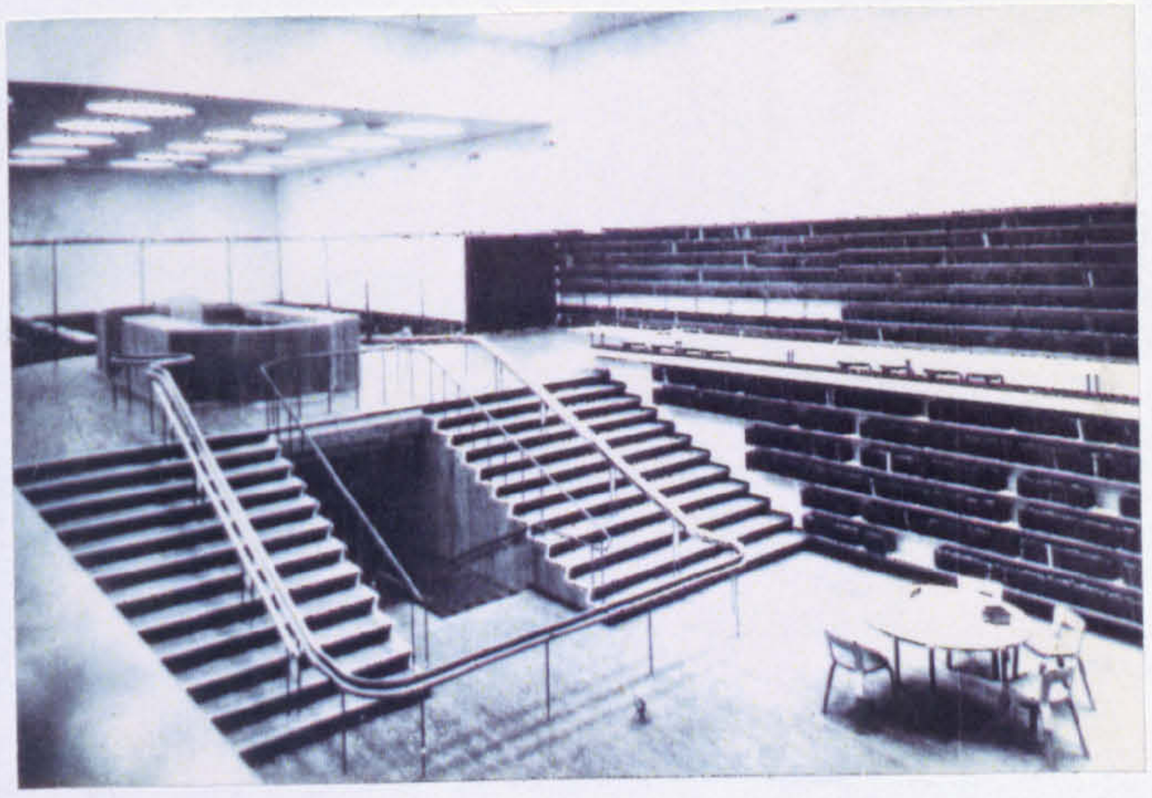
[34] A different translation of the above citation (Aalto, 1955a) from Quantrill, (1983:90).

[35] Baranova examines the return, after deep caesurae, of the "Christ" / "redemption" theme in the *Second Symphony*, and the subsequent harmonic depression of the theme through the major-minor tonality, which ends in the latter, with tragic overtones (1995)



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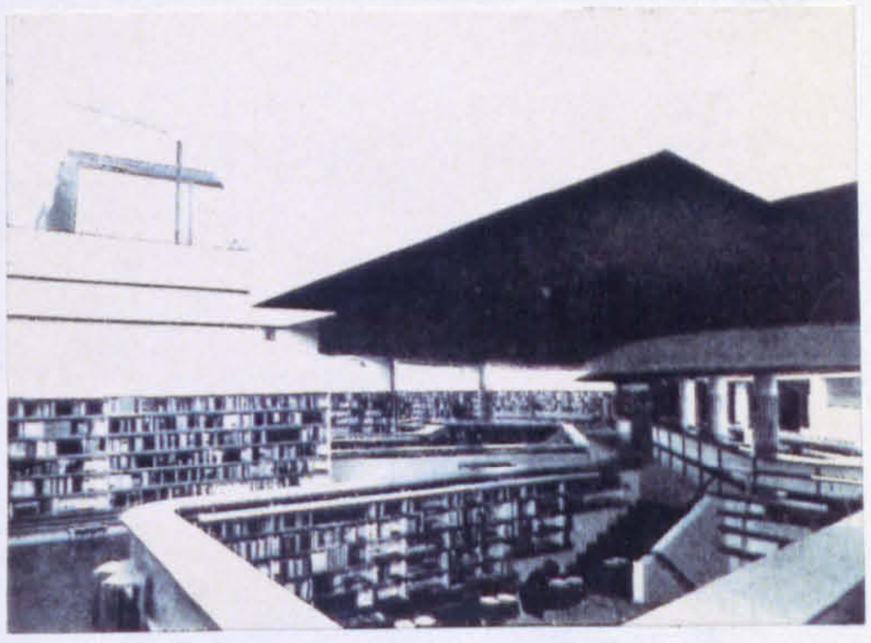

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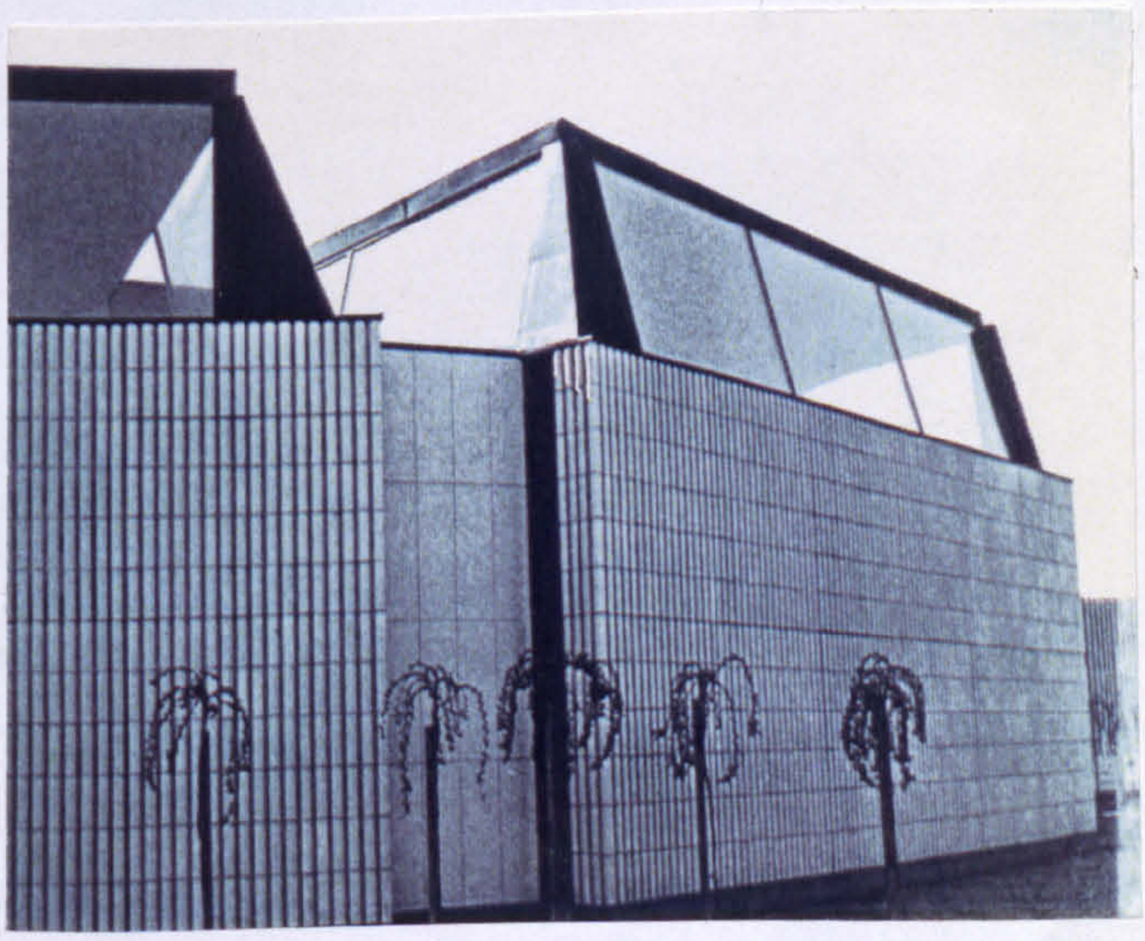

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Fig.13.29 Sunken reading area, *Viipuri Library*; Aalto, 1927-35

Fig.13.30 Sunken reading area, *Rovaniemi Library*; Aalto, 1963-8

Fig.13.31 Clerestory lighting over shelving areas, *Rovaniemi Library*; Aalto, 1963-8

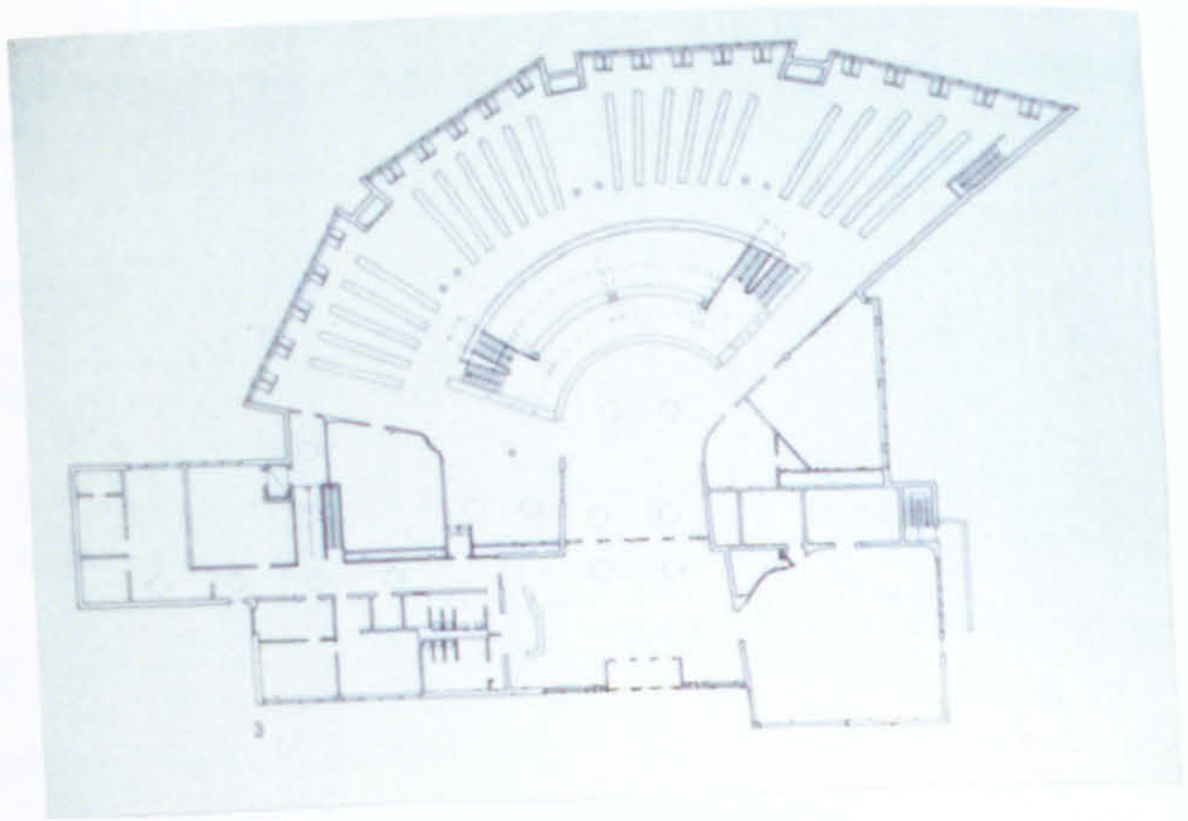

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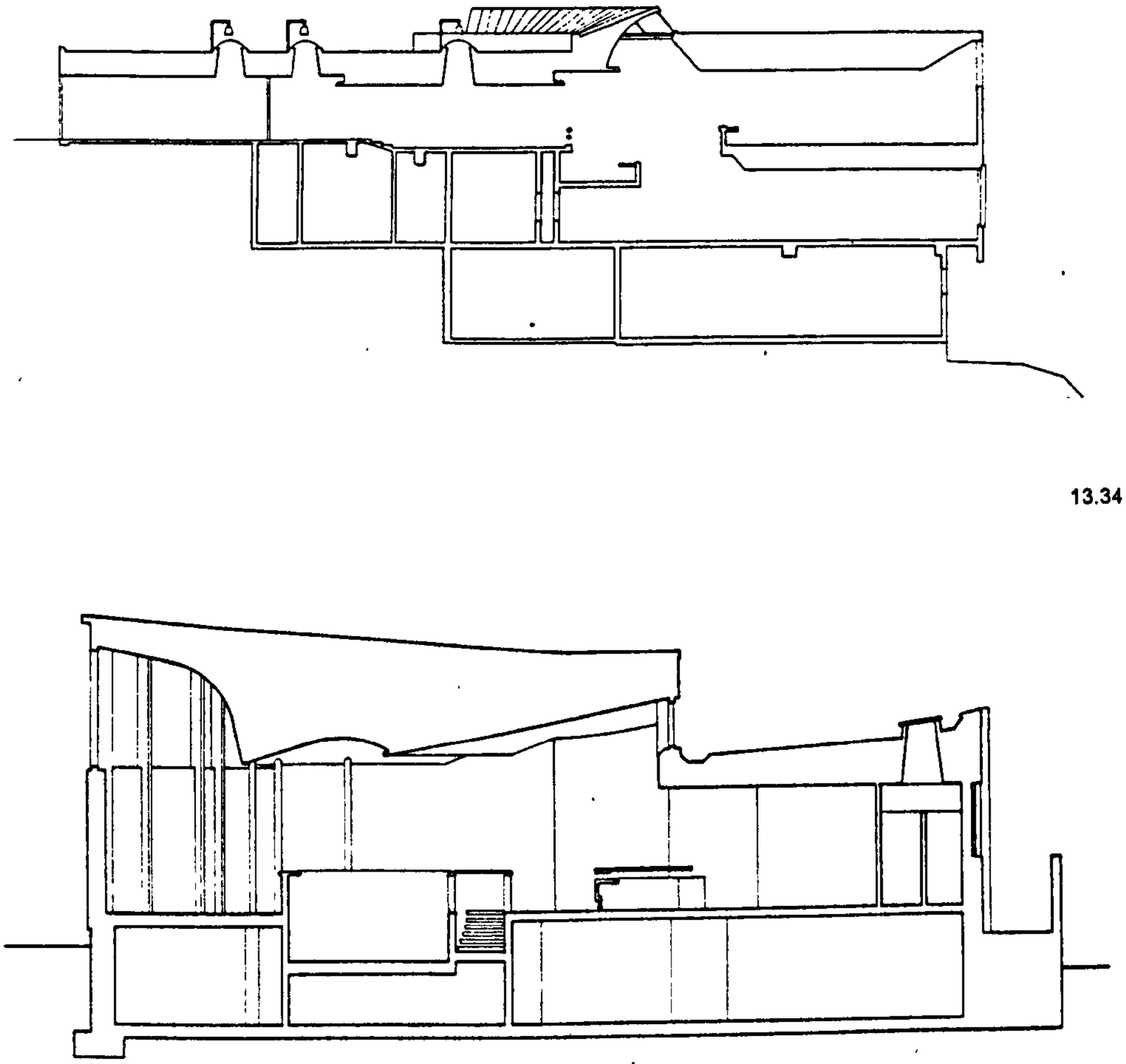
Fig.13.32 Plan of *Mount Angel Library*, showing shelving areas and central sunken reading zone; Aalto, 1965-70

Fig.13.33 Reading tables in sunken area, *Rovaniemi Library*; Aalto, 1963-8



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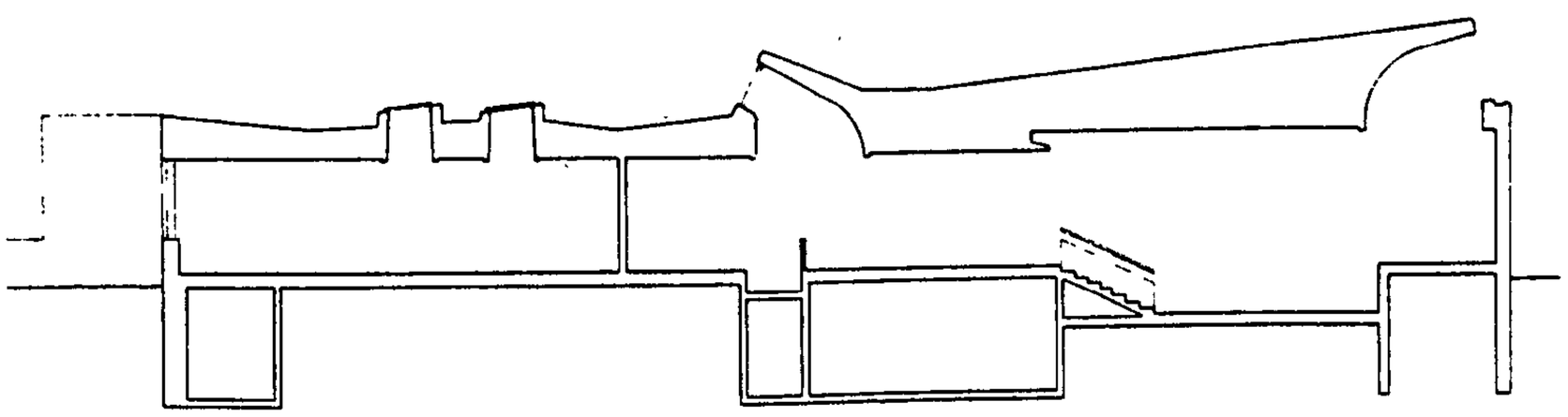

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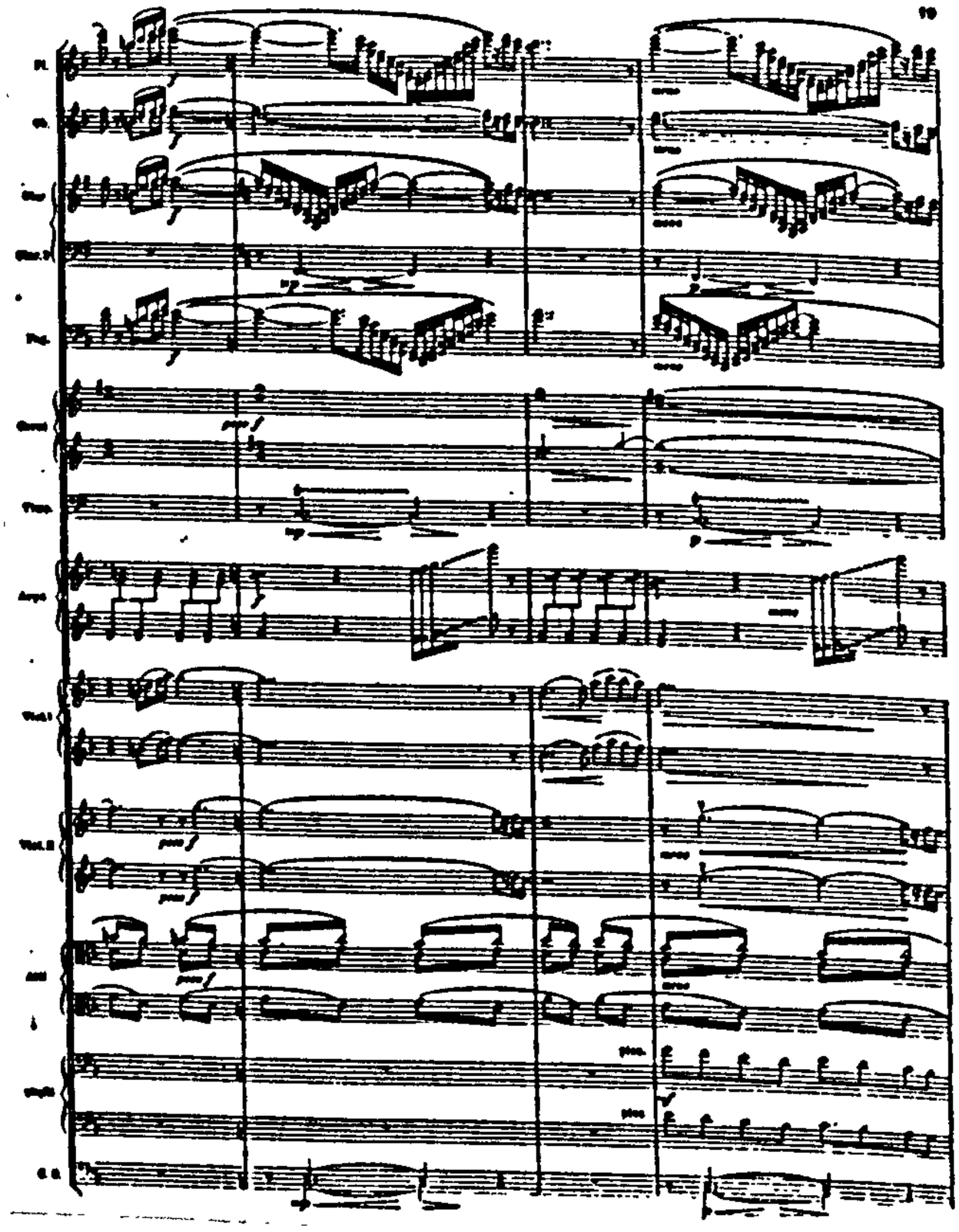
Fig.13.34 Section through *Mount Angel Library* showing clerstory lighting and sunken reading zone; Aalto,1965-70

Fig.13.35 Section through *Seinäjoki Library* showing level changes and clerestory lighting; Aalto, 1963-5

Fig.13.36 Section through *Rovaniemi Library* showing sunken readin area and clerestory lighting; Aalto, 1963-8



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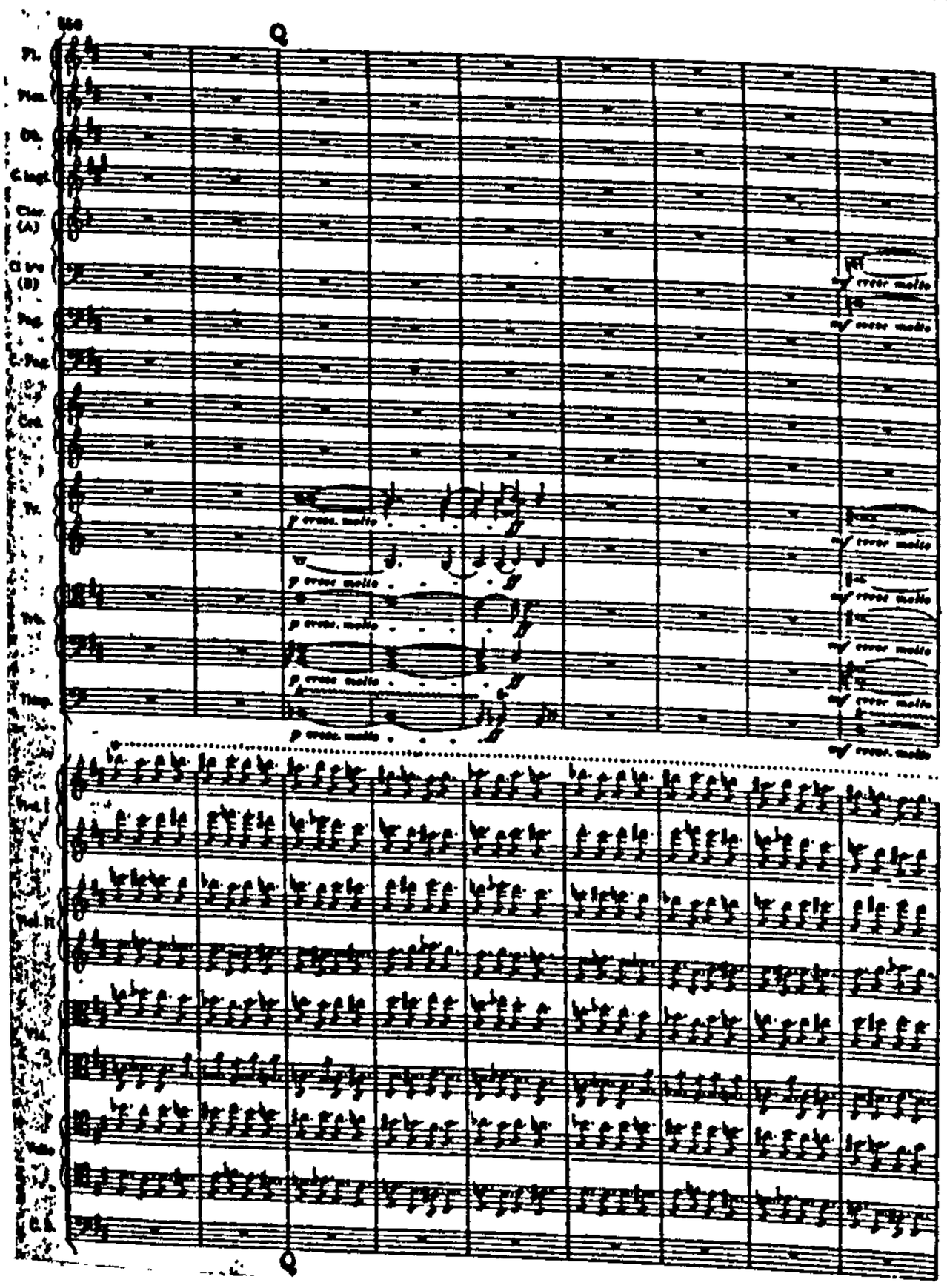

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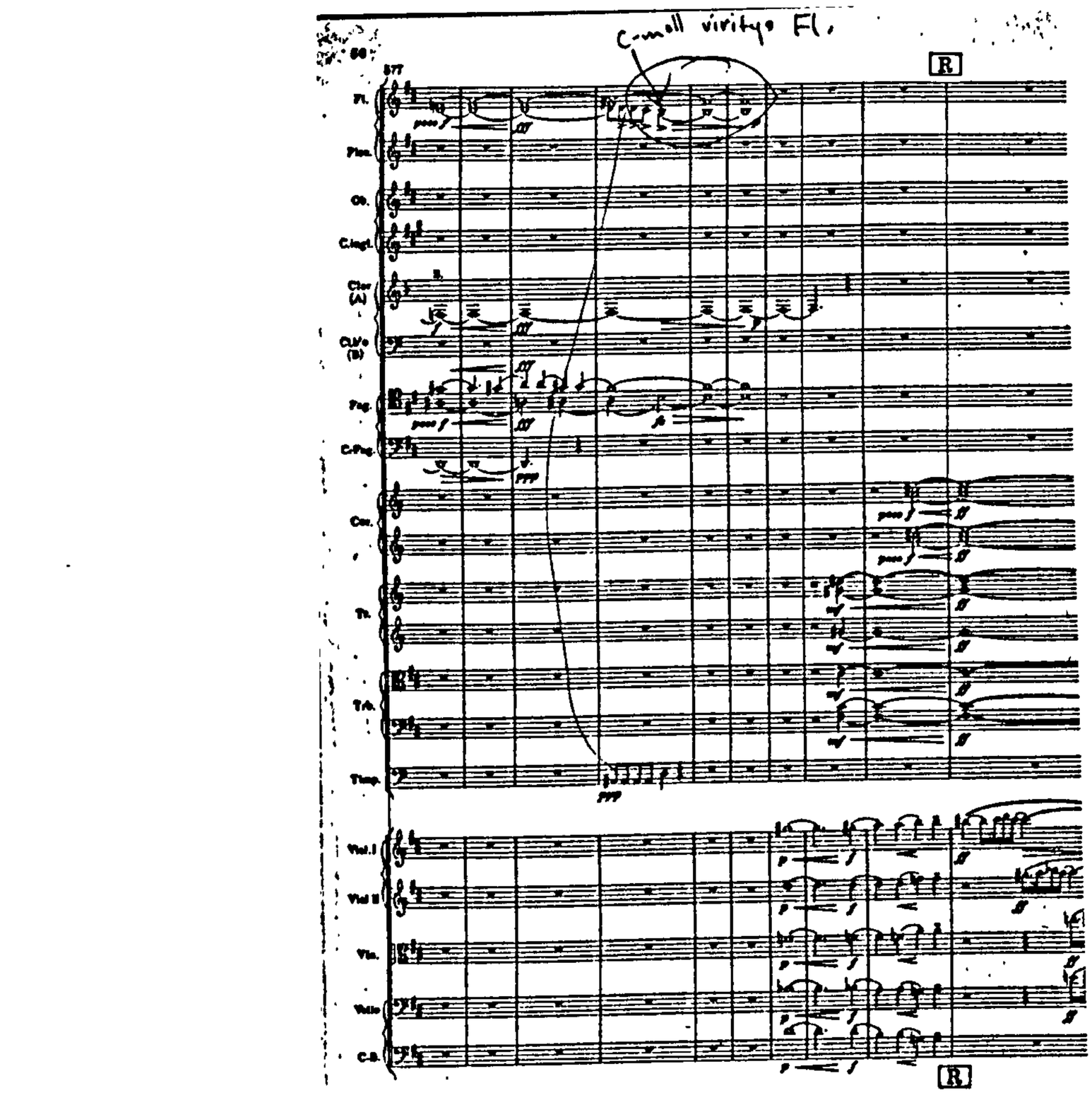
Fig.13.37 Woodwind activity against sustained Pedal in trumpets and violins, *Sixth Symphony*; Sibelius, 1923

Fig.13.38 Brass attempting to establish a Pedal to counter the hectic string activity, *Tapiola*; Sibelius, 1925



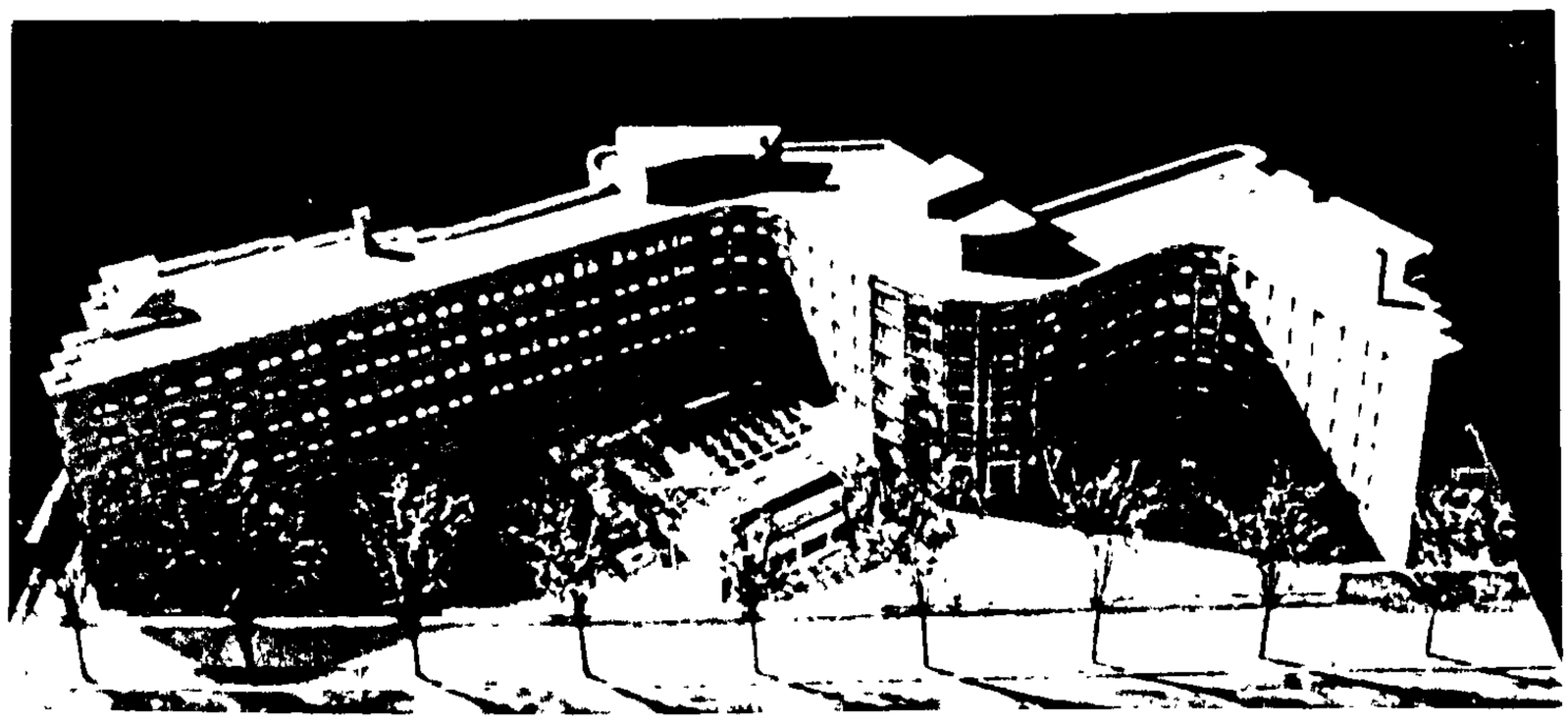


Fig.13.39 The whole orchestra launches into the Pedal towards 'R', *Tapiola*; Sibelius, 1925

Fig.13.40 Model of *Baker House* showing undulating southern mass against more rectilinear rear form; Aalto, 1946-9

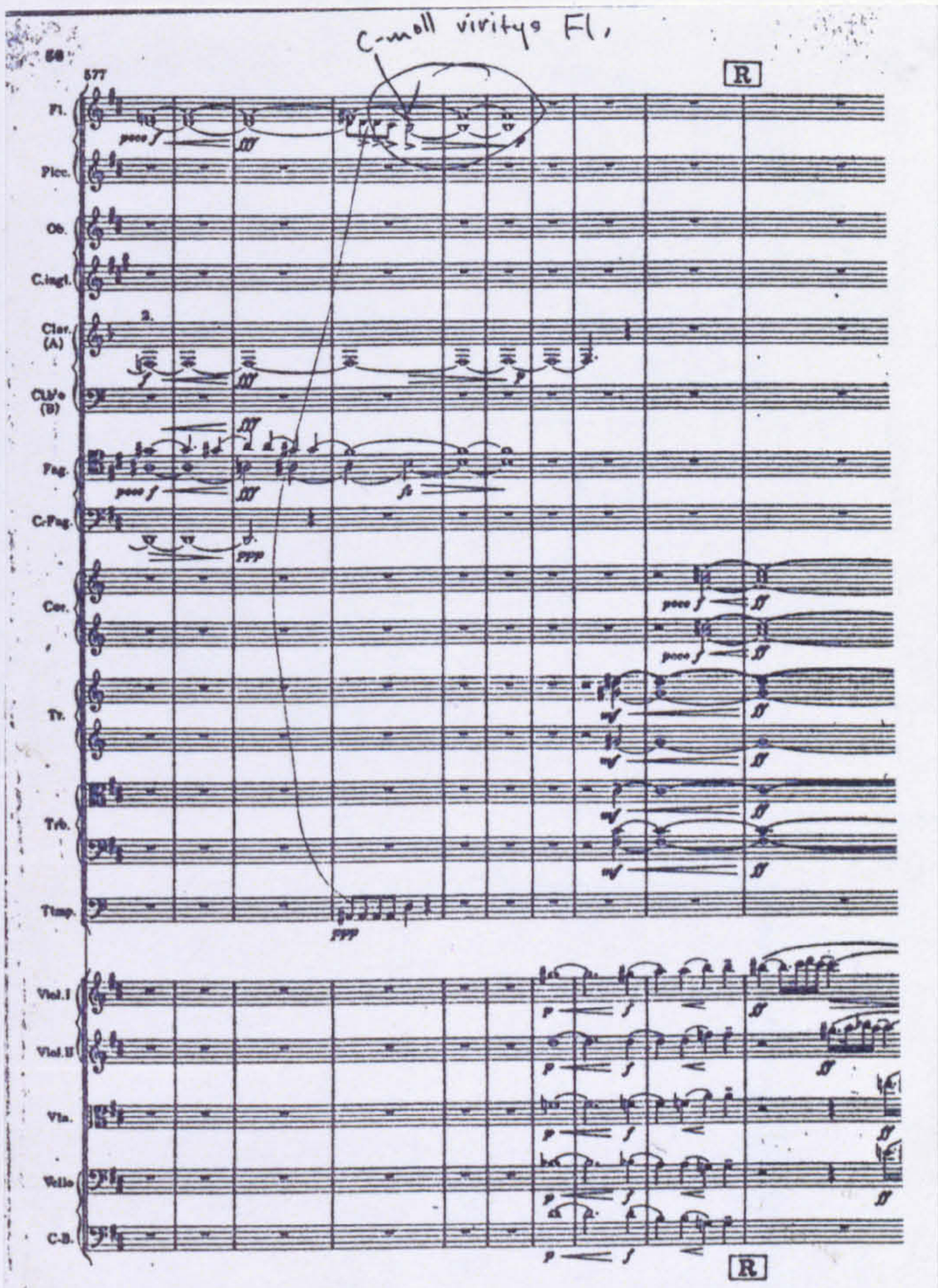


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Fig.13.39 The whole orchestra launches into the Pedal towards 'R', *Tapiola*; Sibelius, 1925

Fig.13.40 Model of *Baker House* showing undulating southern mass against more rectilinear rear form; Aalto, 1946-9

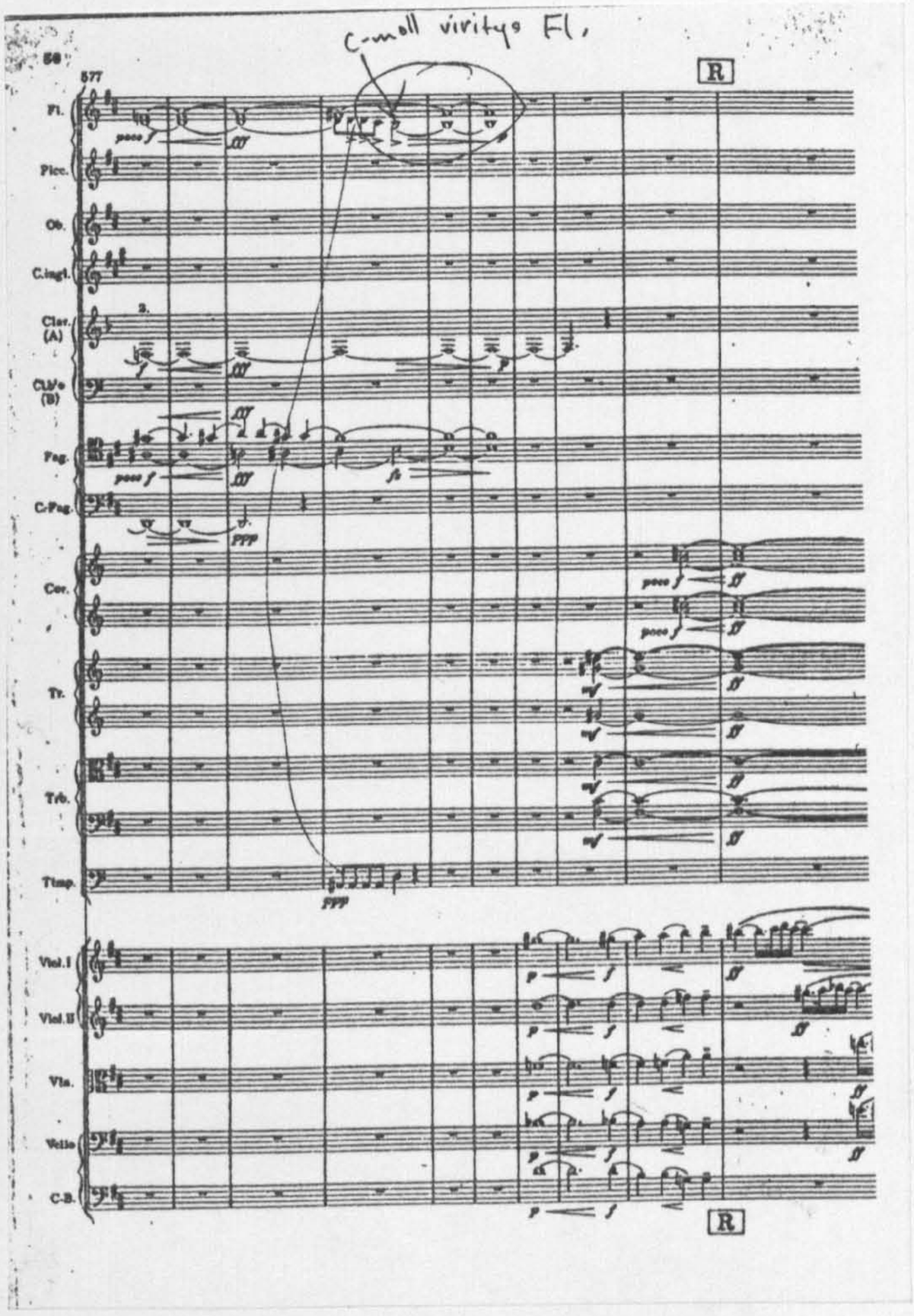

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Fig.13.39 The whole orchestra launches into the Pedal towards 'R', *Tapiola*; Sibelius, 1925

Fig.13.40 Model of *Baker House* showing undulating southern mass against more rectilinear rear form; Aalto, 1946-9



13.41



13.42

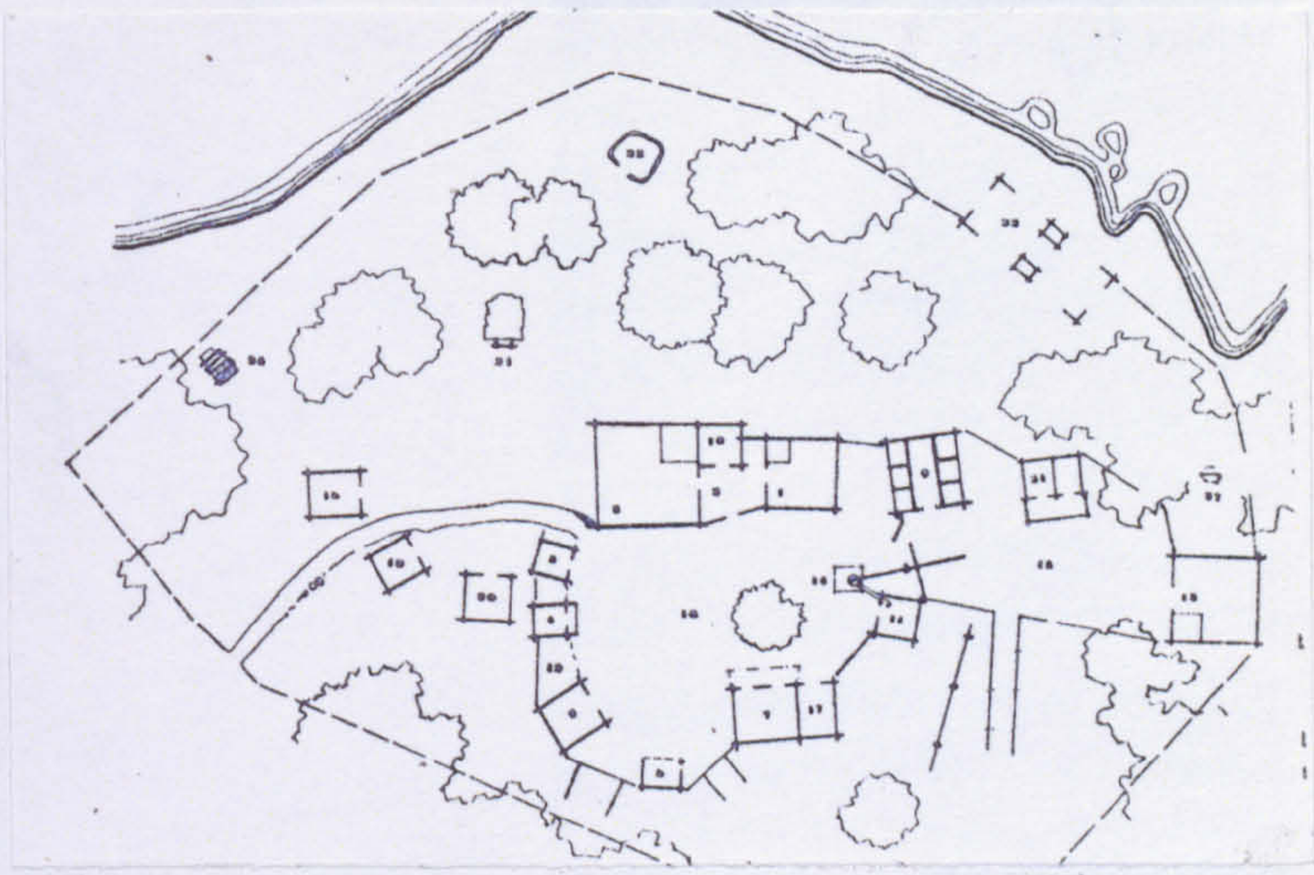


13.43

Fig.13.41 Detail of stair, *Villa Mairea*; Aalto, 1936-9

Fig.13.42 Design sketch of *Finlandia Hall*; Aalto, 1962-71

Fig.13.43 Sketch of Calascibetta, Sicily; Aalto, 1952



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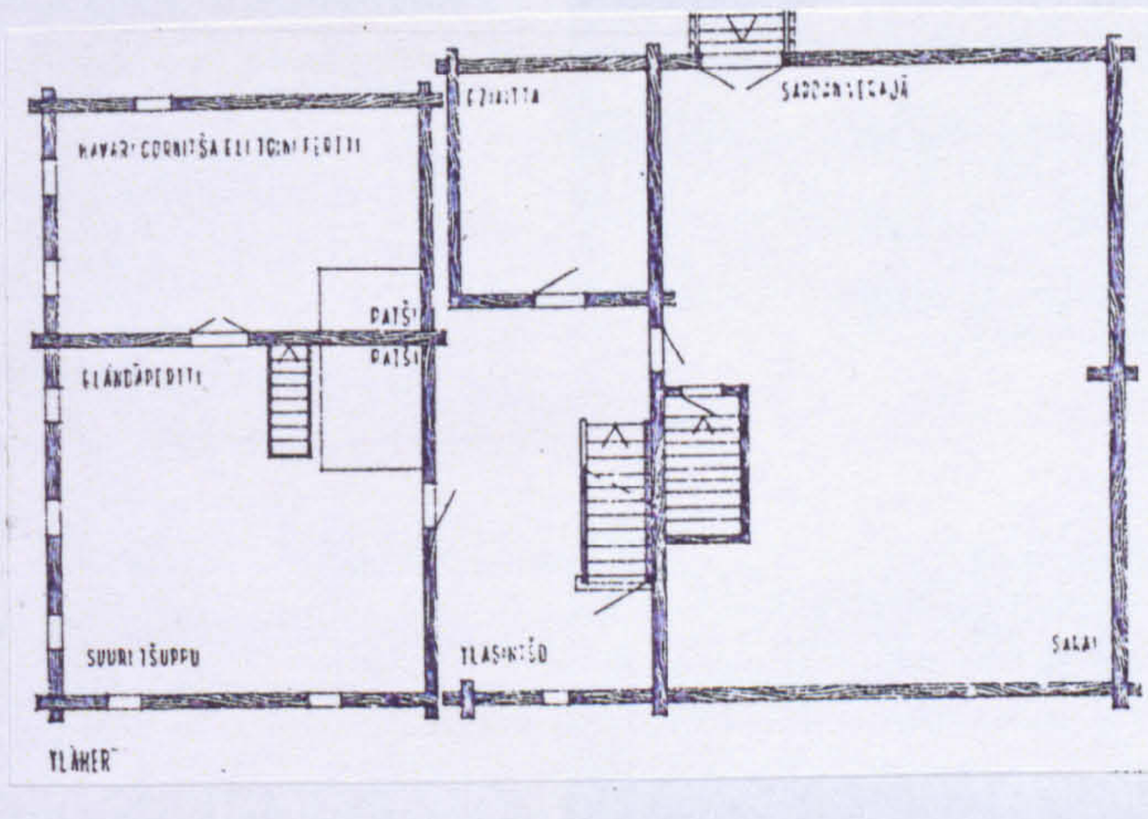

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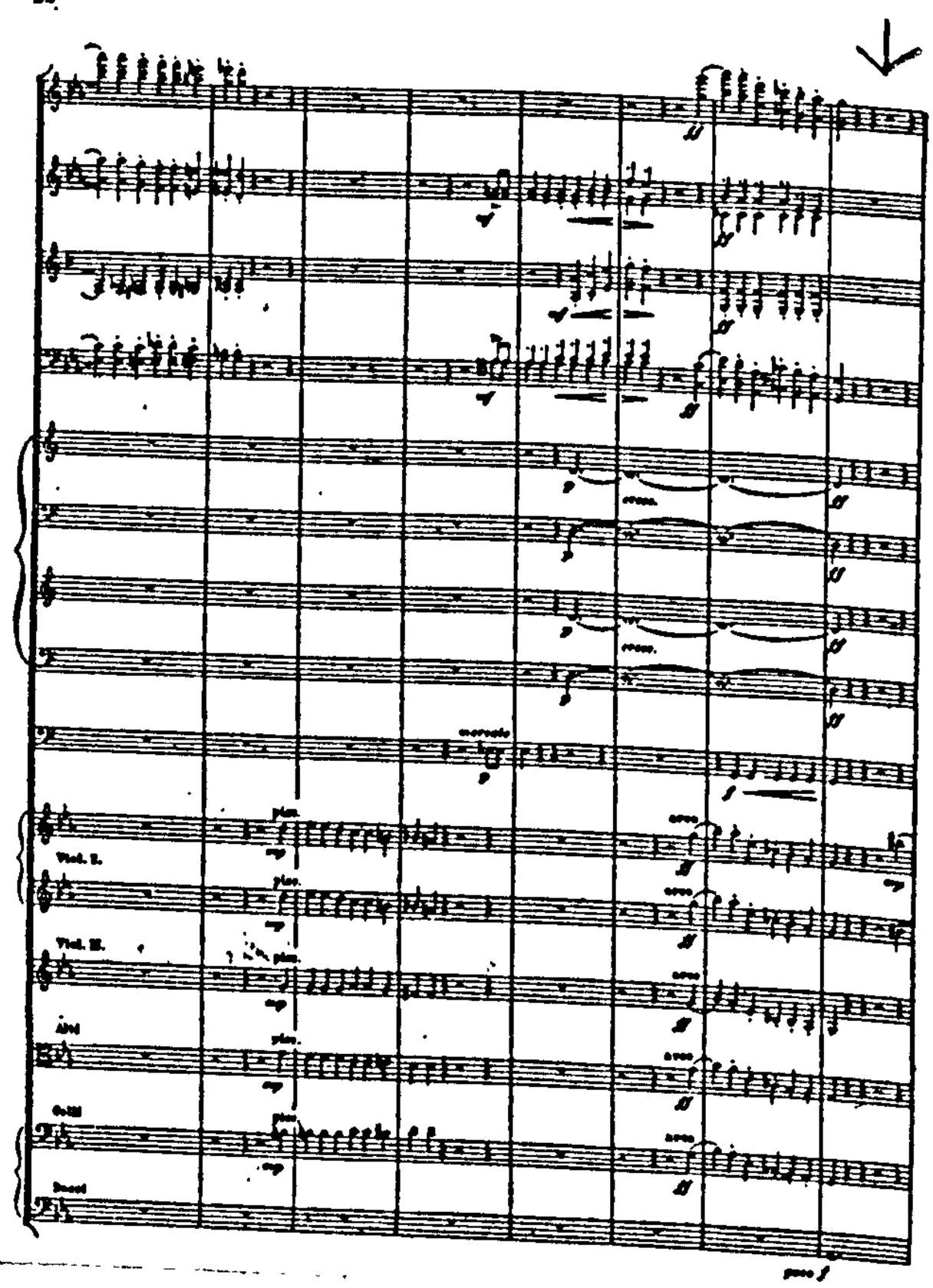
Fig.13.44 Layout of Niemelä Farm, Seurasaari Folk Museum, Helsinki

Fig.13.45 Traditional Karelian house plan

Fig.13.46 Open foyer space, *Finlandia Hall*; Aalto, 1962-71



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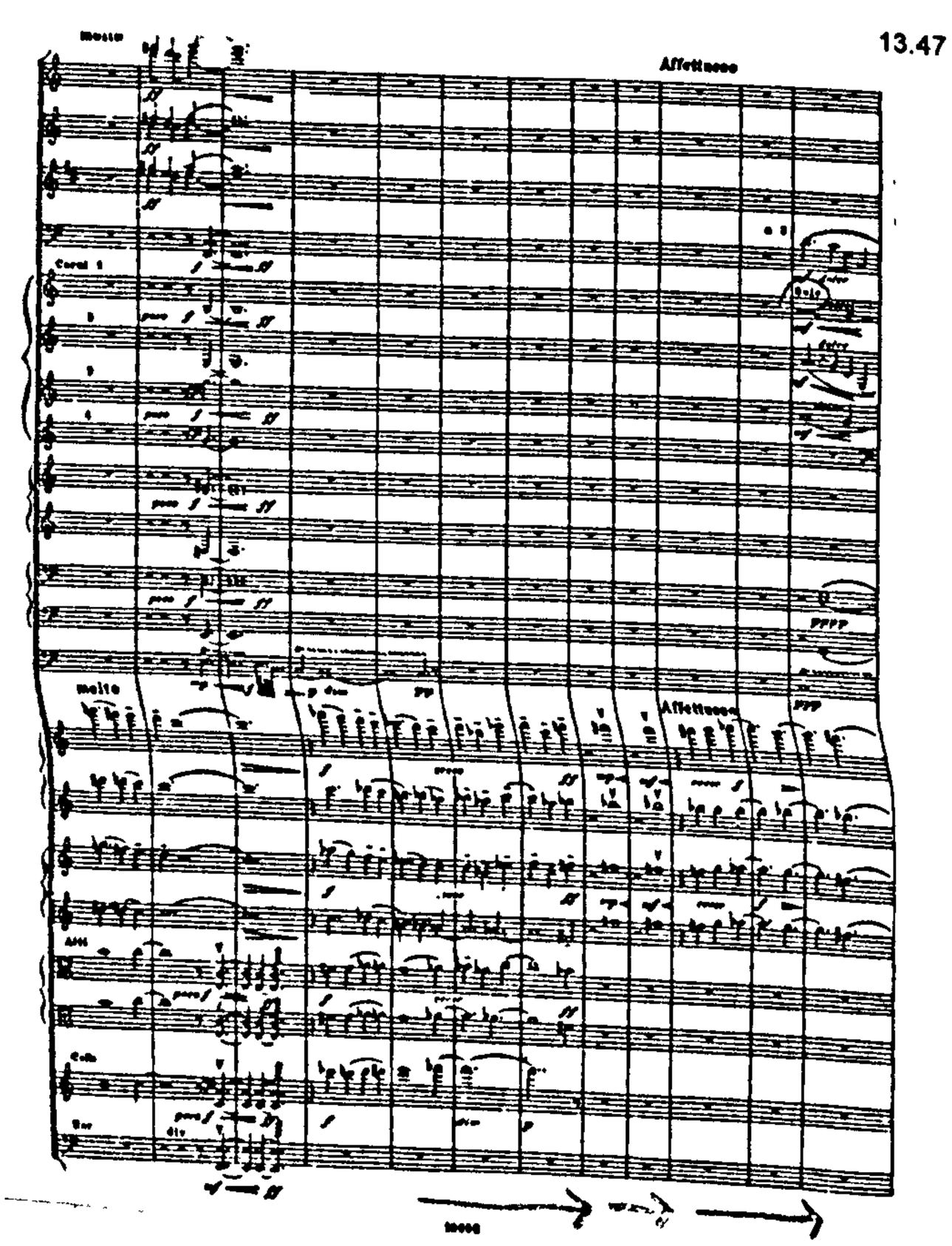

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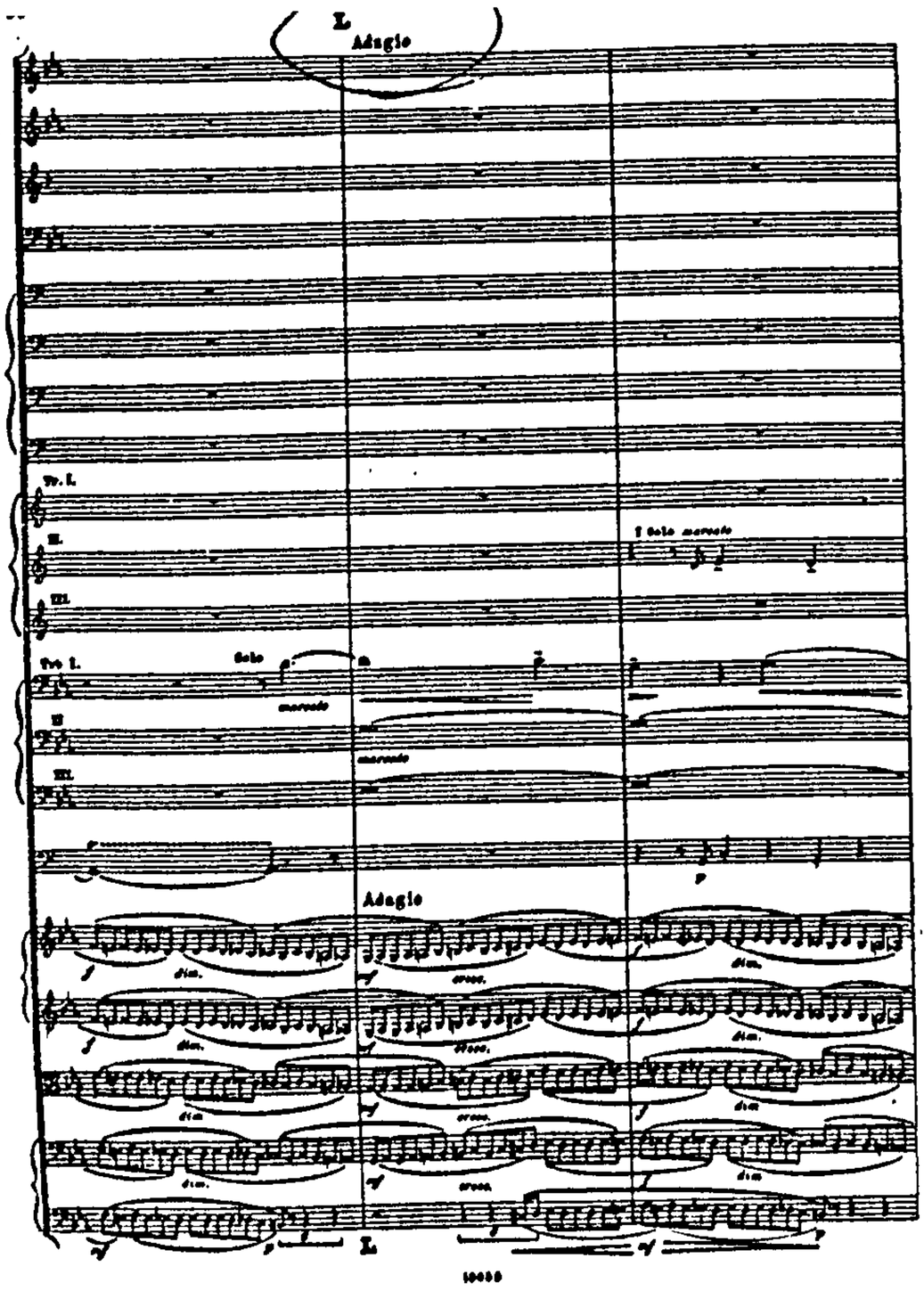
Fig.13.47 Music crashing into stasis, searching for the tonic, *Seventh Symphony*, Sibelius, 1924

Fig.13.48 Music bleeding into stasis, *Seventh Symphony*, Sibelius, 1924



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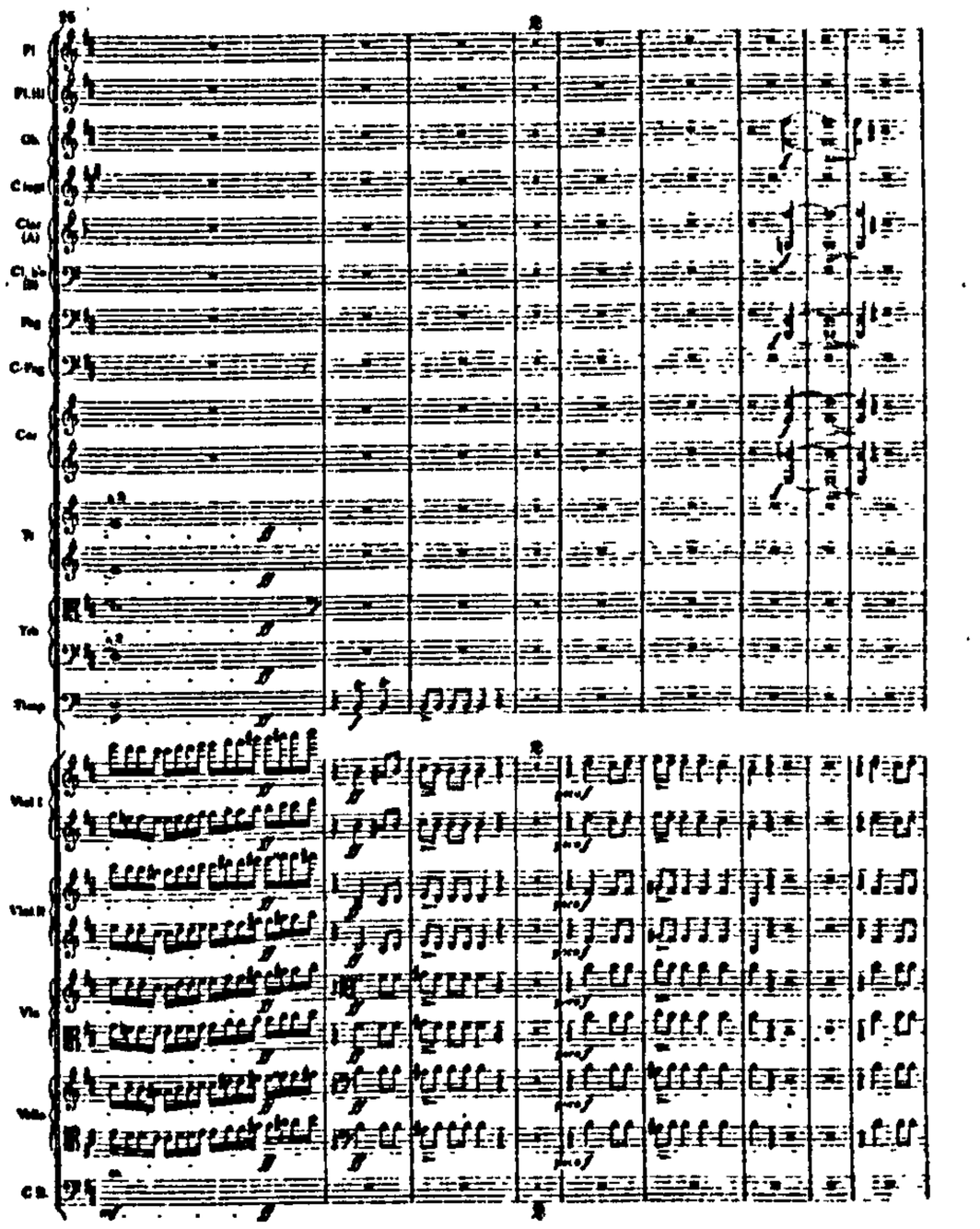

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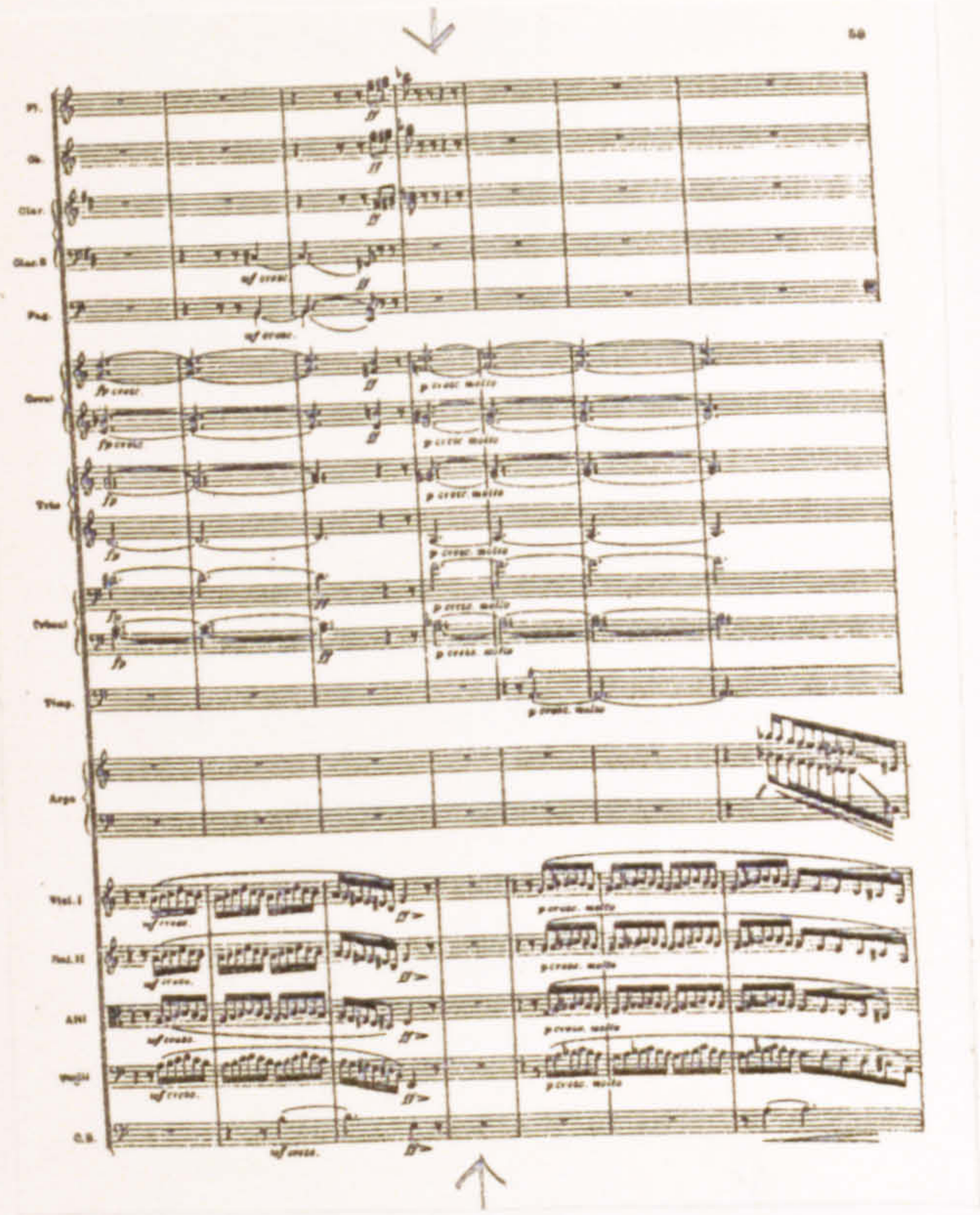
Fig.13.49 Security of Pedal dominates the hectic violin activity, *Seventh Symphony*; Sibelius, 1924

Fig.13.50 Deep stasis despite musical activity in search of the tonic, *Tapiola*; Sibelius, 1925



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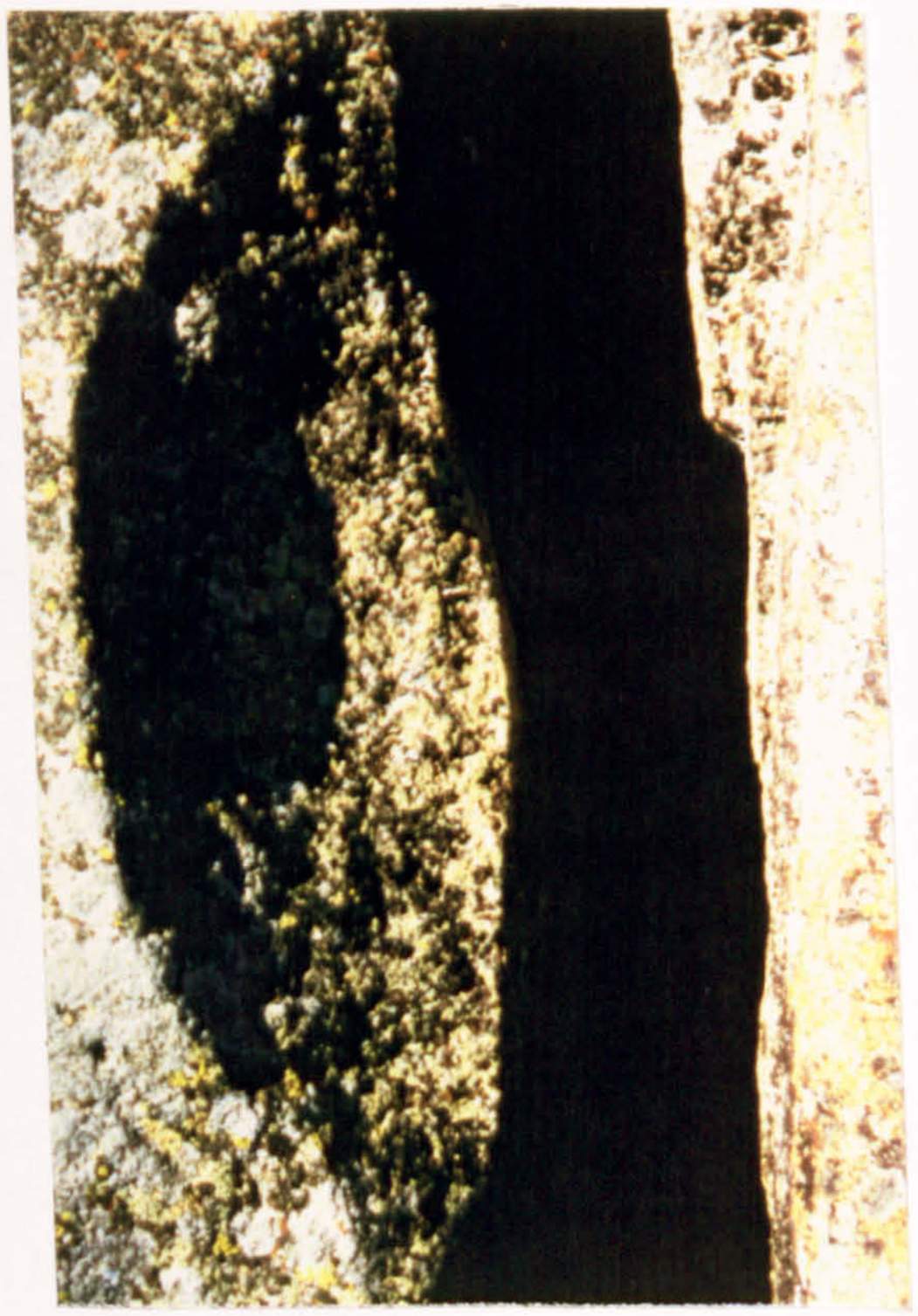

13.52

Fig.13.51 Brass and timpani Pedal rides the tacit gap in rushing string activity in third movement of *Sixth Symphony*; Sibelius, 1923

Fig.13.52 Striated rock

divorcing the Pedal elements, but rather create the tension which perpetuates the dynamic, and the growth.

As cited above, Aalto, too, overcame standard constructive limits through the emancipation of the section. Indeed, Aalto developed a judicious use of free-form mediation (or Wave) within the section as a mechanism for such manipulation of the building's inner-life; the emancipation of the section as tool of mediation. Although the Wave appeared in a competition design for *Tehtaanpuisto Church* (1930, fig.13.54), it was first activated in the wooden Wave at *Viipuri Library* (1933, fig.13.55) , the Wave was dynamic in the ceiling in *House of Culture* (1955, fig.13.56), as it would be to a greater extent in *Vuoksenniska Church* (1957, fig.13.57). In these cases the ceiling, roof and walls each respond to different circumstances. In other words, the structure mediates between these circumstances. Indeed, free form (the Wave) is achieved in the entirety of *Vuoksenniska Church* (fig.13.23), free, that is, to respond to the needs of the spaces it encloses (i.e., *Leistungsform*), being rooted in the Pedal which may signify the rational, grounding of fantasy in the remaining form.

PEDALLING STABILITY: RELATING FORM TO RELATIVE FUNCTIONS

"[...] what is at variance is in agreement with itself: a back-turning (palintropos harmonia)" (Heraclitus, frag:51).

With justification Törne recognised that the Pedal "expresses [Sibelius'] attitude towards life and the artistic philosophy", ideas of unity and symphony which are of great significance here (1937:32). Certainly the mechanism in use, coupled to a disparate episode of activity in pursuit of harmony, exclaims a significance beyond the purely musical.

Sibelius' tonal prolongation offers stability. For example, leading to the last statement of the trombone theme of the Presto in the *Seventh*, the accompanying figures are penetrated by the circling motion (Murtomäki, 1993:256; fig.13.58, tape e.g.49 & fig.13.59, tape e.g.50); the Wave is threatening to break bounds. Yet, there is no 'hole' because of the underlining or under-girding Pedal. In Aalto's architecture (as in life beyond the arts) such anchors offer such stability from a functional view point too. One building imbued with such a sense of precarious *harmonia* 'forged' from distinct elements is the *House of Culture* in Helsinki (1955-1958, fig.13.61). Built as headquarters for the Finnish Communist Party the building comprises Aalto's first amorphous undulating amphitheatre Wave form (fig.13.62), familiarly welded to a rectilinear Pedal element. In this case the weld or *harmos* (joint) between the two is mediated by a vinculum (connecting band) in the form of a covered walkway, the profile of which infers the undulation, and the linearity of which is geometrically bound to the office's Euclidean nature (fig.13.63). Here there are two Pedal elements:- a) that which bonds the building masses (the vinculum), and b) that which both counters and balances the extrovert (auditorium) of part of the whole (the office wing).

"The arrangement of the interior creates an asymmetrical exterior." (Fleig, 1992:35).

Here Fleig gives expression to the circumstantial composition in the *House of Culture*. Although the expressive (Wave) parts of the buildings are the most distinct, their relation to the rational and the less outgoing (Pedal) elements are crucial. This offers the Pedal a vital role in the whole life of the building. In this case, the extrovert expression of one function of the whole life of the building (the undulating auditorium - the Wave) creates a keener demand for an external relationship with other parts of the whole, the character of which is expressly different (i.e., the pedal); evincing Porphyrios' identification of Aalto's "determination to compose circumstantially" (1982:48).

The often undemonstrative, auxiliary 'Martha' or Pedal spaces, which are often linear, serve and indeed facilitate the life of the dynamic, featureful, even worshipful 'Mary' Wave spaces (fig.13.61), which are given to bend and twist with the drama of the brief. That these two cohabit and imbibe the 'whole' form, relating to different realities of life is crucial in Aalto's work. In adjacent accord with this interpretation, St. John Wilson comments that "there seems always to be in the "argument" of an Aalto building a complementarity between the rigorous plane of analysis and the turbulent wave-like surge of fantasy." (1992:91); correlating the Pedal - Wave episode with something essential in the architect's work. Indeed, towards the end of his career, Aalto described how (after Hegel) he sought to combine thesis and antithesis into synthesis (1967), demonstrating that such a synthesis was that which is found, rather than imposed (fig.13.64).[36]

From the first undulation of the Wave in the *Viipuri Library* redesign of 1933, which abuts the right angled 'White' Pedal elements with a certain precocious confidence, Aalto had begun to explore and refine this new element of his design portfolio. Having been generated, in part at least, by a desire to manipulate sound waves in the *Tehtaanpuisto Church* competition (fig.13.54) and *Viipuri* (fig.13.55), the Wave was then used as a structural tool in the *Paimio Chair* (1930-33, fig.13.65), as expressive signs in *Villa Mairea* (1937-9) in, amongst other details, the form of a pond (fig.13.66) and a poetic mechanism for abutting a chimney breast and a glass wall (fig.13.67),[37] and the *Eskimo Woman's Leather Breeches* (Savoy Vase, 1936, fig.13.68), thereafter as a lake in *Le Bois est en Marche Pavilion* (fig.13.69), and a balcony in *Tsit Tsit Pom*, Paris (1937, fig.13.70), and in the spectacular free-form symphony in wood, enclosed in a box-like volume, in New York (1939, fig.13.90). In 1938 the *Forestry Pavilion* at an agricultural exhibition, Lapua (fig.13.71), comprised an undulating external wall enclosing a free form space.

Each of these examples is a development of the free-form undulation, but apart from the initial Viipuri acoustic example, their function is largely esoteric. In *Baker House*, however, the

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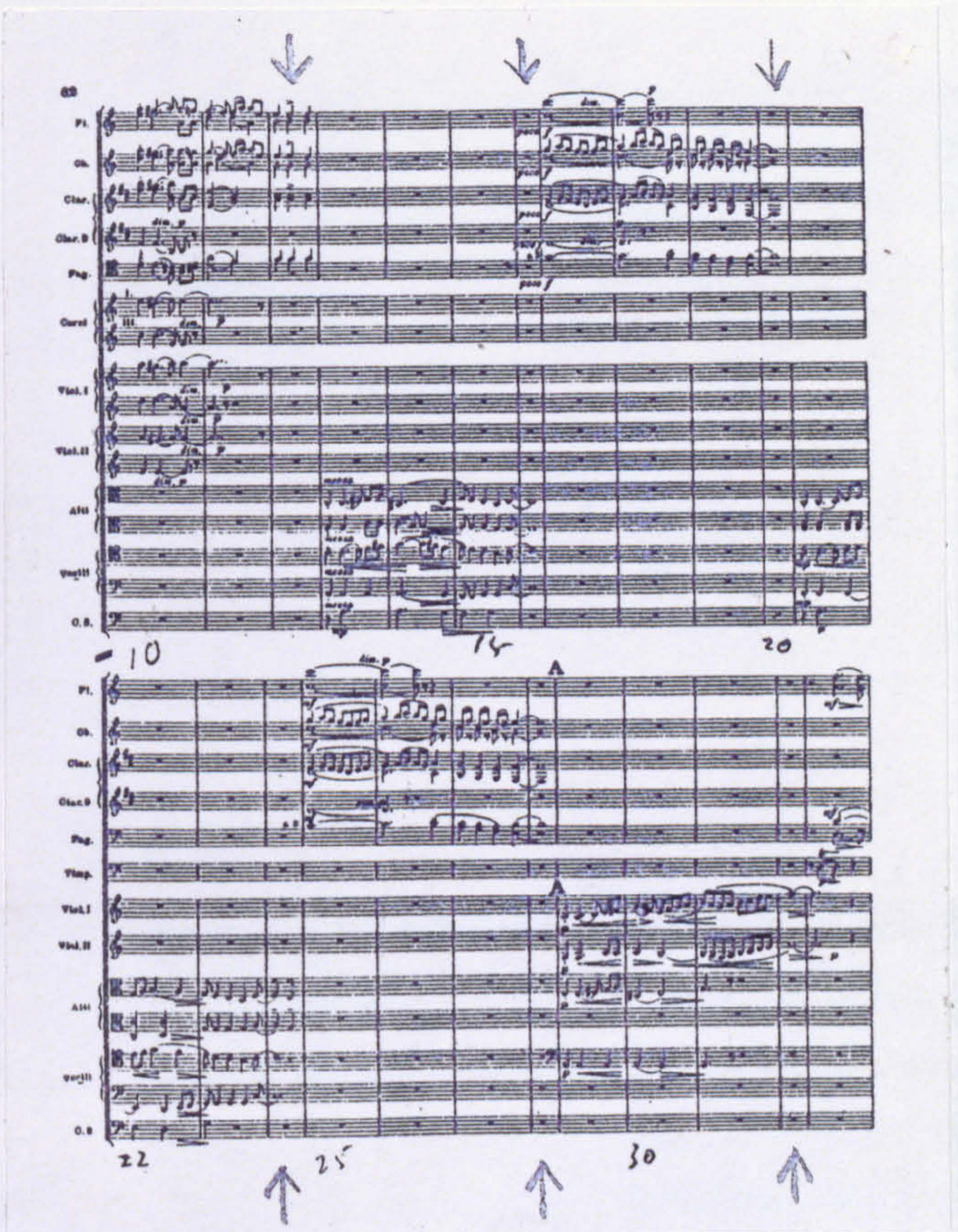
[36] *Wolfsburg Cultural Centre* (1958-62, fig.13.72) has a backbone of regular 'cells', the size and clarity of whose function distinguishes them from that of the auditoria and library spaces, just like *Vouksennlska Church* (fig.13.22) and *Seinäjoki* Library (fig.13.73).

[37] This detail is said to be a reminder for Maire Gullichsen of Aalto's big ears.



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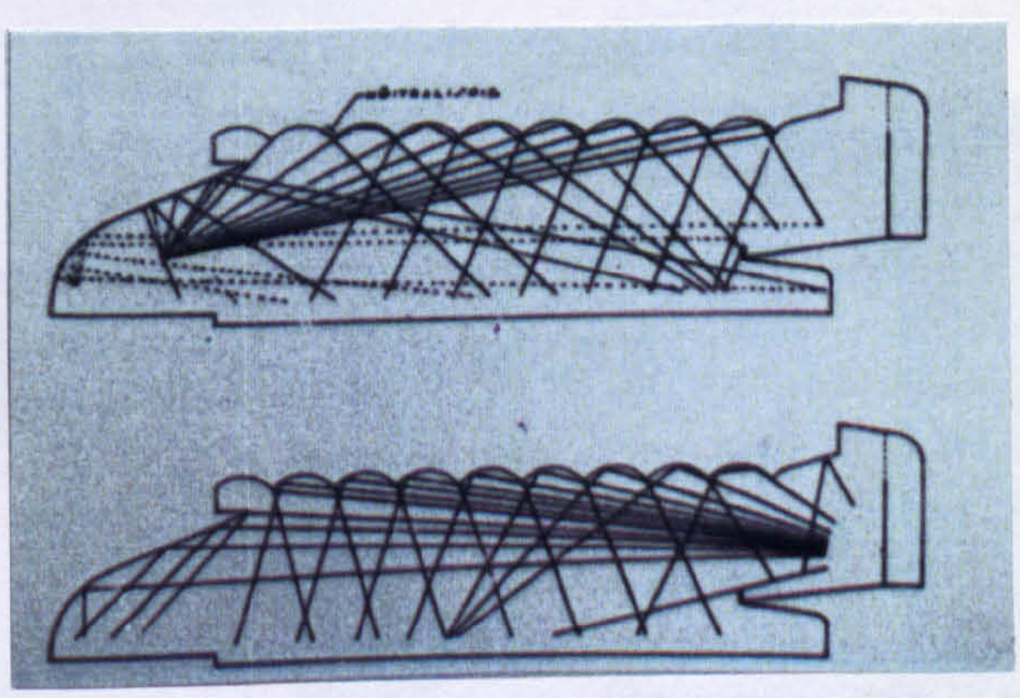

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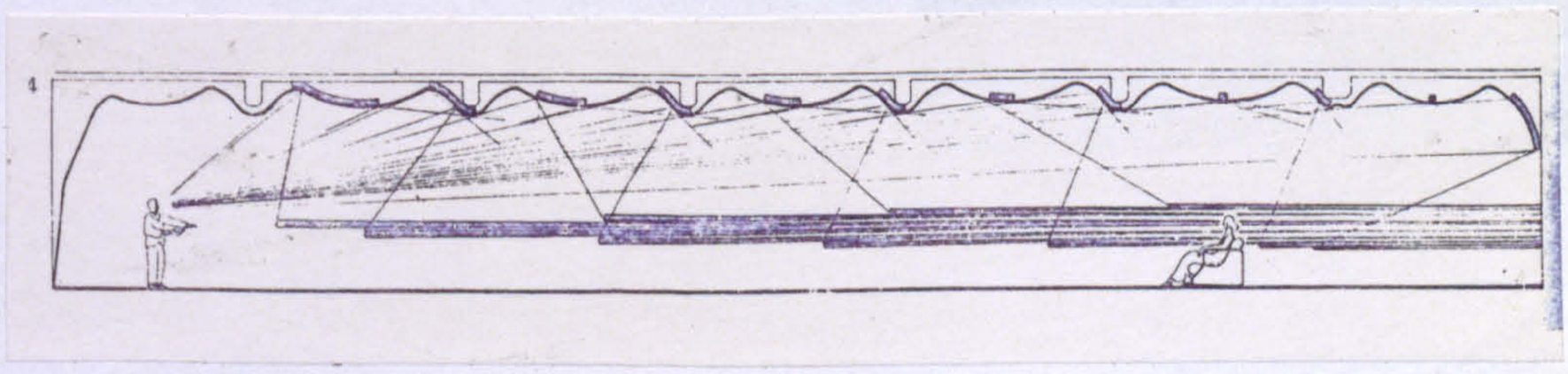
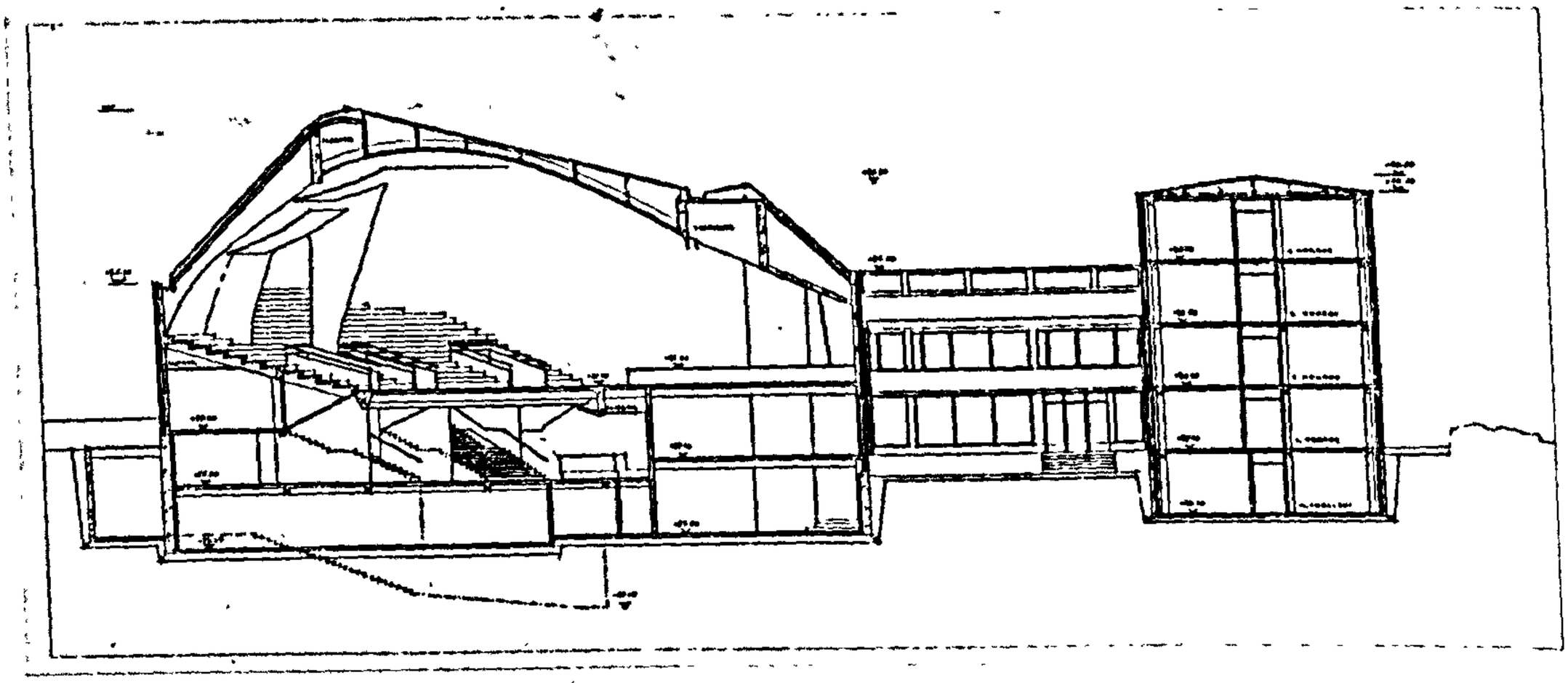


13.55

Fig.13.53 Small gaps in finale of*Sixth Symphony*; Sibelius, 1923

Fig.13.54 Section through *Tehtanpuisto Church* showing acoustic ceiling undulation against floor; Aalto, 1930

Fig.13.55 Section through *Viipuri Library* auditorium; Aalto, 1927-35



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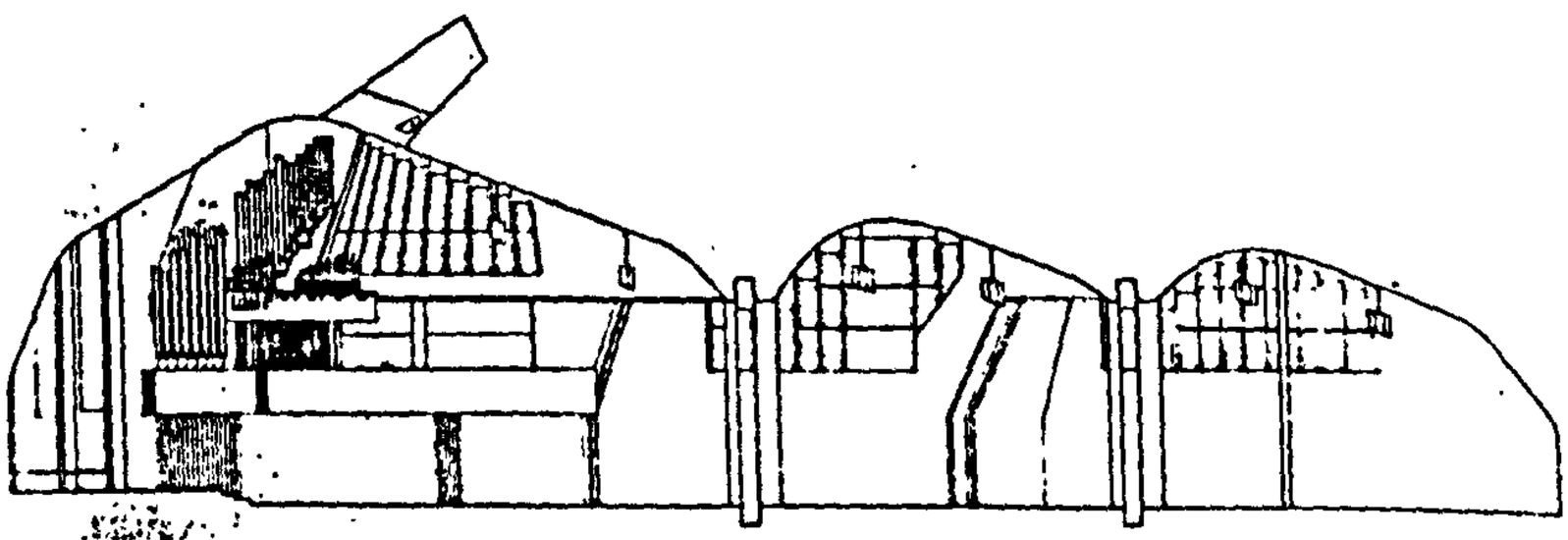

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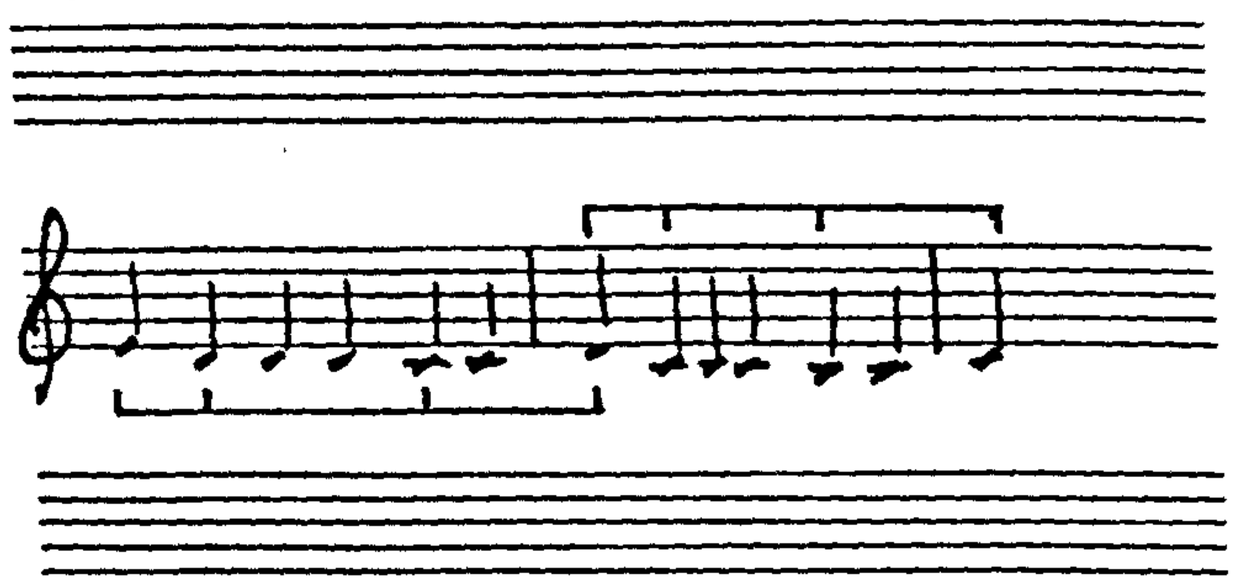

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Fig.13.56 Section through the *House of Culture*, Helsinki; Aalto, 1955-8

Fig.13.57 Section through *Vuoksenniska Church*; Imatra; Aalto, 1956-9

Fig.13.58 Example of circling motion, *Seventh Symphony*, Sibelius, 1925

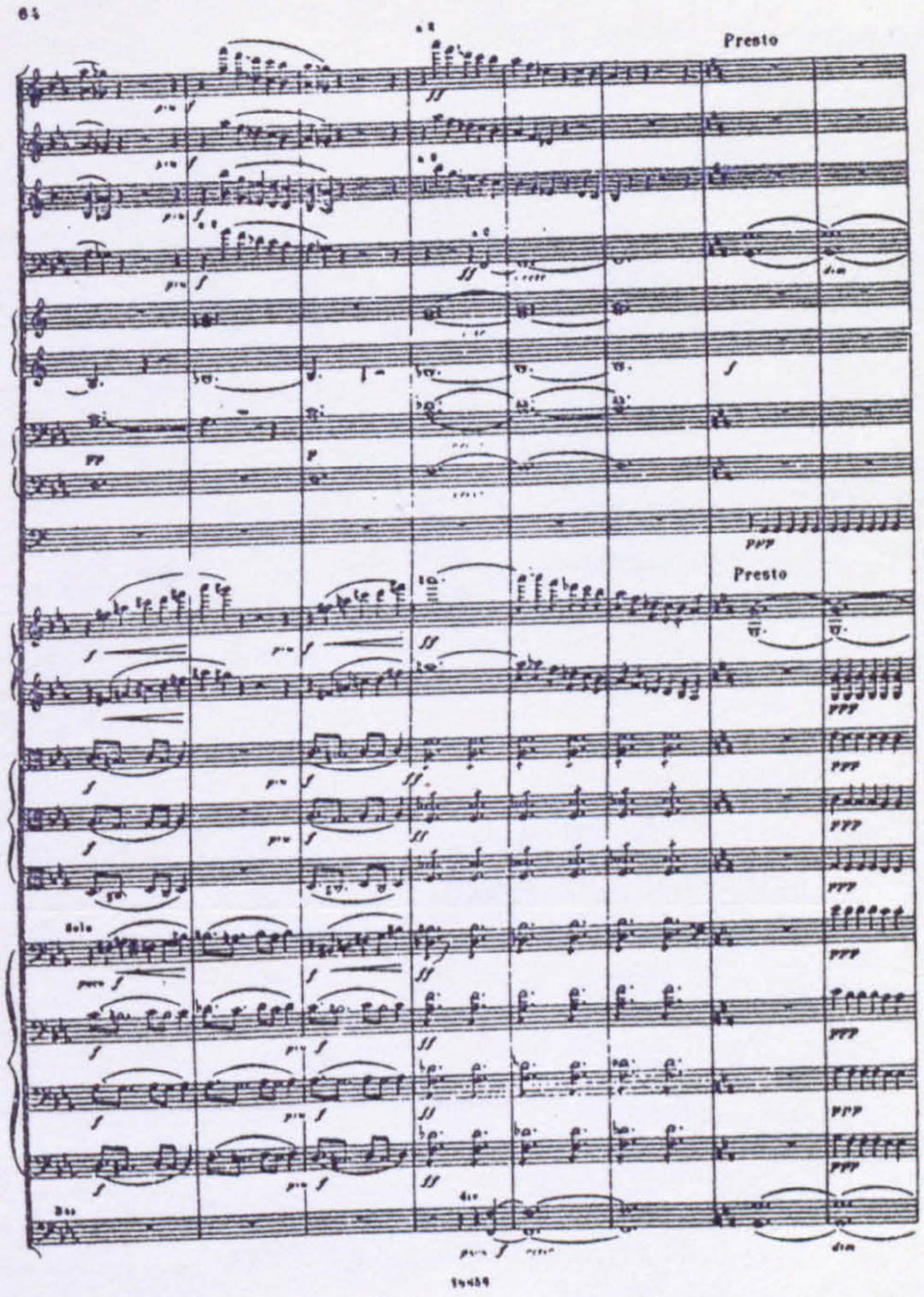

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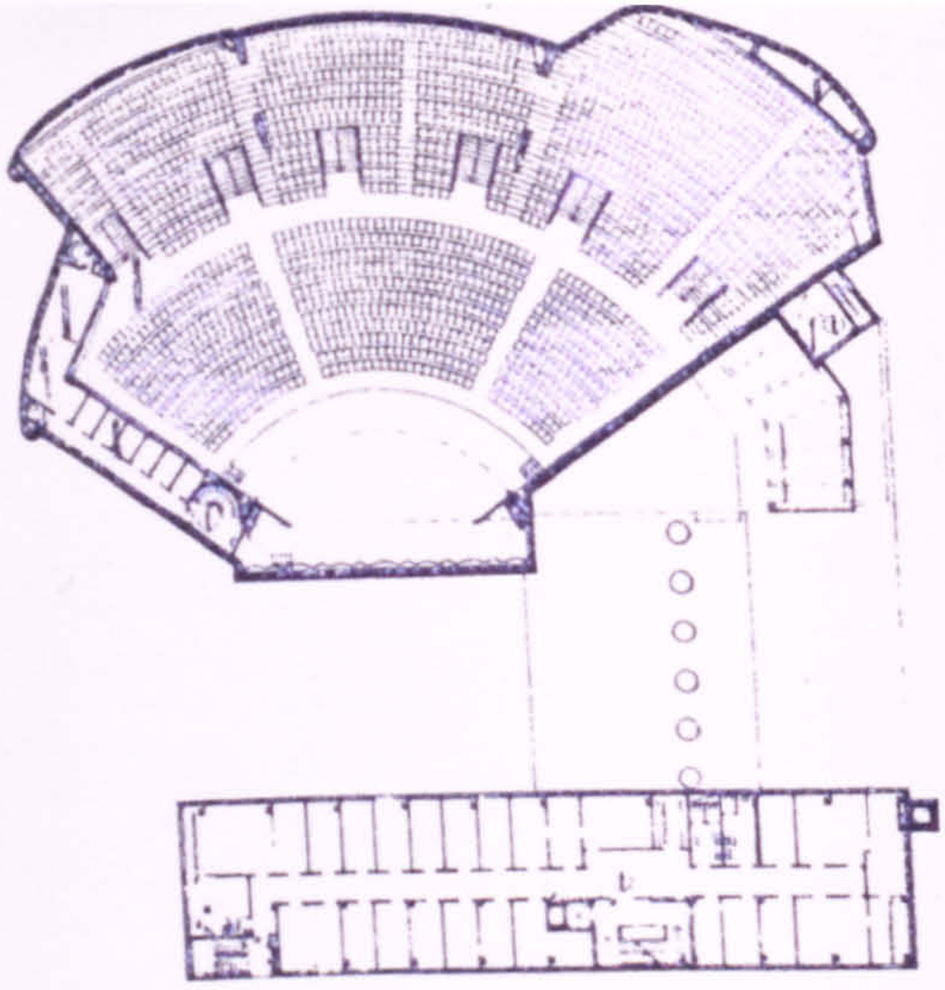
Fig.13.59 Circling motion in the Presto of the *Seventh Symphony*; Sibelius, 1924

Fig.13.60 View of Lake, Hauho



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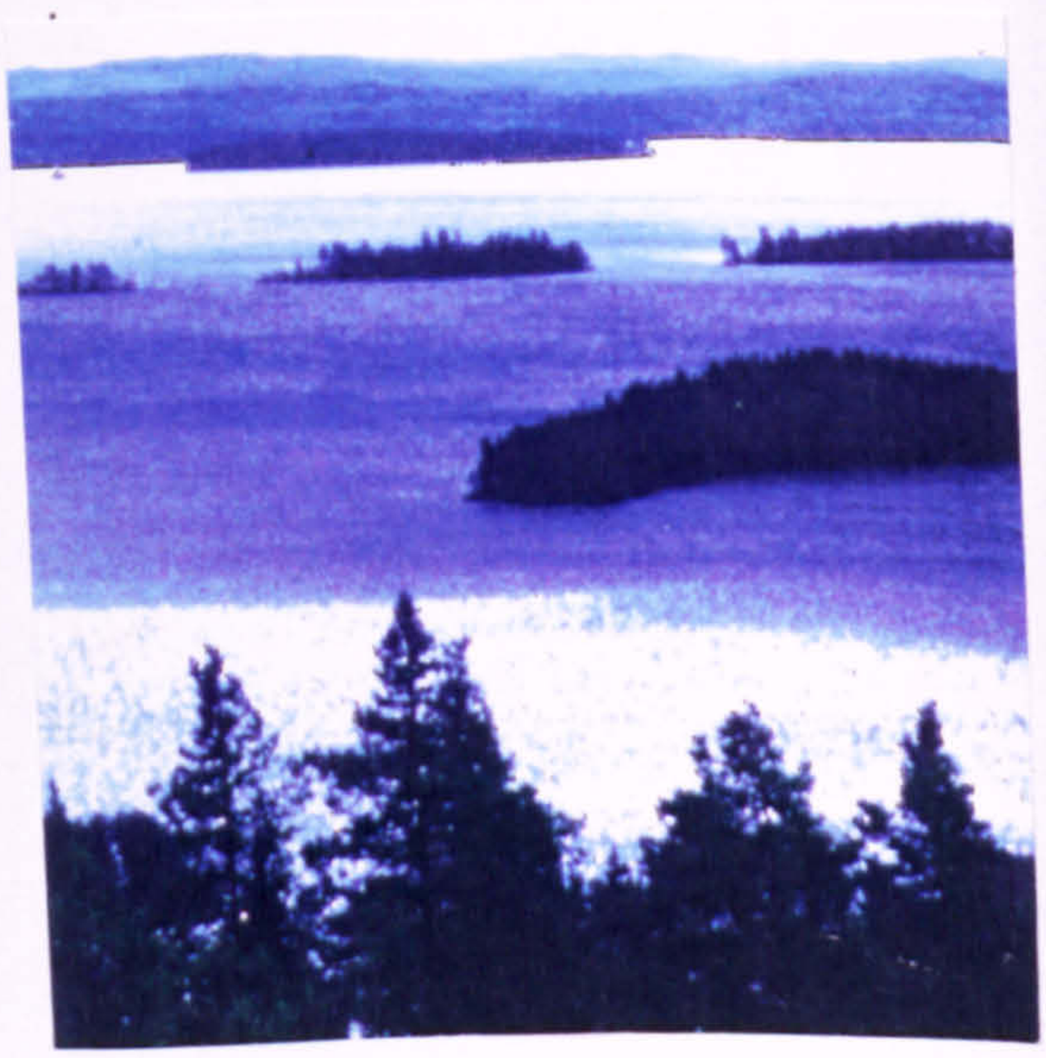

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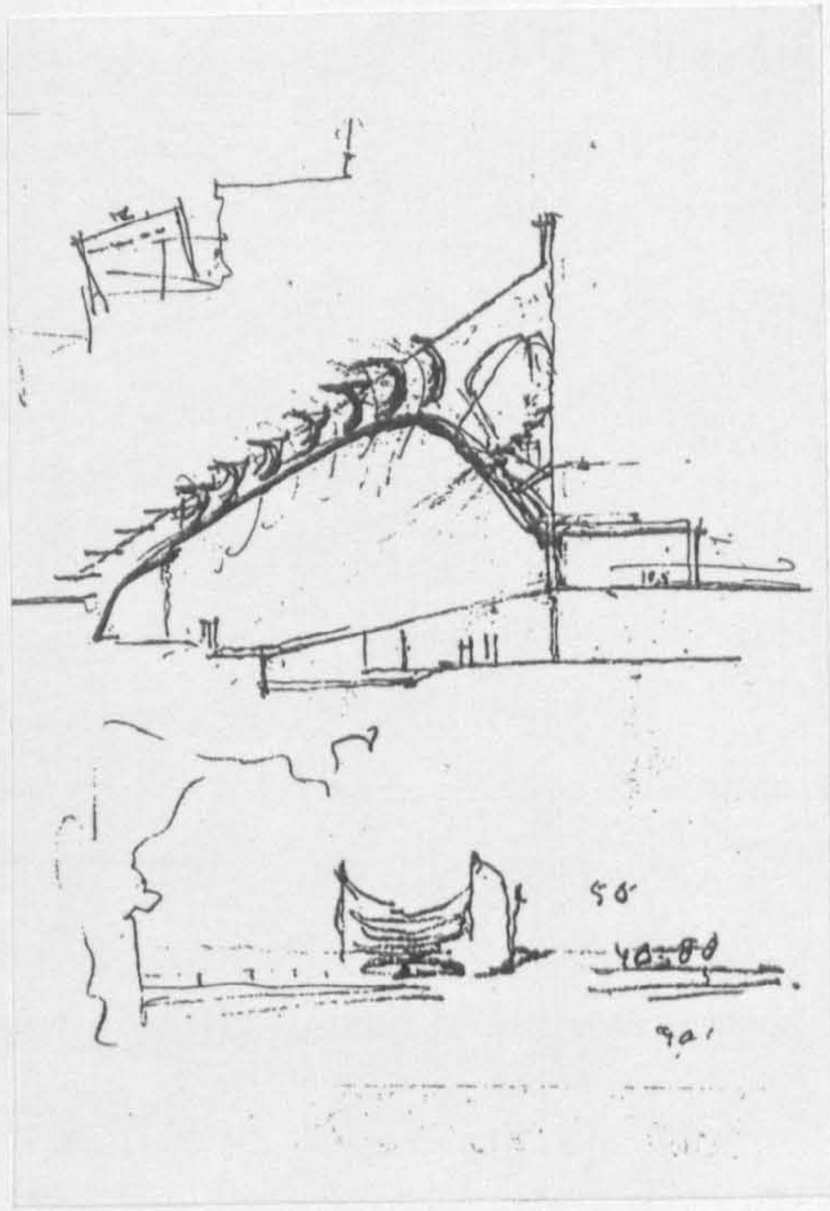
Fig.13.61 Plan of the *House of Culture*, Helsinki; Aalto, 1955-8

Fig.13.62 View of Pedal and Wave in the massing of the *House of Culture*, Helsinki; Aalto,1955-8

Fig.13.63 View of lake and islands



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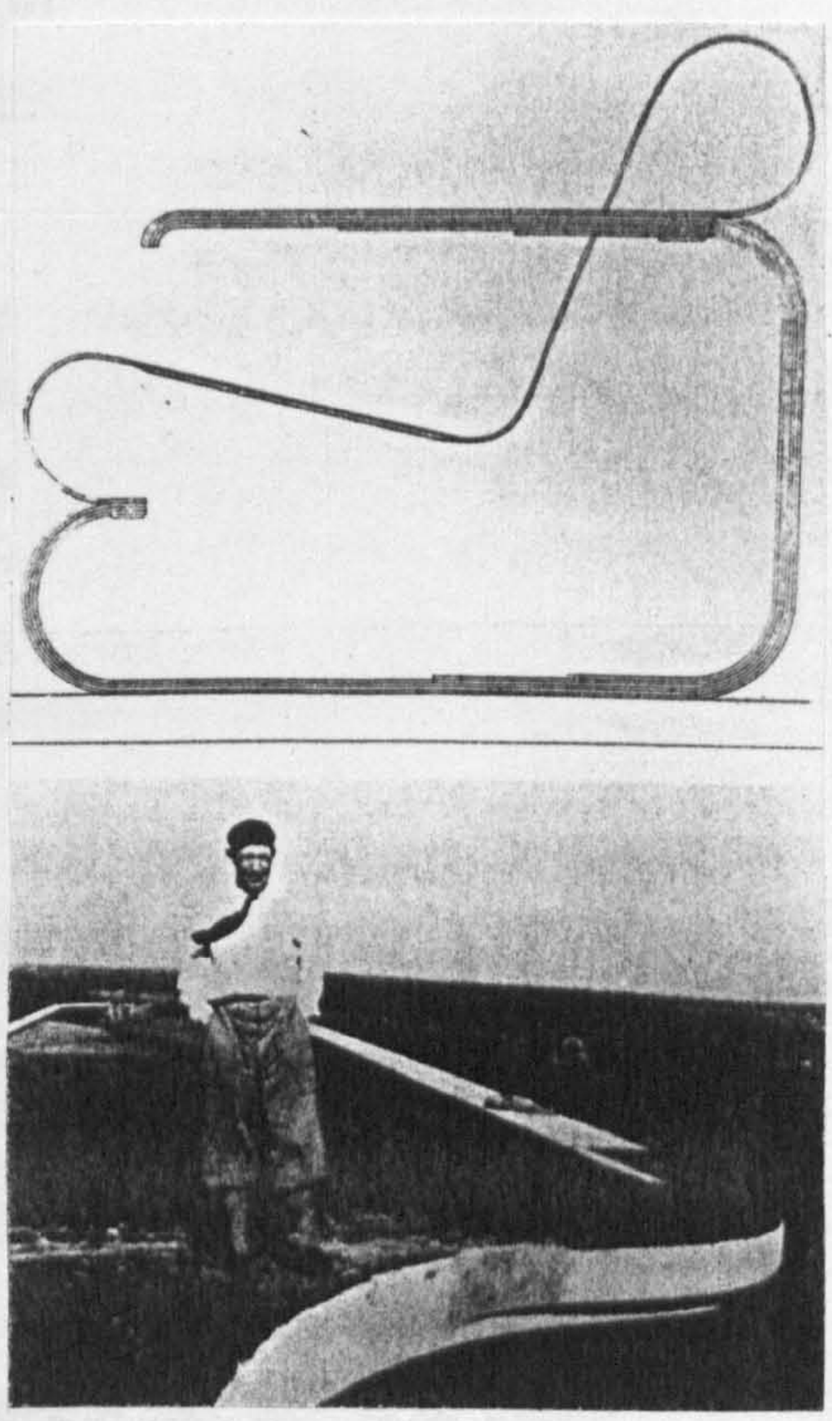

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Fig.13.64 Design sketch section through *Helsinki University of Technology* lecture theatre; Aalto, circa, 1955

Fig.13.65 *Paimio Chair*, and Aalto on roof of Paimio Sanatorium; Aalto, 1933

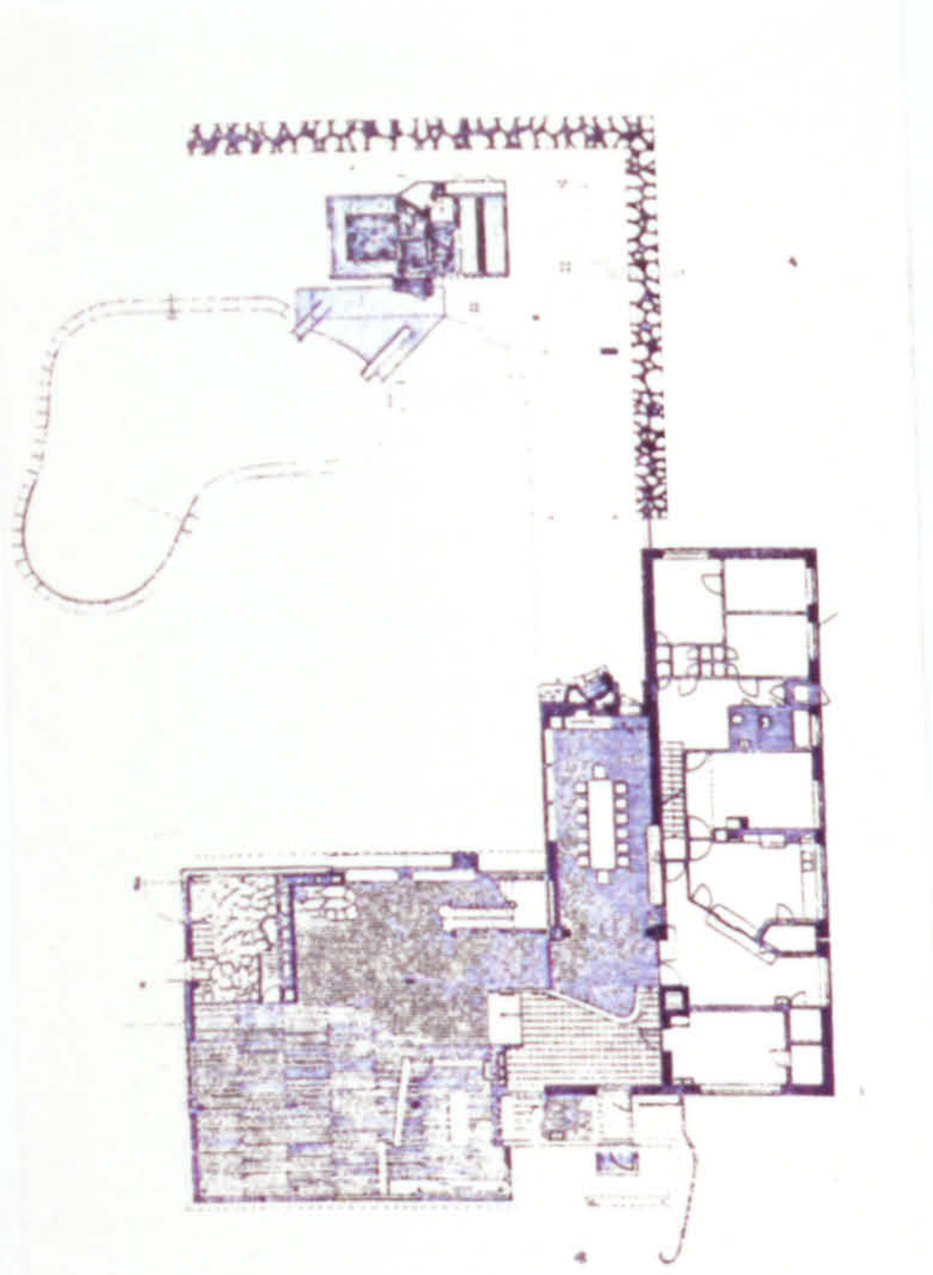

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Fig.13.66 Plan of *Villa Mairea*; Aalto, 1936-9

Fig.13.67 Chimney breast, *Villa Mairea*; Aalto, 1936-9

undulation (Wave) is rooted in these *raison d'être*, and, being so, is also tightly related to what might be considered its antithesis, the rectilinear (Pedal).

From *Baker House* onwards Aalto was able to make his use of the 'organic' Wave form deeply logical, in terms of any of the rationalists prepared to delve into the buildings' generation. In New York *Pavilion* the Wave is rebelling within the box; a wonderful metaphor for his relationship with his 'White' CIAM colleagues. At M.I.T. the box has inherently become the Wave, generated by the demands he believed were inherent in the brief (fig.13.41). In response to the site (i.e., the river frontage and the rear access route across a playing field), the demands of the brief, and his fundamental notions of economy (evinced in chapter four and twelve - which incidentally explain why M.I.T.'s late demands for further economy, to be demonstrated below, insulted him deeply), Aalto manifest the antithesis of the formulaic doctrinal Modernism in *Baker House* (1946-9); i.e., the way of relating the function-generated wave and the functional angularity which tends to the rectilinear.

SUMPHONOS AND *HARMONIA*

> *"The healthy soul is 'symphonic,' i.e., harmonious"* (Spitzer, 1963:17)
>
> *"[...] those deep wrought combinations of the regular and the irregular"* (Valéry, 1956:74).

Chapter six examined the notion that syncretism may hold the key to the creative process.[38] Indeed, such a search for reconciliation or union of the diverse has been shown in the latter discussion of the Pedal and the Wave. The following two sections will expose the outworkings of the ideas about the jointing inherent in harmony, and the related notion of symphony, further examining jointing mechanisms (*harmoi*) in the creative journey to Sibelius' symphonic unity of *Seventh Symphony* (1924) and the profound manifestation of *Leistungsform* in Aalto's *Baker House Dormitory* (1946-9). To this end it is helpful to explain the notion of symphony.

JOINING TOGETHER, SOUNDING TOGETHER

> *"[...] the making concordant of the discordant."* (Philolaos' Diels, n32:B12)

'Sym-' derives from the Greek συμ (*sum)*, an assimilated form of συν (*sun,* with). The Greek word συμφωνια (*symphonia,* sounding together) derives from συμφωνος(*symphonos*) meaning harmonious.

Sumphonos (harmonious) and *harmonia* include a notion of back-turning, of "mutual adjustment" of parts in the forging of a balance of consonance and dissonance, together illustrating *logos* (Heraclitus, frag. 51; Hussey, 1972:44-7). It is important to recall that neither

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[38] To recall, syncretism is rooted in the Greek συγκρητισμος (*sunkretismos*), meaning an attempt to find union or reconciliation of diverse or opposite tenets or practices (Brown, 1993:3188).

for Heraclitus nor any other Greeks, were self-moving systems law-like in their behaviour. After all, *Kosmos* (natural order) was the scene of a constant struggle between opposing forces (1972:47).

Sumphonia (parts sounding together) will be understood as parts being together, rooted in the *sumphonos* (harmonious), and it indicates a move from the suggestion of the joining disparate pieces to becoming a "means of ideal thinking" (Murtomäki, 1993:12) for which Sibelius strove, and to which end he developed the notion of the Pedal (Törne, 1937:32; Murtomäki, 1993:12). To assist in the examination of *harmonia*, *sumphonia* will be joined by another Greek word συμφυσις (*sumphusis*, growing together). Sibelius scholar Robert Layton believes that,

> "One of the most important fingerprints of Sibelius' craftsmanship is the use of apparently insignificant segments that serve to link more important thematic elements, as vital life giving motives on their own account later on" (1978:59)

Concerning the importance of such connectedness, Aalto wrote,

> "Architecture is thus a kind of super-technical creation, and the harmonisation of many disparate forms of activity is central to it." (Aalto, 1941b)

Growing Together

Elsewhere Aalto noted that, "the harmonisation of many disparate forms of activity" (1941b) is central to architecture. *Sumphusis* (growing together), from which the modern word symphysis (union of bones, such as through cartilaginous connections) has evolved, is also rooted in the Greek *sumphonos* (harmonious). *Sumphusis* signifies both a process of growing together or jointing (which was integral to Heraclitus' notion of making *harmonia*; i.e., the process of jointing), and how this was achieved, for example, in Sibelius' and Aalto's work. It will be recalled that *harmos*, the etymon of *harmonia*, means joint. It should also be noted that *sumphusis* has come to mean the union or coming together (*sum*) of bits of nature (*phusis*). This applies particularly to bones on a skeleton, or the fusion of parts surgically or naturally to form a whole.[39] Equally, *sumphusis* may be used to indicate the assimilation of a whole form from parts; i.e., parts which need each other for life. There is an important relationship between this etymology and the notion of *Leistungsform*.

In reclaiming what has become the genre specific term 'symphony', the following will seek to understand the Greek *sumphonos* (sounding together) in light of the *sumphusis* (growing together) in Aalto's architecture. Indeed, the forgoing demonstrates that *sumphusis* which suggests the coming together of tangible forms, the *harmos* (joint) of parts into a whole, and indeed with the biological analogy and the etymology of *phusis*, a whole which supports life, is etymologically close to the musical notion of *sumphonia* (parts sounding together).

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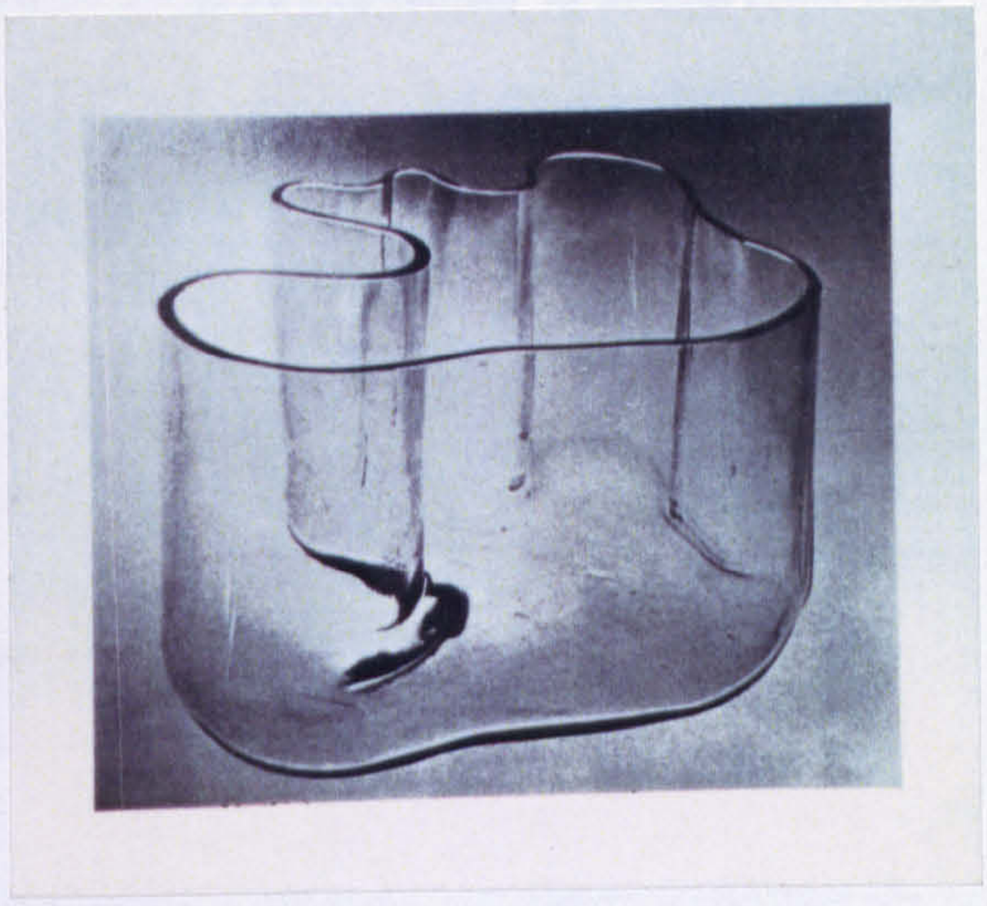
[39] There is a clear correlation with the morphological studies of Thompson and Dreisch.



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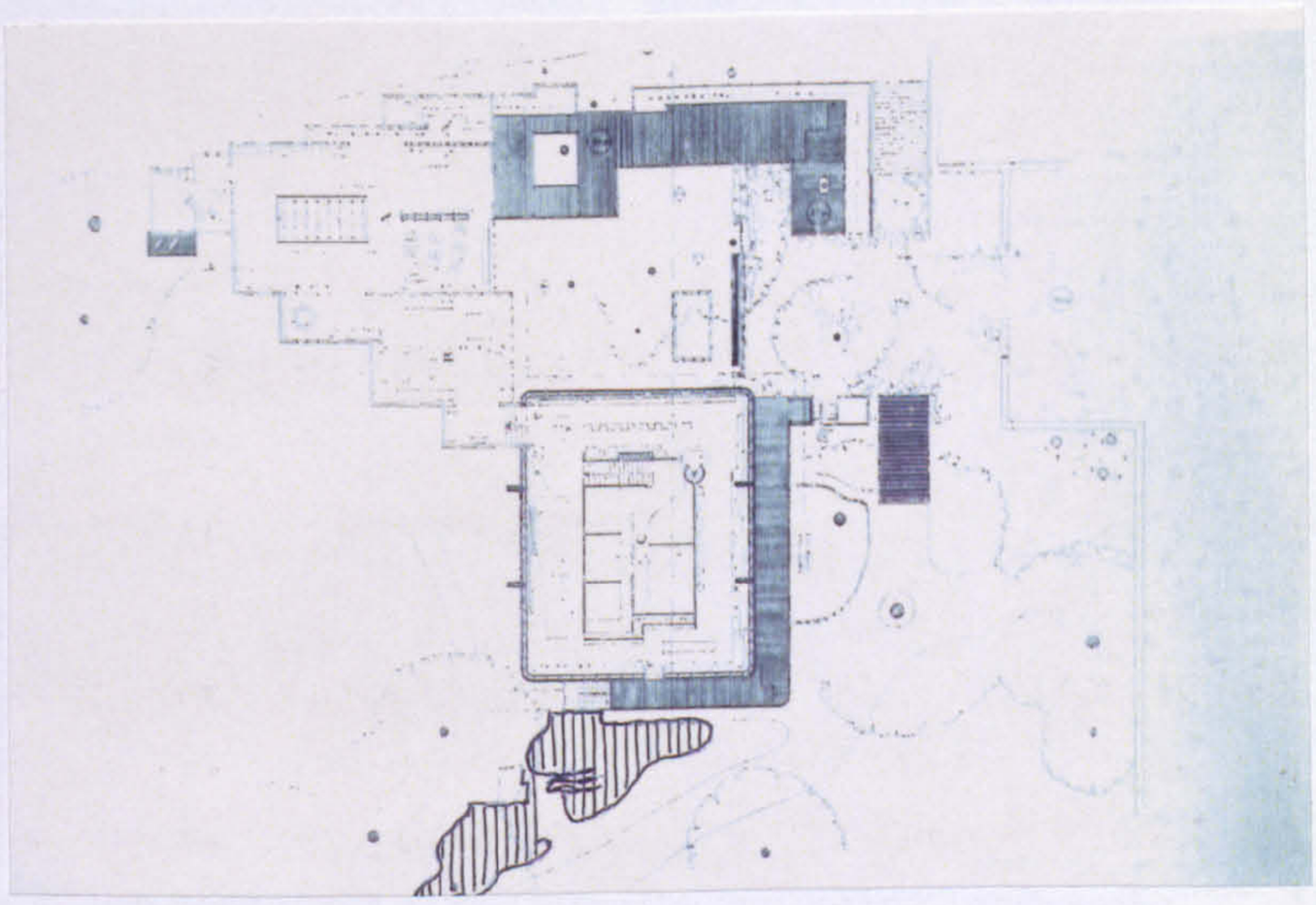

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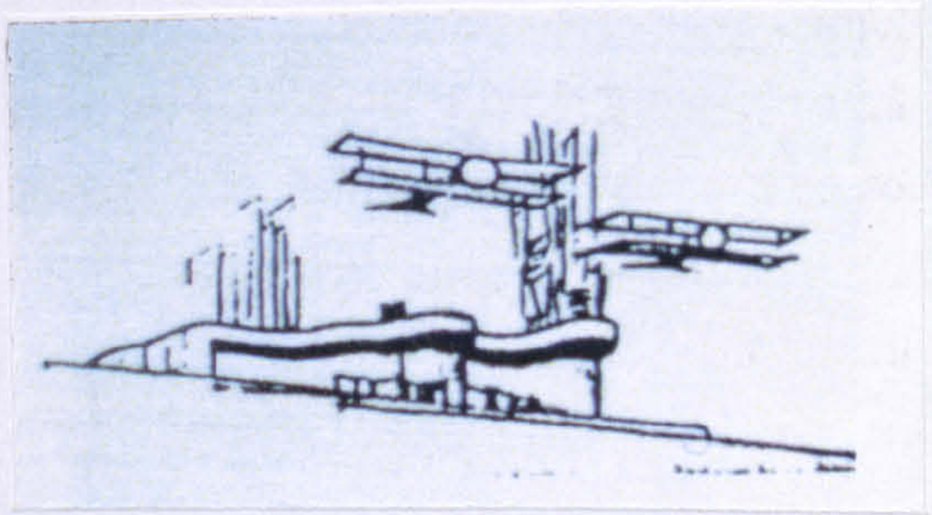

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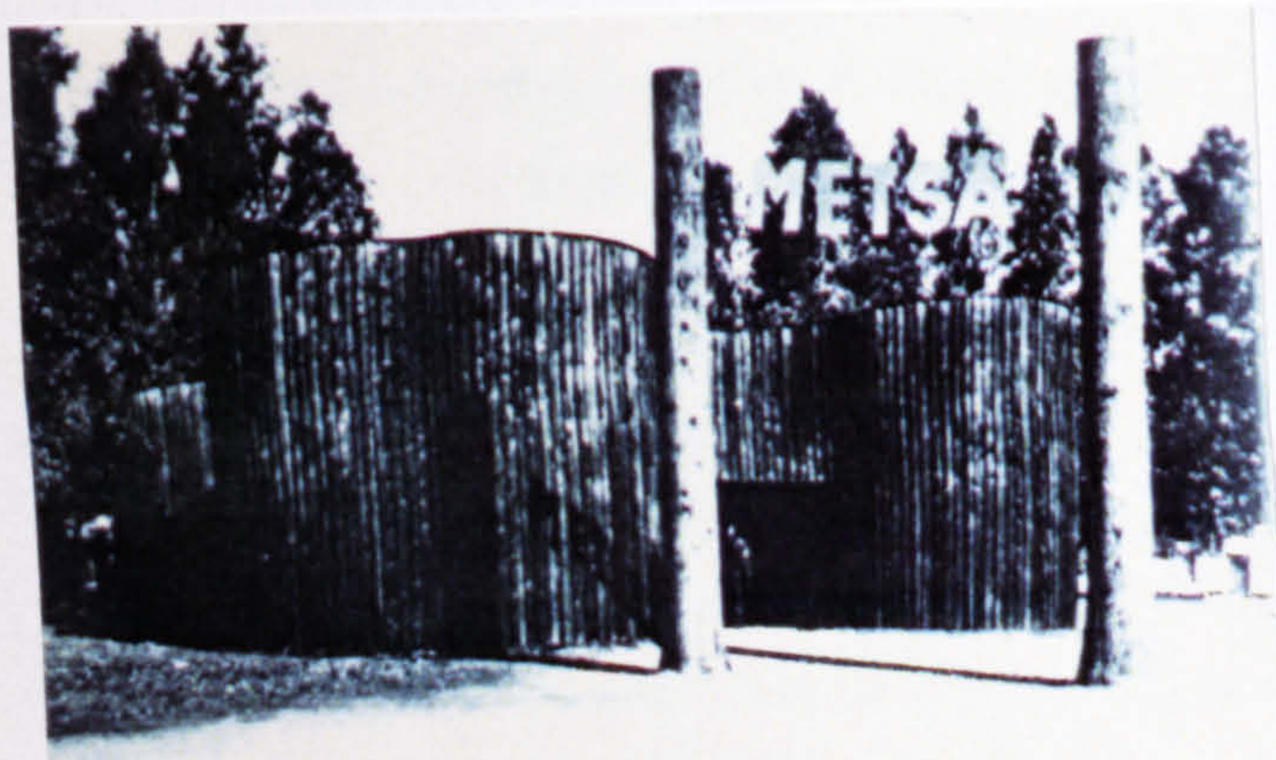
Fig.13.68 *Savoy Vase*; Aalto, 1935

Fig.13.69 Plan of *Le Bois est en Marche*, *Finnish Pavilion*, Paris World Fair, showing the undulating pond feature; Aalto 1936-7

Fig.13.70 Undulating balcony of *Tsit Tsit Pom* entry, Finnish Pavilion, Paris World Fair; Aalto, 1936



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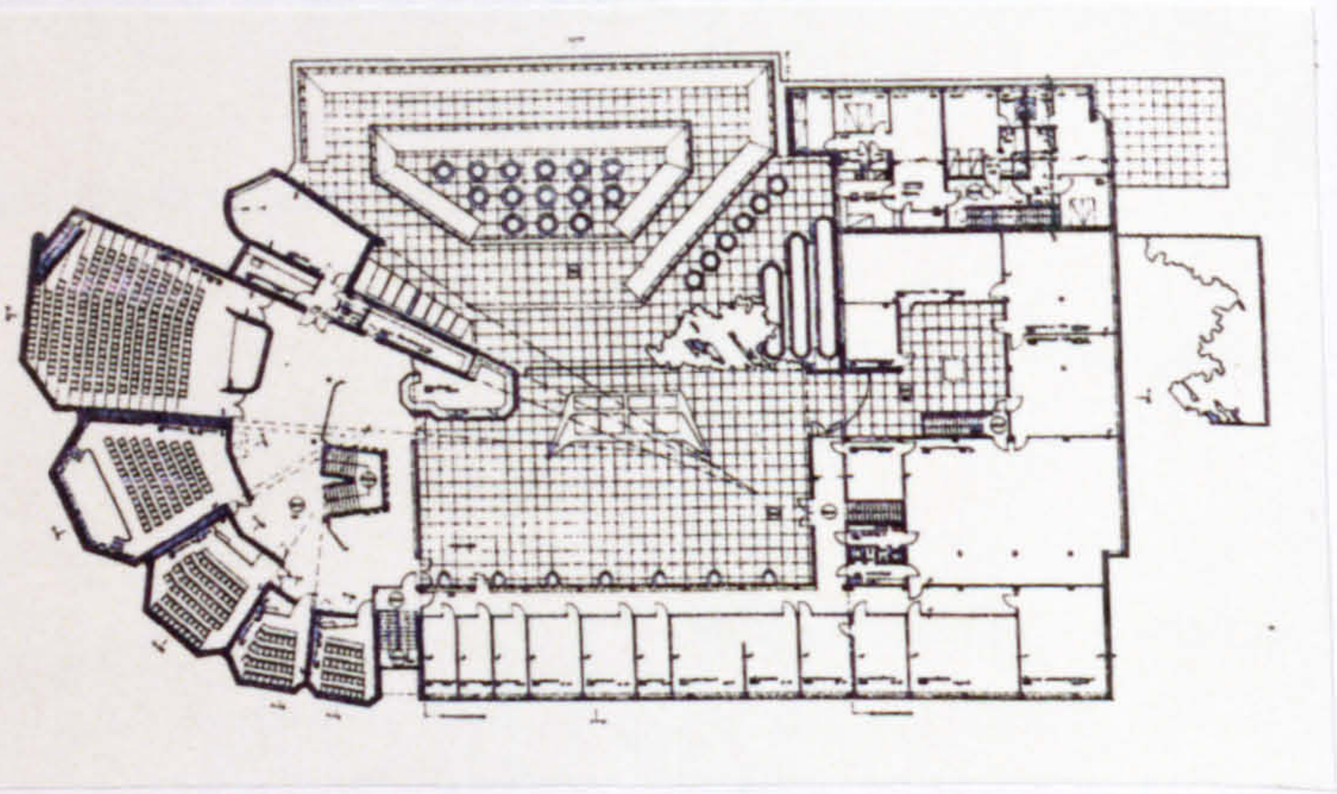

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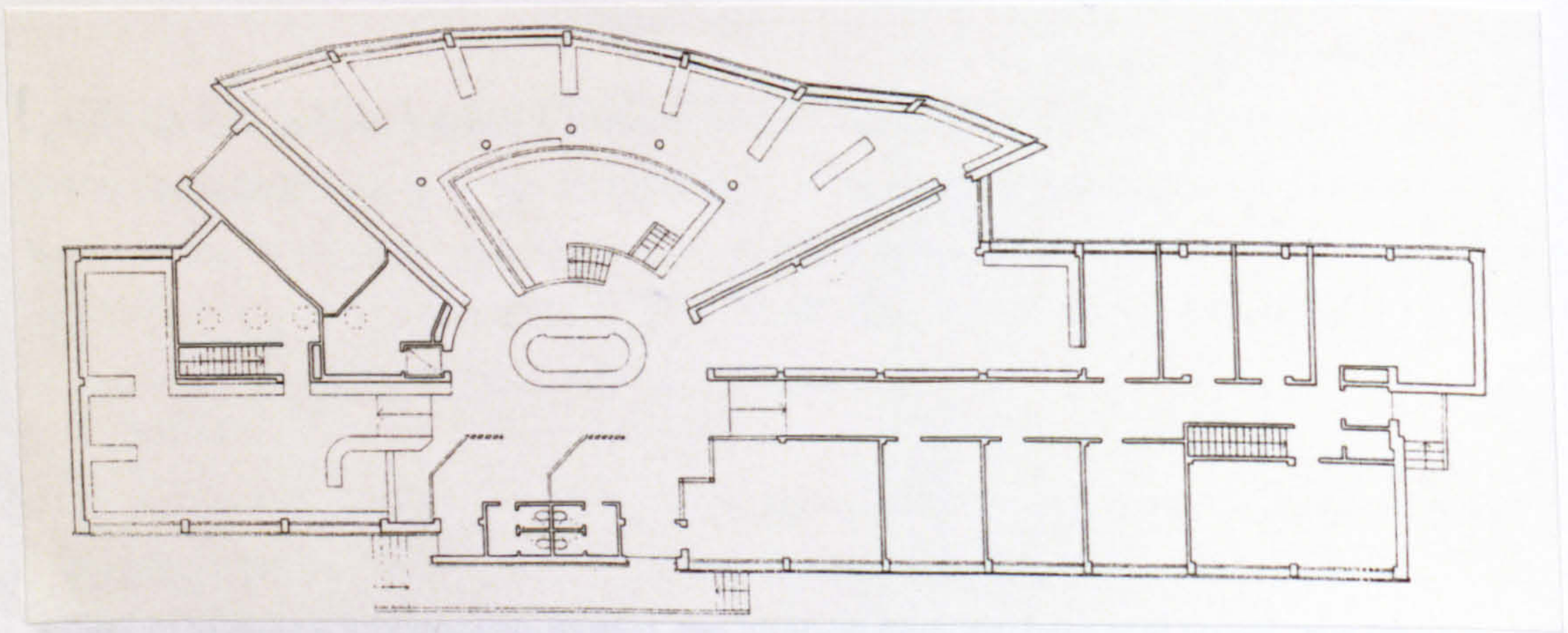

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Fig.13.71 *Forestry Pavilion* for Lapua Agricultural Exhibition; Aalto, 1938

Fig.13.72 Plan of *Wolfsburg Cultural Centre*; Aalto, 1958-62

Fig.13.73 Plan of *Seinäjoki Library*; Aalto, 1963-5

The next two sections demonstrate that both Sibelius and Aalto created unified wholes, formed from their inherent content. Their specific process of *sumphusis*, of joining parts (the process of manifesting *harmonia* of movements or distinctive spaces) will be explored after the significance of the symphonic genre (Sibelius' vehicle for such integration) is examined, and the equivalent of such formal integration which is a vital element of Aalto's work has been established. The first section will explore Sibelius' development of the *sumphonos* into the fulfilment of *harmonia* of the *Seventh* (1924), and the second will be a study of the development of *sumphusis* in the often fraught establishment of *harmonia* in the design of Aalto's *Baker House Dormitory* (1946-9).

SYMPHONIC *KOSMOS*: SIBELIUS THE SYMPHONIST

> *"This wonderful logic - let us call it God - that governs a work of art is the forcing power"* (Sibelius to Ekman, 1938:257)
>
> *"The craftsman let kosmos appear through the artefact [...] allowing kosmos to appear through making "* (McEwan, 1993:73 & 75)
>
> *"The great unity and homogeneity of colour thus obtained, in spite of the infinite variety of timbre, derive from a symphonic, that is to say, epic conception of life."* (Törne, 1937:32)

The latter explanation indicated that in the formal genre of the symphony there is a musical outworking of the search for *harmonia* which, this thesis contends, visits that which the pre-Socratics addressed.

This section will examine the relation of the *techne* (letting appear, coming to being) of Sibelius' symphonies as responding to different material, and the demands of this for different, increasingly integrated wholes; the production of *harmonia* and *sumphonia* through *sumphusis*. This section will seek to explore how Sibelius "strove" to "forge" congruence between the *élan* and the created form of the symphony to its ultimate manifestation in the *Seventh* (1924).

Since Sibelius felt that "giving the symphonies in chronological order is the best way" (26.10.1932; T3:ch.21),[40] the discussion will offer an abbreviated progress towards the zenith of Sibelius' symphonic development. Appendix twelve offers a short historical perspective of the symphony, relating the musical to the philosophical root in archaic Greece, and into the nineteenth century, allowing the argument here to launch into Sibelius' contribution to the genre, in the last years of the nineteenth century.

SUMPHONOS (SOUNDING TOGETHER): JOURNEY TO UNITY AND ORGANIC GROWTH

> *"The Greek mind has been able to see harmony in discord, to see the triumph of 'symphony' over discordant voices"* (Spitzer, 1963:9)
>
> *"[A symphony is] an orchestral work in which 'profound logic' unifies 'all the elements' "* (Lionel Pike, borrowing from Sibelius, 1978:203)

In *Symphonic Unity: The Development of Formal Thinking in the Symphonies of Sibelius* Veijo Murtomäki suggests the progress of the symphony, from a means of joining disparate pieces (a development from the suite) to a "means of ideal thinking", attracted Sibelius to the form (1993:12).

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[40] Sibelius, letter to Koussevitzky,.



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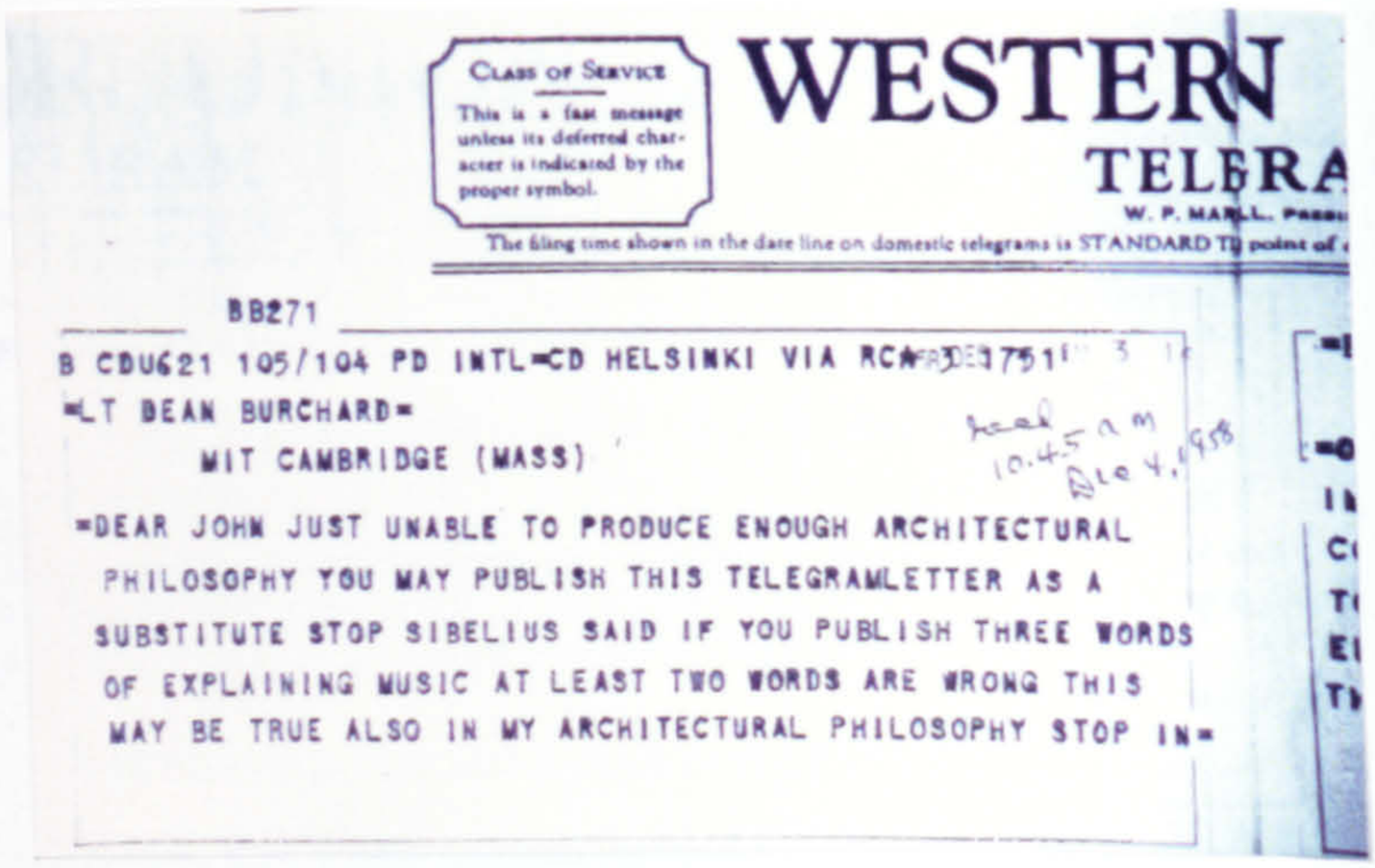
Fig.13.74 Forest in autumn



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=DEAR JOHN JUST UNABLE TO PRODUCE ENOUGH ARCHITECTURAL PHILOSOPHY YOU MAY PUBLISH THIS TELEGRAMLETTER AS A SUBSTITUTE STOP SIBELIUS SAID IF YOU PUBLISH THREE WORDS OF EXPLAINING MUSIC AT LEAST TWO WORDS ARE WRONG THIS MAY BE TRUE ALSO IN MY ARCHITECTURAL PHILOSOPHY STOP IN=

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Fig.13.75 Telegram from Aalto; 1958

Fig.13.76 National Romantic Building, Katajanokka, Helsinki

Fig.13.77 Early neo-classical *Dwelling House* , Jyväskylä; Aalto, 1923

In 1851 Wagner had announced the death of the symphony. However, this pronouncement was defied as Mahler's titanic symphonies became the culmination of romantic monumentality; i.e., the search to deal with important moral issues in the high plane of musical expression wherein various elements are dramatically fused. This achievement is in contrast to Sibelius'. Chapter four cited Sibelius' encounter with Mahler, in 1907, in which he said,

> "When our conversation touched on the essence of symphony, I said that I admired its severity and style and the profound logic that created an inner connection between all the motifs. This was the experience I had come to in composing. Mahler's opinion was just the reverse. "*Nein, die Symphonie muss sein wie die Welt. Sie muss alles unfassen.*" ("No, symphony must be like the world. It must embrace everything.") (Sibelius; Ekman, 1938:191).

It is Sibelius' experience which will be examined here.

Nineteenth century symphonic literature had two strands:- a) strong conservatism in which classical forms were continued and developed from the inside out without touching the foundations of the forms themselves, and b) imaginative reinterpretation, in which form revolutionised the pursuit of poetic and programmatic goals (Ballantine, 1983:77; Murtomäki, 1993:16; see appendix twelve).

GROWTH TOWARDS UNITY

> *"I have struck on a new path in the symphony! In fact, the path of the future."* (Sibelius, 1905.T3:39)

"Cyclic techniques", procedures which seek to bring unity in musical form, are either 'inner' (i.e., unifying material), or 'outer' (i.e., helping a piece of more than one movement appear as a whole) (Murtomäki, 1993:30).[41] 'Inner' procedures include, for example, the *idée fixe* which appears repeatedly in each movement.[42] Sometimes the cyclic technique derives from a few tone configurations, or transformations or changes of, for instance, a single theme. The most sophisticated device, however, is continuous variation; "a method of metamorphosis in which new ideas are the result of a process of transformation" (Murtomäki, 1993:30). The passage from beginning to end must involve the specific process unique to the work. 'Outer' techniques may include the *attacca* joining of two movements without a pause, or their flowing integration. The connection of movements into a single continuous entity, either through bridge passages or Liszt's 'many movements in one' form in which the fusion is solid but can be clearly defined, comprises arbitrary and obvious joining, not something natural and organic (Murtomäki, 1993:31).

Beyond these formal integrations Gerald Abraham discerned "fusion form", defined as the organic, indivisible, higher level unity of two or more movements (1947:22). Here the unifying procedures have resulted in a new form. Although Carl Nielsen achieved some fusion form in his *Fifth Symphony*, Sibelius went on to create what has been identified as the "single

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[41] Traditionally this meant that material from preceding movements was gathered into the finale.

[42] For example the idée fixe in Beethoven's *"Symphony of Fate"*, Liszt's *Faust Symphony*, and Berlioz' *Symphonie Fantastique*.

complete organism" of the *Seventh* (1924) (Abraham, 1947:35); "a masterly consummation of the unifying aspirations of the nineteenth century symphony" (Murtomäki, 1993:292).

"A PROFOUND RELATIONSHIP TO GERMS":[43] A JOURNEY TO THE SEVENTH

"Symphonic art constituted the primary focus of Sibelius' creative work" (Kozhenova, 1995:98)

It is apparent that while studying in Vienna, in 1890, Sibelius' aim was "to create something new, a kind of suite or rather symphony" (T1:88). Indeed, this thesis suggests that this virtually assumed the role of a belief system for Sibelius. He has had his critics, most famously Johnson (1960) and Adorno (1966), but also lesser known commentators, such as those who found "a seeming lack of logic" (Barry, 1966)[44] and who felt the "ambiguities" could lead the music to "fall apart" (Austin, 1966:97). Yet, most other scholars identify his role as developer of symphonic form (e.g., Abraham, 1947; Murtomäki, 1993), and Parmet even describes him as a "renovator" of symphonic form (1959:viii).

As Aalto believed the truth is in building not talk (fig.13.75), so Sibelius did "not wish to give a reasoned exposition of the essence of symphony. I have done that in my works," continuing that, "the directly symphonic is the compelling vein that goes through the whole" (Ekman, 1938:234). It is this "compelling vein" which will be outlined here through the development of both his cyclic techniques and fusion form, which facilitated the coming together of elements into the symphony, and which compare with Aalto's arrangement of forms into a whole.

FUSING FORM : "A STRANGE PASSION"[45]

"[...] I admired its severity and style and the profound logic that created an inner connection between all the motifs" (Sibelius to Mahler, 1907; Ekman, 1938:191)

This section will abbreviate the progress towards the total fusion form of the *Seventh*, indicating how the content "forged" the form; 'what the thing wants to be' - *Leistungsform* (Häring, 1926).

National Enthusiasm

Sibelius' early symphonies were "still a part of the late romantic tradition." (Murtomäki, 1993:285) (fig.13.76 & 13.77). However, demonstrating himself to be "something infinitely more than a folk-song nationalist" (Meyer, 1936:68), the *First* (1899) has elements of "the pregnant, detached phrases" which comprise the main theme, and which 'grows' organically out of the introduction" (T1:65); "kernel structure technique" (Salmenhaara, 1979:126-7).

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[43] Gunnar Sundberg (1990).

[44] Cited, without page reference, in Jordan (1984:4).

[45] Sibelius, diary entry, 23 June, 1920. (T3:chap.12).

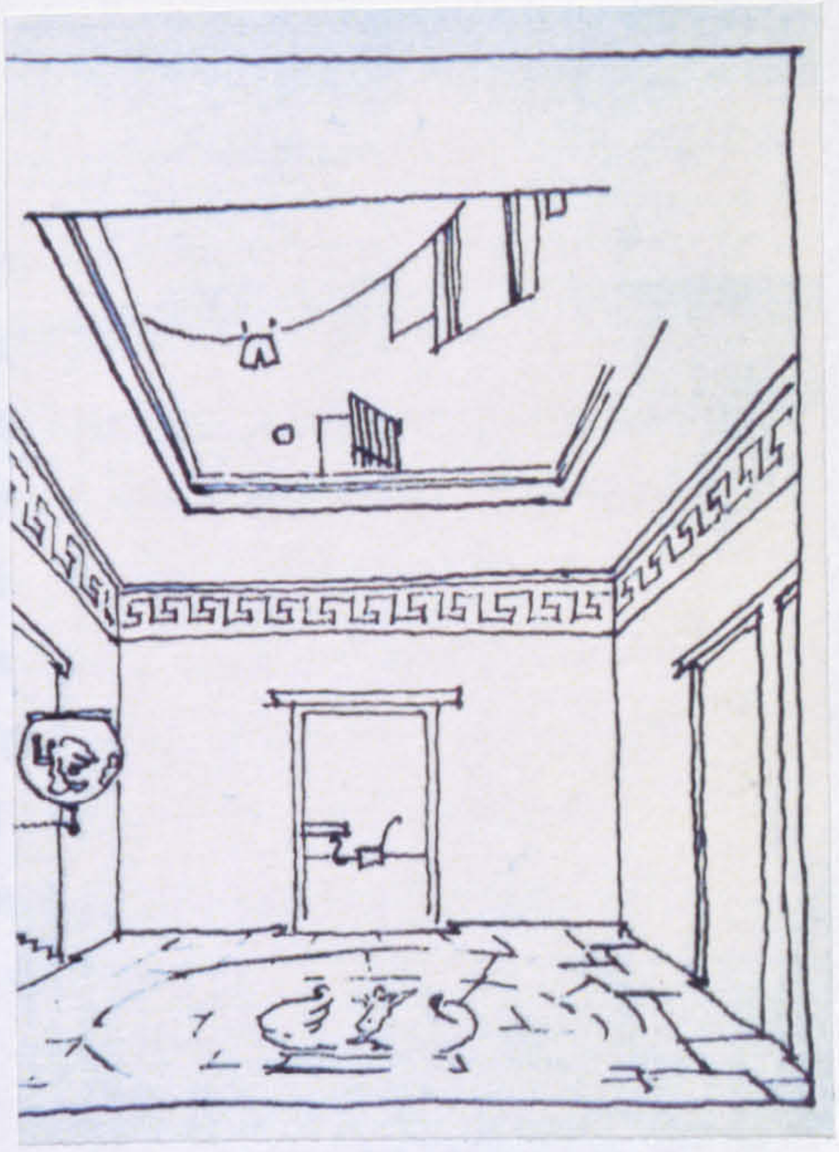

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Fig.13.78 Design sketch of *Atrium house* for Aalto's brother; Aalto, 1925

Fig.13.79 Midnight sun, Kareila

Fig.13.80 Growth of a pine branch



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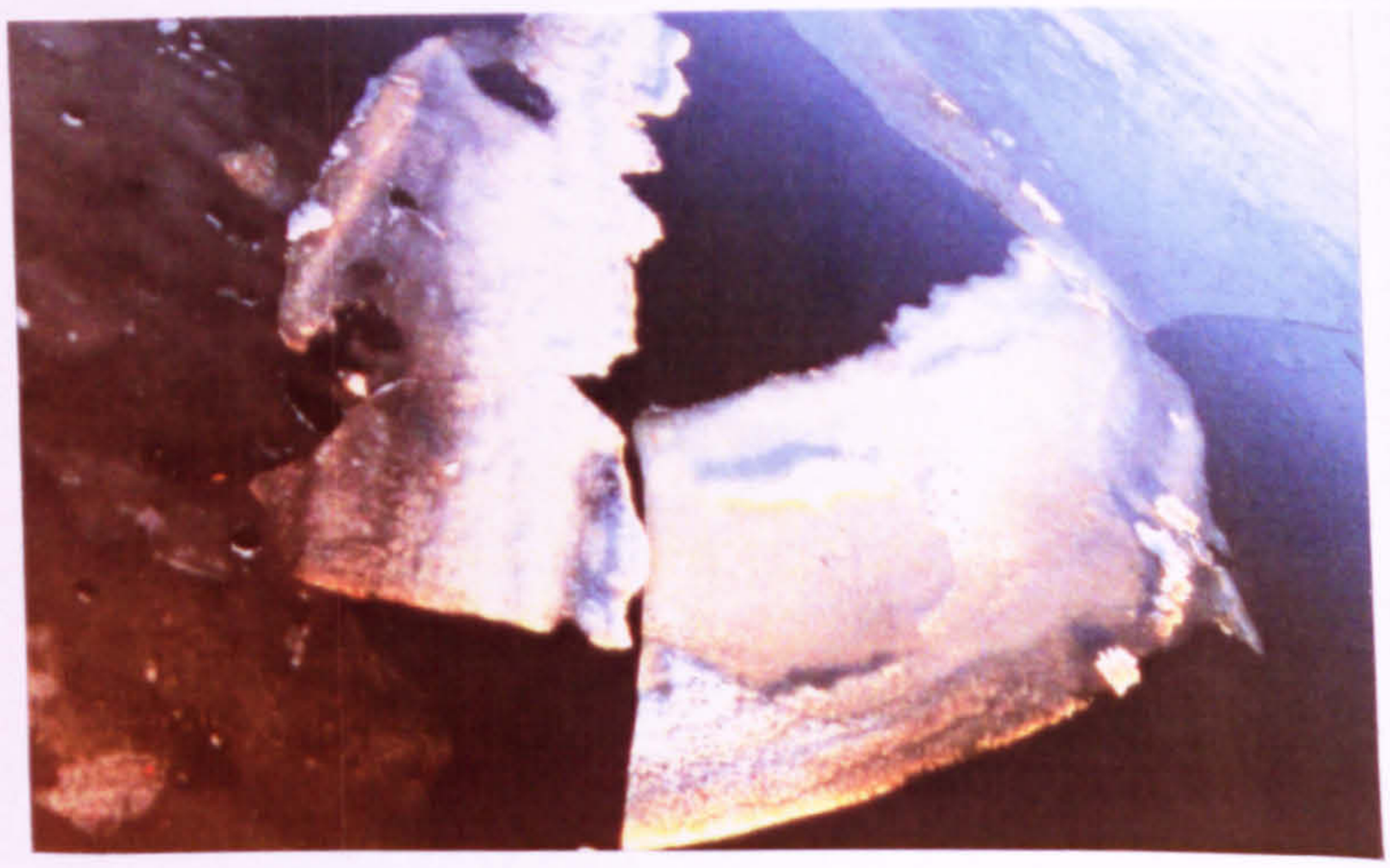

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Fig.13.81 Entrance to *Viipuri Library*; Aalto, 1927-35

Fig.13.82 Ice breaking

Fig.13.83 Male fern

Towards Unity

The *Second* (1901-2) exhibits romantic exhaustion, leaving the trace of "a decisive step towards a more classical style" (Murtomäki, 1993:286) (fig.13.78), given substance by Sibelius' continued admiration for Mozart's "wonderful unity and homogeneity [...] like an uninterrupted flowing" (Sibelius; Törne, 1937:48-9) (fig.13.79). Inherent in this was a procedure of integration which has been described as a "synthetic principle [...] this growing and binding together" (Collins, 1962:239). This concurs with an argument of this thesis, namely that such unity and homogeneity may be generated from innumerable small elements. In his early symphonies Sibelius experiments with the intricacies of transition and relation of musical elements, learning the art of *logos* and deepening his classicism through personalising the symphonic genre.

Classical Concision

In June 1904, Sibelius wrote to Carpelan that his "inner self is in the grip of change", beginning his increasingly organic manner of "welding movements together" in the *Third Symphony* (1904-7) (Murtomäki, 1993:59) (fig.13.80).[46] The attempt "to distil the essence of a single key" in the *Third* was fully manifest later (Goss, 1995:49), in the C-centred *Seventh* (1924). Sibelian classicism had emerged in its own form, inherent in which was the growth and concomitant integration of form; close to, but not isomorphic with what was to be Busoni's *junge Klassizität.*

Modern Classicism

It can be argued that there was psychological *sumphusis* in the *Fourth* (1911); "Sibelius' most modern work [...] almost early classical" (Murtomäki, 1993:288) (fig.13.81).

Significantly, Sibelius confessed that "I've suffered and learned much." (Ringbom, 1954:98). The correlation of these two (suffering and learning) is significant. Written during Sibelius' experience of throat cancer, some believe that what Sibelius had suffered and learned imbues the piece with "something spiritually deeper" than the "most chaste and delicate work" (Frosterus, 1932); a "brooding melancholy" (Ringbom, 1954:109). Compression of symphonic structure, modern tonality and thorough classical discipline were to meet in the aphoristic form and language of the *Fourth*, the formal structure of which is as elusive as the *Third's* was clear.

Despite analytical dialogue, the *Fourth* is considered to be the absolute peak of Sibelius' oeuvre (Lambert, 1985:276; Abraham, 1947:25; Murtomäki, 1993:85) and the epitome of the Sibelian ethic and aesthetic (Burnett-James, 1989:67) (fig.13.82; tape e.g., 51). What *Kullervo* (1892) was in one symphonic direction the *Fourth* was to be in another. The exuberance of

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[46] The key features of the *Third* (1904-7) have been discerned to be; concentration of form, reduction of size and number of movements, concentration of expression, de-romanticisation of orchestral sound, activation of rhythmic element and reduced orchestral size (T2:66-67).

nineteenth century romanticism and national enthusiasm had turned to the preponderance of existential vulnerability, epitomised by the tri-tone (the interval of the augmented fourth) as a motive capable of facilitating the "logical development of his art from the inside" (Burnett-James, 1989:67), and of bringing a "unity of mood" to the different movements (Ringbom, 1954:112) which mused on the '*lack*' and the '*gap*'. Having "overstepped the boundaries dictated by sound" (Klemetti; T2:170) Sibelius then stepped back, to become preoccupied with universalising classicism; i.e., what in 1914 Sibelius saw as "the directly symphonic [...] the compelling vein that goes through the whole." (Ekman, 1938:234).

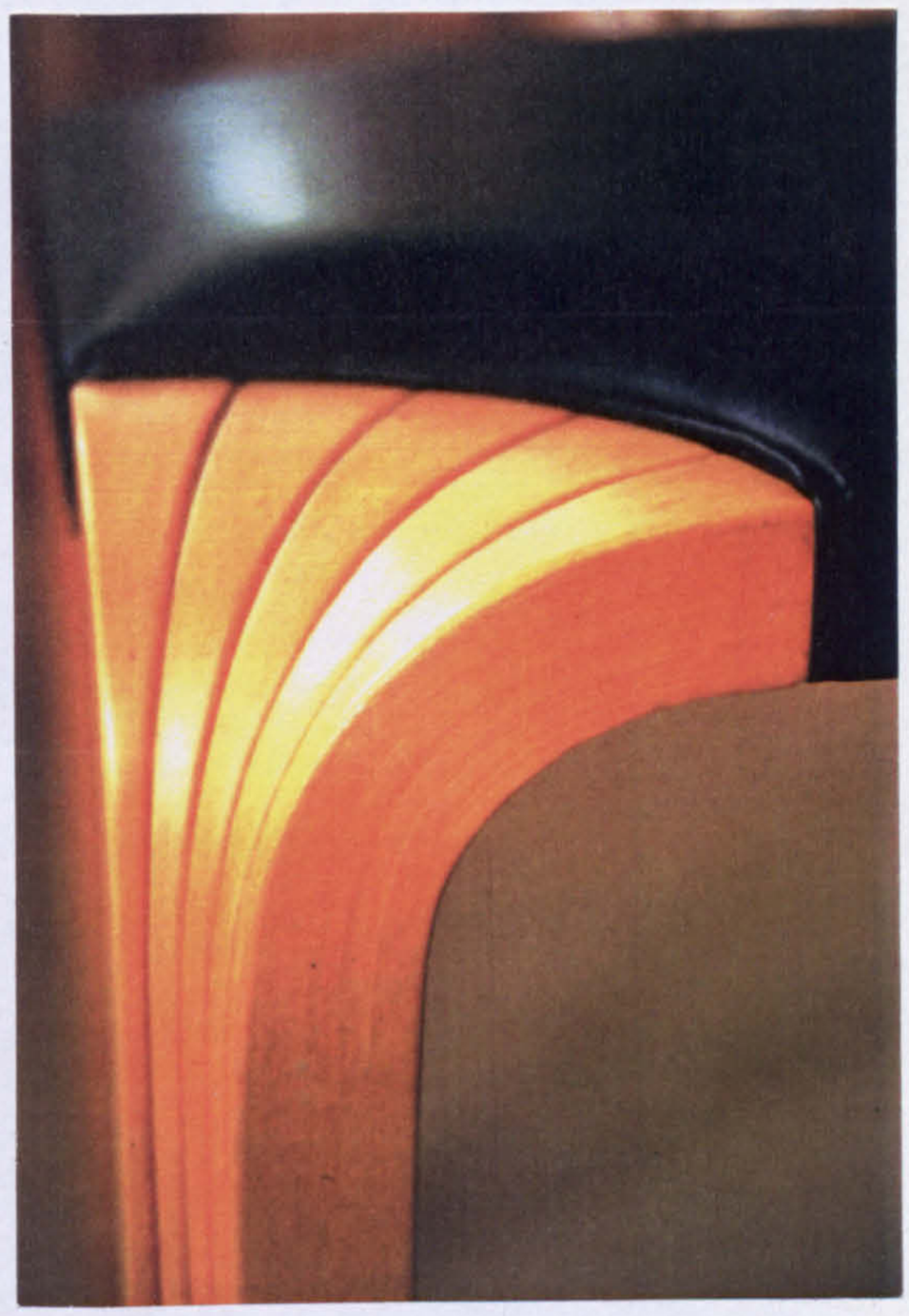
Feeling Fusion Form

The *Fifth* (1915, 1916, 1919) demonstrates both the large scale fusion of movements and smaller cyclic techniques in which there was, for example, "the creation of a material continuum from the "embryo" of the opening in the horns to the conclusion" (Murtomäki, 1993:290) (fig.13.83). This demonstrated that the more classical Sibelius' symphonic path, the more growth to fusion and concision there was; distillation towards the 'pure spring water' discussed in chapter four (fig.13.84).

Sibelius sought to escape the external situation of the crumbling of the Russian Empire; "If I could only get away from it all" (Ringbom, 1954:140). Indeed, to some extent he did escape. As chapter nine recalled, his diaries attest that he was turning increasingly to nature at this time.

In the work the harmony becomes linear, in multiple instrumental lines, enhancing the idea of motion and constant change as the essential character of the music. Closely connected to this is the development of the "step impulse" and the "pendulum impulse" (tape e.g., 52). Tawaststjerna suggests that it is "probably possible" to divide all the themes into those which swing and those which move forward mainly stepwise or in a wave-like fashion (T3:ch.1). Sibelius described to Carpelan how such ideas built "the Whole" towards "a vital climax" at the end (i.e., the *telos*, goal) (20.5.1918; Johnson, 1960:146). Such organic elements led one scholar to go as far as to describe the "bucolic signal" which opens the symphony as a rhythmic, melodic and harmonic "embryo" from which the circling motions begin (Gefors, 1975:3), while Hepakoski refers to this kernel as a 'swinging theme' (1993:35-7). With the pure diatonicism this motion is a further step towards symphonic unity, demonstrating Sibelius to be one of the only symphonists who dared base his musical language on the most "primitive" elementary forces and their potential.[47] In this Sibelius may be said to be more 'classical' than Beethoven (Murtomäki, 1993:150).

[47] Shostokovish was another such symphonic composer.



13.84



13.85

Fig.13.84 Fan-shaped chair leg; Aalto, 1954

Fig.13.85 Detail of wood-slat clad columns, Villa Mairea; Aalto, 1936-9



13.86



13.87

Fig.13.86 Detail of elements comprsisng the Sibelius Monument

Fig.13.87 Ice crystals

Sibelius experienced a sense of relief through the creation of such formal fusion. On 17 September 1914, he wrote "Sym.5 is beginning to grow. Wonderful day."(T3:ch.1). He was adamant that the *Fifth* was "based [...] on inspiration [and] has nothing to do with the conventional kind of composing" (19.9.1914; T3:ch.1). A key to the work is a confession written during the long years of the *Fifth's* gestation; "As usual, I am a slave to my themes and submit to their demands" (Sibelius; Ekman, 1938:256). Sibelius revised the work twice "with a view to still greater concentration in form and content" (Ringbom, 1954:135). Interestingly, concerning the *Fifth,* Sibelius wrote, "I wonder whether this name 'symphony' has done more harm than good to my symphonies. I'm really planning to let my inner being - my fantasy - speak."(18.10.1914; T3:ch.1). The thematic disposition was a pattern or *paradeigma* formed by the embryonic elements of the mosaic which Sibelius believed was thrown down by "God the Father" "with all its mystery and fascination" for him to assemble ("Perhaps that is a good definition of composition - or not?"; 10.4.1915; T3:ch.2).

This thesis contends that it is through such a process of "divine" - artistic work (i.e., "that wonderful logic -(let us call it God)";Sibelius; T2:129-30) Sibelius did very important psychological work, and which can be identified for the first time in a single unifying element.[48] Indeed, in seeking to concentrate on his "inner life" (his "real work"- Sibelius; T3;ch.19) Sibelius music increased in concentration, becoming "restricted, almost truncated [in] form [...] aphoristic" (Parmet, 1957:71).

Revisiting the Ancients

Sibelius penultimate symphonic expression was one of ascetic, almost abstract purity and sensibility, and was even closer to the classical ideal (fig.13.85). In the *Sixth* (1923) "the luminous and refined use of harmony and melody are like modern Mozart and the polyphonic structure is exceptionally strong" (Seymer; T3:ch.15). Chapter three examined Sibelius' interest in the runic modality of the Finnish runes, and as chapter four indicated the work of Palestrina and Monteverdi had tutored Sibelius in his discernment of the "classical ideal"; i.e., "the manifoldness of the universe is brought to unity" (Spitzer, 1963:46). As the *Fifth* was imbued with modernisation of this into orchestral polyphony (Murtomäki, 1993:144),[49] so the *Sixth* was an "ascetic, crystalline ode, so curiously akin to the later works of Palestrina." (Törne, 1937:48) (fig. 13.86; tape e.g., 53). Both symphonies repeat his unconventional application of a given traditional form, and are a "pronounced departure from traditional architectural schemes" (Hepakoski, 1993:40). Sibelius was excited by polyphony built "more on linear rather than harmonic foundations." (25.2.1923; T3:ch.15). However, the philosophical progression of his desire to "forge" unity, which Tawaststjerna describes as Sibelius' "intuitive vision of the whole" (T3:ch.2), continued through such desire to relate the past to the present

[48] In the fusion of the concluding theme of the first movement with the "bucolic", "embryo" theme gives birth to the "pendulum" theme, the full manifestation of which happens only in the last movement.

[49] This was based on the interpenetration of textures, tempi and rhythmic characteristics .

through such "tonal archaism" (Ingman, 1965:33); i.e., the problem was how to replace the tensions of a major minor system with the "organic growth" offered by the use of modes (Murtomäki, 1993:197).[50]

Importantly, Pike indicates that modality was used not only to give harmonic and melodic piquancy, but to unify the work (1978:189). Chapter twelve indicated that many commentators believe that the unity of the symphony rests on the organic treatment of a kernel-motif of some sort (Gray, 1935:57; Pike, 1978:200; Cherniavsky, 1942:2; Parmet, 1959:95). Tawaststjerna, Gray and Murtomäki argue that the root of the *Sixth* is, "a certain stepwise motive in authentic Dorian mode" (Sw.T4:151; Murtomäki, 1993:198). It was this that Gray felt to be the coldest and purest water from the Sibelian fountain (1934:56).

In 1914 Carpelan had advised Sibelius to "Follow your own star and stick to the symphonic path" (30.7.1914; T3:ch.1). Sibelius had written that "the title 'symphony' is a defect for this kind of composition; but - since they are - really are symphonies. The concept must be expanded. At least I have contributed to this effect." (18.10.1914; Sw.T4:26). Sibelius was aware that here he stepped across the boundary of the conventionally symphonic.

THE SEVENTH: A "HELLENIC RONDO" AS SOURCE OF THE INNER SONG

"[...] in its degree of organic integration and the subtlety of its thematic metamorphosis, the Seventh stands right at the peak of the symphonic tradition." (Layton, 1970:77)

"[...] the ideal symphonic form" (Murtomäki, 1993:241)

The development of Sibelius' symphonic thinking finds its zenith in the *Seventh* (1924). This piece, initially known as *Fantasia sinfonica*, confounded formal description with its single movement form which offered no programme, being the "logical conclusion of the initial vision" (Murtomäki, 1993:293), wherein "absolute, bare logic" and "the capacity for developing and unifying musical ideas without introducing any merely ornamental loose ends" (Sergent, 1962:433), was the distillation of Sibelius' symphonic thought. This threat to the nineteenth century symphonic tradition was rooted in essentially classical ideas; bringing unity from dualism and diversity, "winnowing down the classical structure" to monism (Mellers, 1948:180); a truly 'classical' symphonic whole built of many, integrated parts (fig.13.87).

In his famous letter to Carpelan, written as early as 20th May 1918, Sibelius described what was to be a three movement piece, the last of which he thought of as an "Hellenic rondo"

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[50] Robert Simpson (1965:30) points out that D minor is Dorian, but the B natural has a different effect on modern ears than it would in the Renaissance, tending to "tilt" the weight towards C major. Sibelius takes full advantage of this, he believes, creating a "fascinating oscillation" between a grey Dorian D minor and a sunny C major.

(Sibelius; Ekman, 1938:255-56). To recall; "As usual, I am a slave to my themes and submit to their demands."[51] This appellation has stuck as a description of some essence of the *Seventh*.

FULL FUSION FORM: ORGANIC UNITY AS SOURCE OF THE INNER SONG?

"Sibelius' orchestration is an integral part of the form" (Lambert, 1934:262)

Form and content are fully integrated in the *Seventh*, resulting in what Salmenhaara describes as the "kernel structure technique" (1984).[52] Fusion form had reached its logical conclusion, differing radically from Marx's sonata form, yet having "truly" symphonic characteristics. While all scholars agree on the prominent, unifying role of the trombone, some have sought to fit the work into traditional forms (Gray, 1935:71; Ringbom, 1954:152-4), while others have accepted its unique nature (Downes, 1945:95), and others even find it to be "a new stage in the evolution of symphonic form", indeed being prevented from becoming a "predictable" symphony by the "Hellenic rondo" (Whittall, 1977:21). That an episode inspired in some way by the Ancients should promise the unexpected may permit its denotation as a phenomenon of 'flux'. However, maintaining his position as *agent provocateur*, Johnson claims that the supposed 'organic fusion' of the one movement form is sufficient justification for the appellation of *Fantasia sinfonica*, but perhaps not symphony (1960:163).[53]

However, Jordan lists some elements of harmony which assisted Sibelius in bringing parts together (i.e., the fusion inherent in the symphony's harmonic style) as "diatonic harmony, functional chromaticism [...] non-functional chromaticism [...] and whole-tone scale patterns" (1984:164). This "striving" to create wholes built from fewer units (movements) can be said to be countered by the nature of the musical fabric, "incessantly developing thematic cells" into completed themes (Parmet, 1957:41), which in turn produce "an 'organic' symphony in one movement; not merely a long entity in which various sections correspond to slow movement, scherzo and so on, but a single indivisible organism" (Abraham, 1947:35) (tape e.g., 54).

Although this integration is often cited, there is little in-depth examination of how "the music simply grows out of the internal inexplicable forms of the seeds" (Downes, 1956:92), where the form is "dictated by the very nature of the material chosen" (Pike, 1978:212), being simply the "correlative" of those ideas (Newman, 1932:7). This is not the place for a detailed musicological analysis. Yet it is appropriate to cite the suggestion of one scholar, that rather than being a variation on the trombone theme, the "music of the symphony springs from the

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[51] These diary notes may not relate the published *Seventh*, but to ideas related to its conception. Kari Kilpeläinen has recently studied the sketches, and finds no evidence that the *Seventh* is the outcome of the amalgamation of three such movements. Kilpeläinen (1990:68-9).

[52] In this the melodic-thematic whole grows from a fourth to a C octave and the tetrachord below it.

[53] Johnson (1960:29) cites those who dismiss Sibelius completely, referring to Adorno's vitriolic attack, (1938).

same source of inner song, the existence of which is the reason for the existence of the entire symphony" (Väisälä, 1990:202).[54] The variations of this Adagio theme, such as that of the trombones, offer a *paradeigma* (pattern) which is "sometimes clear, sometimes more veiled connections between sections." (Murtomäki, 1993:280).

Hellenic Leistungsform: *Weaving with the Threads of the Past*

Indeed, another scholar believes that the one movement form may not have been the original aim, but grew to be the solution as "a result of the way the compositional process proceeded."(Kilpeläinen, 1992:244). The symphony "follows a logical development of its own without the smallest reliance on the standardised structural devices of the ordinary symphony."(Newman, 1958:119). This "peculiar thematic weaving" (fig.13.88) is matched by the orchestration which grows from the same material, and is not applied from outside, rather "pertaining only to ideas, so that it is impossible to say which is the idea and which its clothing." (Newman, 1958:119). In other words, what Sibelius described as the "germ and fertilisation" (Sibelius, 1934; in Newman, 1958:121) of his symphonies were their whole; what Newman describes as "solely musical".

Sibelius' admiration for both Mozart's "wonderful unity and homogeneity", the "uninterrupted flowing", and Palestrina's ascetic unity through diversity may have found form in the *Seventh* in a profoundly personal, classical sense (Törne, 1937:48-9). Yet, as the foregoing explanation of classicism suggests, the interest in unity was the means of seeking to bring disparate, or multiplicitous elements together. The foregoing indicates that there was no separation between the *technikos*, the technical in art by which things are made to appear (Heidegger, 1971:159; McEwan, 1993:75), and the *eidos*, the form and idea of what that something actually is. Thus it may be said that the *Seventh Symphony* grew to be a unified form exemplifying that, as Sibelius repeatedly indicated, the content forged the form of his work; i.e., *Leistungsform*. The "Profound *Logos*" concerns the relation of elements to each other, which in turn informs the whole. Sibelius sought a *sumphonia* (sounding together) of ideas which produced a *sumphonos kosmos* (harmonious order) (fig.13.89).[55] It seems that the more personally and stylistically isolated Sibelius was, the more he turned to nature and the symphonic problem, and indeed, the more classical he became.

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[54] This is confirmed by independent studies of the sketches. Kilpeläinen (1992:221-2). Väisälä identifies an Adagio type motive found in sketches from the mid 1910's onwards, which is thought to have grown in Sibelius' musical imagination to have become "the compositional kernel point" (Kilpeläinen, 1992:242-3), of which the trombone theme is a variation.

[55] At the end of his analysis Roiha reaches utopian conclusions, suggesting that Sibelius' symphonic style guarantees the future of the symphony and of music generally (1941): a free utopian art, liberated from all norms and standards. (Huttunen, 1995).



13.88



13.89

Fig.13.88 Elevation of *Rovaniemi Theatre*; Aalto, 1966-72

Fig.13.89 Chancel of *Seinäjoki Church*; Aalto, 1952-60



13.90

Fig.13.90 Detail of *Finnish Pavilion*, New York World Fair; Aalto, 1939

FORMAL *SUMPHUSIS*: AALTO EXTENDING *TECHNIKA* INTO SPATIAL SYMPHYSIS

"The healthy soul is 'symphonic,' i.e., harmonious" (Spitzer, 1963:17)

"The house and the community should [...] be built with people's lives and need for harmony in mind." (Aalto, 1955a)

"[...] a better and more harmonious way" (Aalto, 19.8.1947)[56]

This section will examine the relation of the *techne* (coming to being) of Aalto's buildings. This will demonstrate the making of *harmonia* through *sumphusis*, through the drawing together of responses to different functions into an integrated whole.

COMPOSING *KOSMOS*

"In almost every task concerning form there are dozens, often hundreds, sometimes thousands, of different contradictory elements" (Aalto, 1955a)

Plato was responsible for shifting the emphasis from making the world appear, to the representation of *kosmos* through duplication of an immutable pattern (*paradeigma*) (McEwan, 1993). It has been suggested that there should not be a dichotomy of the practical and the cultural, but rather that the cultural is "overlaid" onto the practical functions of life, giving them particular meaning (Steadman, 1979:3). Indeed, the immediate cultural frame in which a work is made cannot easily be removed from a work without something inherent being lost.[57]

It has been suggested, herein, that Aalto sought to create "harmony" through his designs, seeing this as his primary cultural contribution, for reasons to be detailed in chapter fourteen. It is vital that such "harmony" is not overlaid onto the practical functions, but was sought at the centre of his analysis of these functions. Indeed, the preoccupation with "harmony" was addressed in a myriad of ways in each of his buildings, being linked with what Aalto called "The principle of unity"; e.g., the *sumphusis* of jointing different elements into a seeming indivisible whole, such as the *New York Finnish Pavilion* (1937-9, fig.13.90), which Aalto described as "a symphonic structure" (1937).

"The unity of a work of art stems primarily from the interdependence of its elements" (Langer, 1988:81)

Sibelius' most unified work was his penultimate piece, the *Seventh Symphony.* However, as will be demonstrated, the vital moment of unification of the foregoing ideas of "harmony" happened in the middle of Aalto's career; greatly affecting the nature of his productive output thereafter. Therefore, the vehicle for the examination will a return to *Baker House* (1946-9, fig.13.91), to evince the process of the creation of harmony during which Aalto took a

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[56] Letter to William Wurster, M.I.T. Archive.

[57] Semiotics, the study of messages, teaches that a source (e.g., a work) is encoded with a message (i.e., a sign). For C.S.Peirce a sign may be an icon, an index, or a symbol) which travels to a destination (e.g., a user), where it is decoded, and interpreted. This all occurs within a cultural frame or context which informs both the source (encoder), the message and the destination (decoder).

great leap in his production of *Leistungsform*; the movement towards the creation of a complex whole comprising disparate function-generated forms.

THE JOURNEY TO BAKER HOUSE

"Housing must be complemented by all those buildings intended for common use." (Aalto, 1966)

"The house and the community should [...] be built with people's lives and need for harmony in mind." (Aalto, 1955a)

It is clear that there was a gap between Aalto's way of being in public and in private which connotes an area of personal insecurity. The relations of the individual and community was one of the most potent 'problems' which Aalto sought to address in his work, and one which generated the most innovative and moving solutions. A key to the unfolding of this story of *Baker House* is, indeed, Aalto's mission to create building solutions which filled the gaps in the social fabric; i.e., what has been denoted as his *humanism*. He was concerned to facilitate social interaction at every turn,[58] and "to create a balance in the whole environment" and to "think of man above all." (1955a). The forms of his work are a manifestation of his synthesis of the various functions he discerned from his analysis of the brief in a manner which sought "to bring the material world in harmony with human life." (1940b). Most importantly this involved understanding "relations" between the individual and their environment (i.e., study room), and the individual and the group.

The analysis of design problems of *Baker House* demonstrates both how Aalto addressed the need for "harmony", his personal manner when this vision was challenged, and the way in which he restored the vision through synthesising the new and different parts of the whole into a built *harmonia*. This constitutes an investigation into the *Leistungsform* of the building.

DESIGN DIFFICULTIES

"At no time should the heavy hand of P.S.H be in the position of making decisions." (Wurster to Aalto, 27.5.1947)[59]

It was established in July 1946 that Aalto could not legally practise architecture in Massachusetts because the Architecture Registration Law required both registration and citizenship.[60] From this point Aalto was referred to as designer, and M.I.T. were obliged to involve a local firm (Perry Shaw and Hepburn) to undertake working drawings.[61] William Wurster, head of the Architecture School, knew P.S.H's previous work, warning vice-chancellor James Killian that he saw "difficulties ahead which come from linking together

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[58] Aalto virtually created a genre of building in his multi-cultural centres in Finland.

[59] Letters and memoranda derive from both M.I.T archive, Cambridge, and the Aalto Office Archive, Helsinki. (Copies are in each location, with additional letters between Aalto and assistants in the office archive).

[60] Memorandum to Messrs Moreland, Hamilton & Rhind, 30 .7. 1946, from the President's office.

[61] P.S.H. had been involved with M.I.T over an *Hydrodynamic Laboratory*, Sloane Building, M.I.T. Robert Dean of P.S.H indicated (pers.com.) that a college friendship between he and the then vice-chancellor, Killian, may have influenced the decision to use their firm. Kaija and Veli Paatela were sent from Aalto's office to supervise the work for the Finn, being replaced by Olav Hammerstom in February 1947.

people with different aesthetics and practical goals - it is M.I.T. which will suffer."[62] Throughout Wurster foresaw what was perhaps a microcosm of the conflict between exponents of the International style and Aalto's more personal approach. Indeed, he even warned Aalto that the "heavy hand" of P.S.H. should never "be in the position of making decisions."[63] Wurster and Aalto's assistants (the Paatelas) formed a critical barrier as they sought to stall the project until Aalto returned from Helsinki on 30 October 1946, and stayed until the beginning of December.[64] Progress was made through the winter, leading to decisions regarding the materials for the building in a meeting between Aalto, Dean and Norton in early April, before Aalto left again for Helsinki.

It was during this absence, which lasted from 20 April until 21 October 1947, that problems emerged. Aalto sought permission to undertake the interior working drawings in Helsinki, and thus lever control away from P.S.H., arguing that, "when erecting my buildings the working out of interior details has always been made this way in conjunction with (Artek)."[65] Wurster and Paatela assessed both the work of P.S.H. and Aalto, suggesting variations including the questionable idea of narrowing the corridors, and significant ones such as having a continuous view as one rises the vast back stair.[66] A press release, on 14 June 1947, announced the grant from the Alumni of $500,000, was accompanied by a memorandum form President Compton, boasting that,

> "the Institute has an exceptional. opportunity to develop the breadth of outlook [...] the hallmark of men who carry the heavy professional responsibility of a scientist and engineer" with "a fresh and forward-looking solution [...] which well-rounded men require."

Design Dissonance

A blow was struck on July 15 1947, when Compton called for the addition of some 54 bed spaces,[67] "for the cost was running up without income."[68] Wurster pleaded that the Institute should stick to the original concept of "NO DARK HALLS"[69] as agreed, but to no avail.[70] Describing a poor alternative proposal from Robert Dean, of P.S.H., Wurster comments that

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[62] Letter from Wurster to Killian, 17 .10. 1946.

[63] Letter from Wurster to Aalto, 27.5.1947.

[64] Letters and Memoranda from Wurster to the vice-president, Killian indicate his fear that Aalto's building would be another to "be reduced in stature by process."(9.10. 1946.) Killian agreed, noting that he saw "no evidence that Aalto's concept and detailed design will not be carried out as (he) would wish." (Letter, 11.10.1946). The Pattela's stayed until December.

[65] Letter from Aalto to Harris Ford, Treasurer, M.I.T. (12 .5.1947). Memorandum from Aalto to interested parties at M.I.T. and P.S.H. (12.5.1947).

[66] Conference papers of a meeting between Wurster and Paatela. 19.5.1947.

[67] The memorandum from the President's office to the solicitors, Moreland, Hamilton and Rhind, signed by the vice-president, J.R. Killian, Jr.

Schildt (GS3:123) wrongly reports this as "54 additional rooms", yet Wurster's letter to Aalto (cited above) clearly states that "54 more boys can be accommodated" going on to describe possible configurations.

[68] Letter from Wurster to Aalto, reporting meeting with President Compton. 15.7.1947. A telegram was also sent, (16.7.1947) stating the basic news of the meeting. "Compton desires added three double bed rooms and one single per floor on north side corridor eliminating library/Also three beds In living room number two on third fourth fifth and sixth floors/ Total beds added fifty four/ sketches follow by air."

[69] Letter from Wurster to Aalto, reporting meeting with President Compton. 15.7.1947.

[70] President Comptom found Wurster's defence of the concept to be "childish". Letter from Wurster to Aalto, reporting meeting with the President. 15.7.1947.

Dean, "could not join me in stressing daylighted [sic.] corridors for he never goes toward light."[71] There is a clear sense that here the very basis of Aalto's approach is challenged by P.S.H.'s ignorance and mediocrity;

> "Compton tried to make out that artificially lighted corridors are as good as daylighted ones! What confused minds."[72]

Robert Dean asked Wurster to visit his office immediately to see the "unsuccessful design" of Aalto's in model form. However, Wurster reported to Aalto that, "To me it is a strong, wonderful design."[73] He was able to postpone the decision about the rooms until Aalto's expected return to Cambridge in September, 1947.

Lecturing Aalto

In a letter and memorandum, dated 17 July 1947, Robert Dean presumed to lecture Aalto on his belief that "architecture is for the people", and that, "we have here an opportunity to greatly advance the cause of a unified architectural style in our country. We also run the risk of setting it back". He proceeds to describe architecture of historic periods as "actually repulsive in appearance", which is "the crux of the problem presented by the attempt to develop a natural and contemporary style."[74] Robert Dean goes on to state that "any good architect" must produce buildings which are moving. These are his most significant, and illuminating points, and it should be noted that Wurster described the man lecturing Aalto here as amoral, who happily jumped "from a Williamsburg restoration to pseudo-modernity".[75] Needless to say Aalto was livid. The significance of Compton's memorandum is great, suggesting all that Aalto was fighting for, and yet represents all that he was to fight against.

A CLEAN SHIRT

> *"If we are poor we should not make a mixed work and dream of architecture that is not logically perfect."* (Aalto, 13.8.1947)

The foregoing statement from Aalto is crucial. In this letter from Stockholm, from August 1947, Aalto declared his preference for a "clean shirt" rather than an "old one patched up" (see plan GS4:217). Aalto seems to have felt that his scheme was essentially threatened. Schildt describes Compton as having "torpedoed Aalto's basic idea" (GS3:123). This may be an exaggeration, since the undulation was not challenged at this stage. However, it is fair to say

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[71] To recall, the building comprises a six storey, brick undulating block, a square stone-clad dining pavilion (fig.13.91), and a cantilevered stair running from the entrance at the centre of the north side to the extremities on the top floor (fig.13.93). The undulation offers views and sun, yet it also offers a much greater degree of individual spatial identity to the 'home bases' than a rectilinear solution could.

[72] Wurster in letter to Aalto. 17.7.1947.

[73] Wurster in letter to Aalto. 17.7.1947. Dean recognised his power in showing the model to Compton, and having the whole project stopped. Wurster threatened to resign in such a case. In conversation with the author (31 July, 1985) Dean gave no impression of being against the project, rather of being a prime mover in its coming to fruition. Again Wurster made important suggestions regarding the windows on the south side, and the need for a quiet rhythm against which the pavilion would stand out.

[74] Dean also wanted a "bright, cheerful and attractive" exterior, which "has nothing to do with the concept or necessarily with the greatness of the work." 17.7.1947.

[75] Letter from Wurster to Aalto, 17.7.1947.

that the thoroughness of Aalto's ideas (i.e., for "(a)n architectural system based exclusively on the right facing of the rooms")[76] would not have been carried throughout the building. However, Aalto's position as "Top dog" had also been challenged, making it a matter of pride as much as anything: an emotion which was doubtless enhanced by Robert Dean's insulting and pretentious memo.

After some emotive exchanges, in a further letter, dated 19 August, Aalto's intellect is once again engaged;

> "I do not believe that it would be so bad, after all, to have a certain percentage of rooms facing north-west in Boston."

It is clear that he feared "a comical air in the inner system of the building". For this reason Aalto then held out for "a plainer shape" in keeping with the economics. He believed that his new sketch plan offered "a better and more harmonious way" than that of Robert Dean's. It may be said that here Aalto is seeking to prevent his concept from floundering in superficiality.

An enclosed memorandum summarised Aalto's official response. He agreed that the building should suit the economic resources of the students, since rents should cover capital costs, but he did not think the addition of rooms to the present system necessarily solved the problem,[77] feeling that, on the contrary, this would arrive at "an architectural dissonance of a very serious nature" (Aalto, 19.8.47)[78]

Summarising the principles of the original scheme, discussed in chapter twelve,[79] he continued,

> "It is not only that we will physically deteriorate the house and its principle (this we could certainly afford), but we will have an architectural patchwork which will be worse than any ordinary, banally commercial structure because the supporting logic is destroyed; a certain comical air would be the result." (Aalto, 19.8.1947)[80]

He continued that "to patch up an old system created in other conditions seldom gives a harmonious result."[81] Yet, it is as if Aalto is using the notion of harmony as a precious, untouchable goal which has been shattered, and one which simply cannot be reforged. As Wurster speculates, this may be because Aalto felt "crowded"; both creatively and in terms of the specifics of the design in hand.[82] However, despite his initial preference for a complete redesign and the dropping of the basic serpentine solution, Aalto was to come to a position in which he reforged the precarious *harmonia*, and indeed the process whereby it was re-

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[76] Letter from Aalto to Wurster, 19.8.1947.

[77] Letter from Aalto to Wurster, 13.8.1947.

[78] Memorandum from Aalto to M.I.T. 19.8.1947.

[79] These were ;-south, south-east and south-west facing rooms only; these avoiding views directly across the river; single loaded, fully naturally lit corridor; monumental staircase relating the floors.

[80] Memorandum from Aalto to M.I.T. 19.8.1947.

[81] Memorandum from Aalto to M.I.T. 19.8.1947.

[82] Letter from Wurster to Killian, vice-president. 4.8.1947.

established is extremely significant. The logic of the scheme had not been not fully destroyed, as he had feared. Rather from within had emerged a deeper logic.

HARMONIA RESTORED: HELLENIC *LEISTUNGSFORM*

> *"I managed to fit in the additional boys neatly; in fact I did it by improving the building. I found a superb trick that solved the whole problem."* (Aalto, letter to Aino, 10.1947)

However, before this moment a decision had to be made. Vice-President Killian had prepared a memo in which three options were set out as an ultimatum from Aalto.[83] The three alternatives were:- a) scrap the whole scheme and start again with a less striking, simpler design, more suited to their economic limitations, b) go ahead with the original concept without the additional bedrooms, or c) adjust the scheme to include the additional beds, with or without Aalto's approval or co-operation. A memo from Aalto indicates his decision to proceed with a changed plan; "a more simple and more common solution [...] based on diagonally (south and south-east) placed wings of building" (Aalto, 8.1947) (fig.13.102).[84]

Rather than lose control of the scheme to Robert Dean and P.S.H, and acting as go-between, Wurster had encouraged Aalto and M.I.T. in this latter course.[85] He admitted to the vice-President that;

> "Like many creative people, [Aalto] has difficulty in compromise, but he is a realist and will come along if he is given the chance to have his thought shape the compromise." (Wurster)[86]

Nevertheless, Killian persuaded P.S.H. to go ahead without Aalto's oversight in order to break ground before winter, and to avoid further delays with the concomitant financial implications. President Compton turned ground on 6 October 1947, and foundations were laid before Aalto had returned, on 21 October, to reorder the design.

Unravelling the story of *Baker House* illustrates Goethe's maxim that restrictions show up the true master. Indeed, allowing the form to arise from the content when the content has had to change, to have the patience to keep allowing the "special requirements of every task" (Häring, 1952) to form a "simultaneous solution of conflicting problems" (Aalto, 1955) demands great control and skill. St. John Wilson writes,[87] "Nothing can be left out because it is too awkward to be accommodated; each component must have its place and its identity be given due presence in the whole. This is the vitality of life itself." (1995:65)

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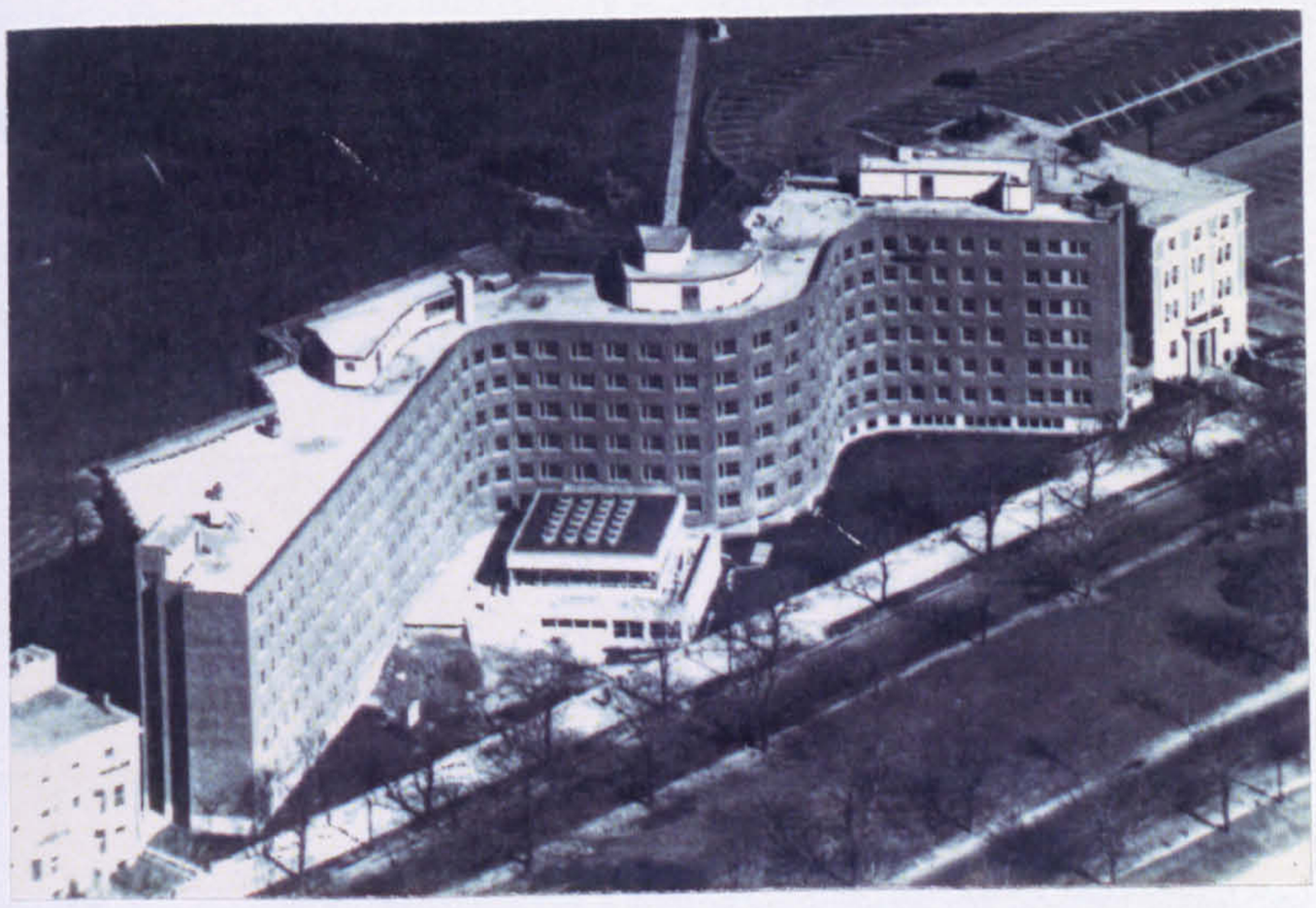
[83] Aalto's memorandum does not indicate the ultimatum in exactly this manner.

[84] Aalto's memorandum from Stockholm. 8.1947.

[85] Letters from Wurster to Killian, and to Robert Dean of P.S.H. 1947.

[86] Letters from Wurster to Killian, and to Robert Dean of P.S.H. 1947.

[87] St. John Wilson paraphrasing Paul Rudolf, *Perspecta* (7:41), no date given, see St. John Wilson, (1995.65).



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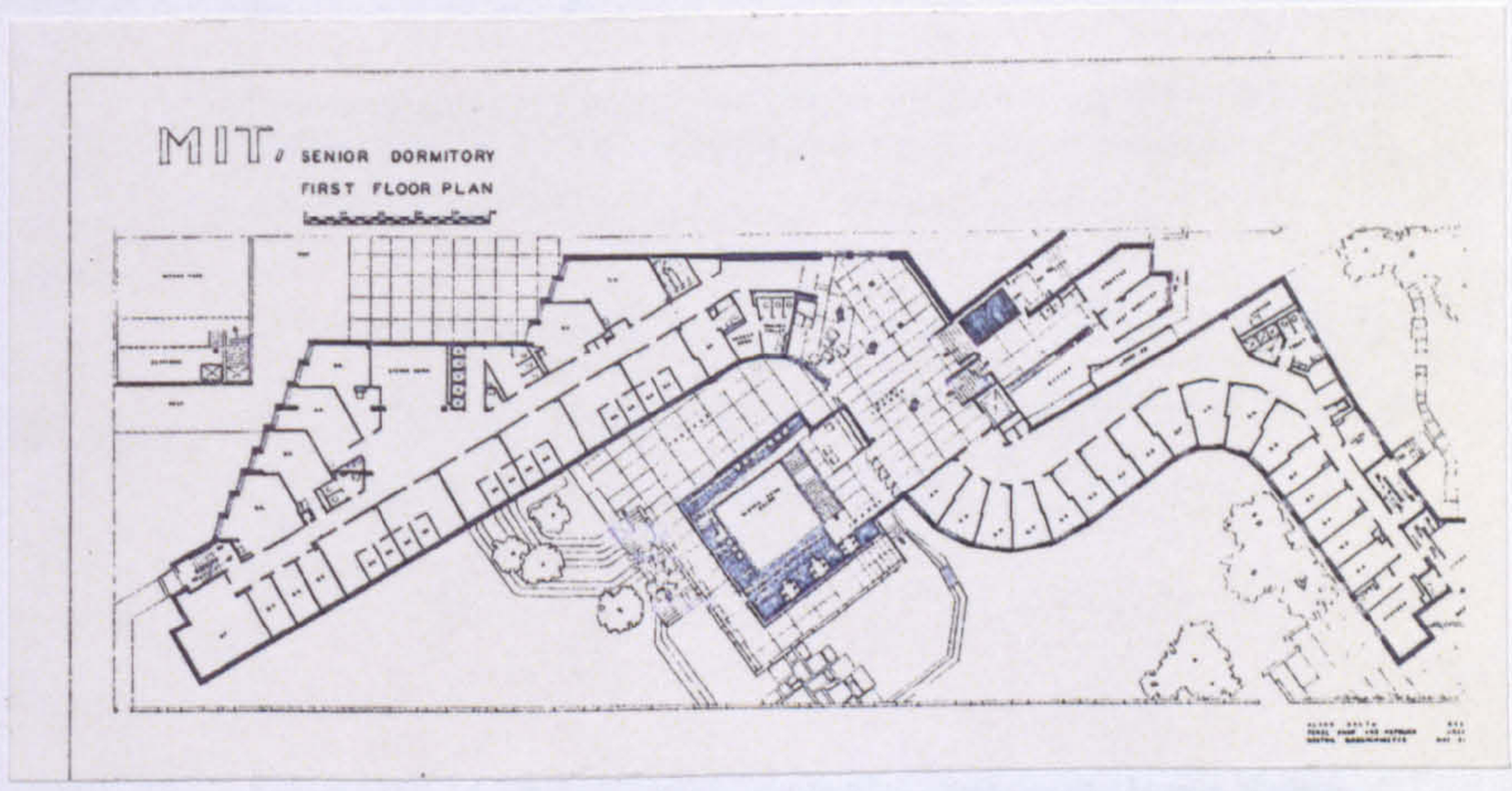

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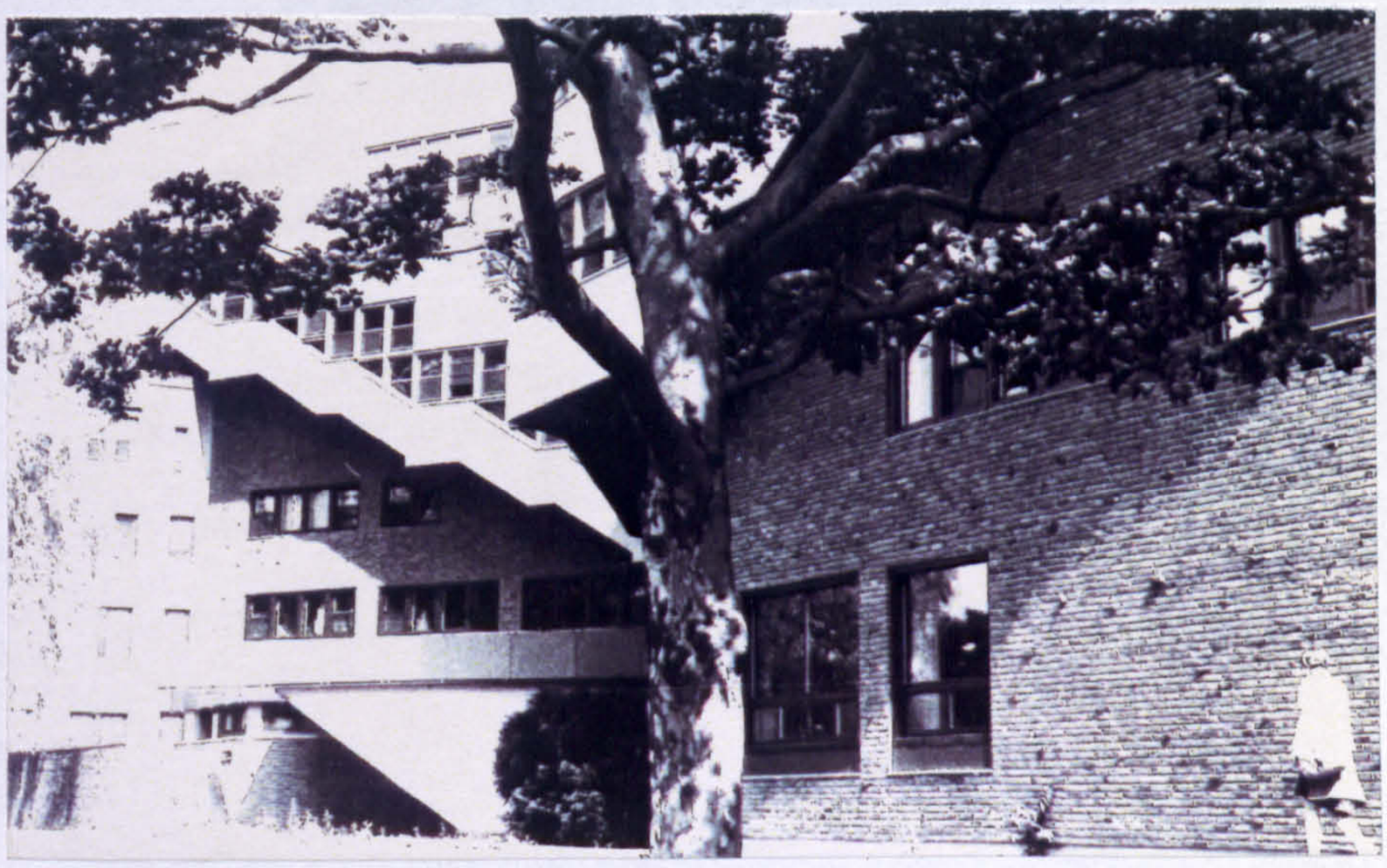

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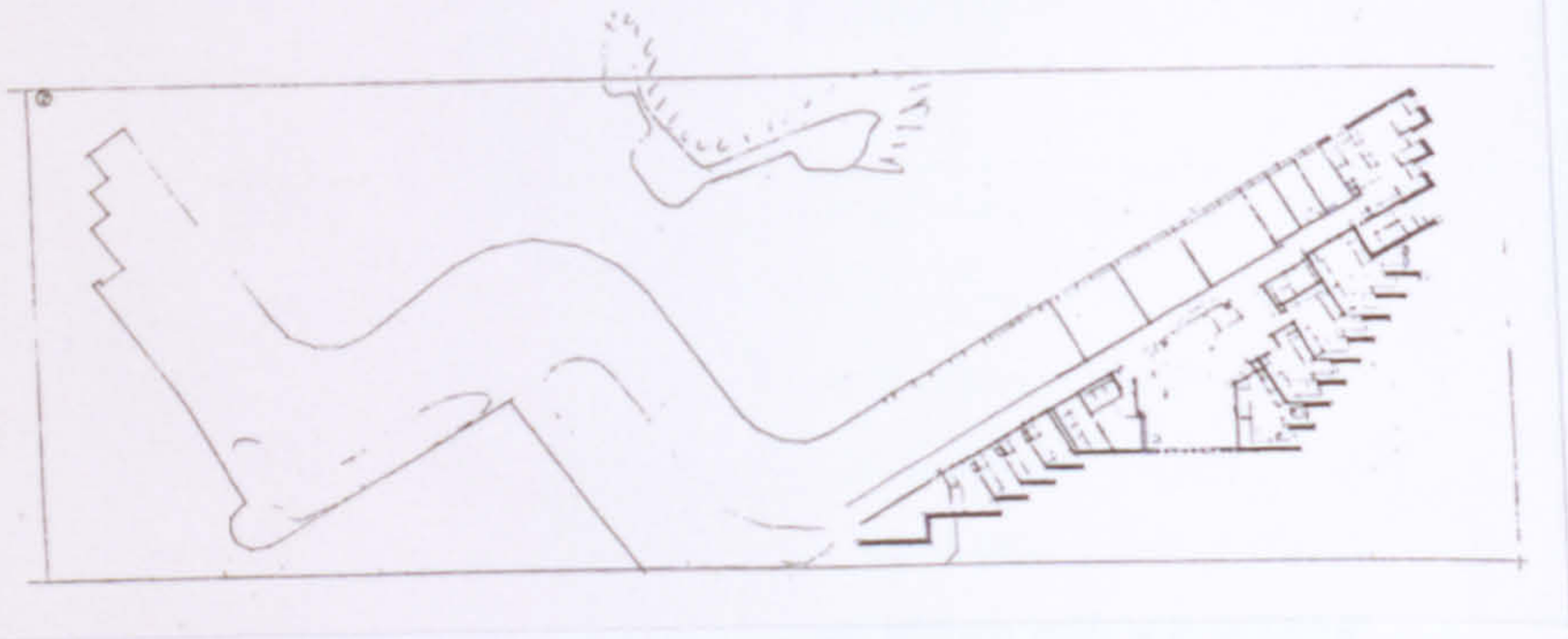
Fig.13.91 Aerial view of *Baker House Domitory*, M.I.T

Fig.13.92 Plan of first floor, *Baker House*; Aalto, 1946-9

Fig.13.93 View of bifurcating stair on north side, *Baker House*



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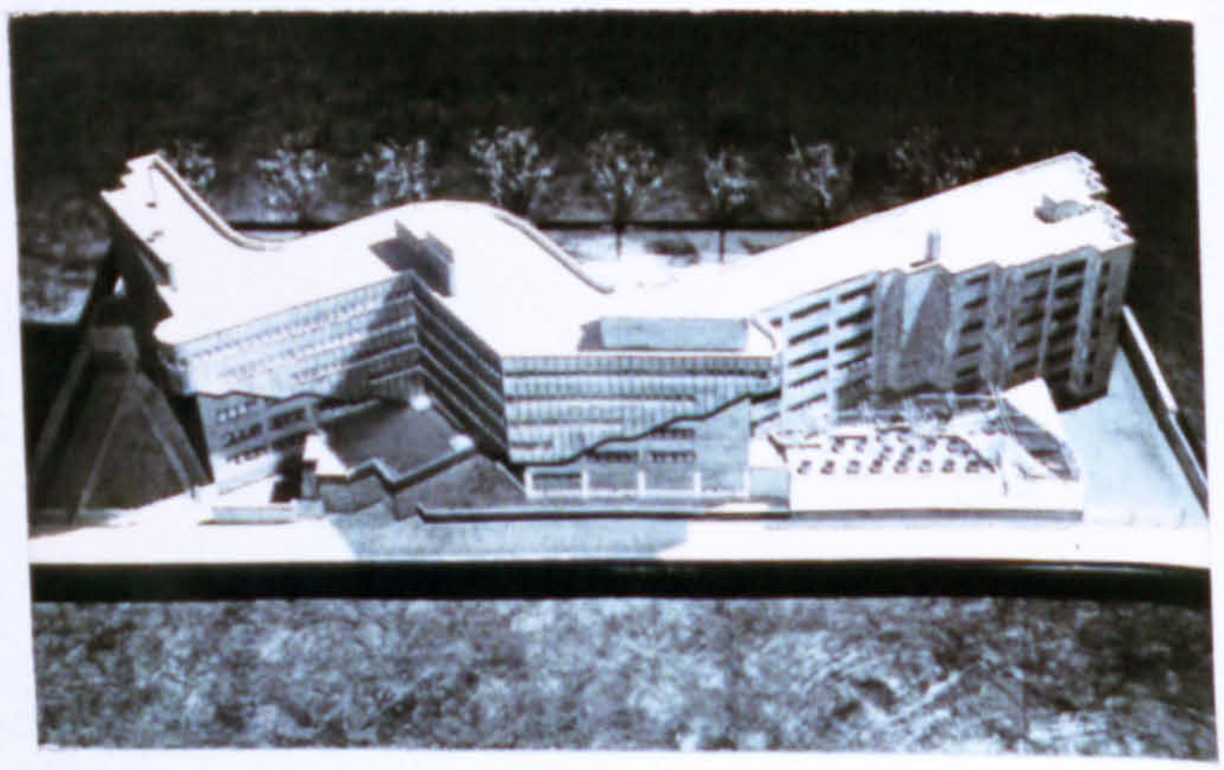

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Fig.13.94 Plan west-end alteration to *Baker House*; Aalto, November 1947

Fig.13.95 View of west-end of *Baker House*

Fig.13.96 Rear view of model of *Baker House*, showing intended metal cladding to north side; Aalto, 1947

Soon after his return, Aalto wrote to Aino;

> "I managed to fit in the additional boys neatly; in fact I did it by improving the building. I found a superb trick that solved the whole problem; will send you a sketch in my next letter. I have improved almost every part of the building; now it is really going to be good." (Aalto, 10.1947) (fig.13.94) [88]

This, again, is the confident Aalto, who has returned from the stand-offish position of August. It evinces something of the creative euphoria which Ehrenzweig elucidates (1967). Then, reminiscent of the building of *Villa Mairea*, Aalto goes on to recognise that, "It always happens that the real inspiration comes and exact forms appear only after construction has started." (Aalto, 10.1947).

The most significant alteration is credited to Aino's inspiration;

> "As for the additional rooms, it went exactly the way you thought best: keeping the basic form of the building with some improvements, but increasing the number of rooms with a stepped extension on one end, turned out best. As always, your instinct was right." (Aalto, 10.1947) (fig.13.95)

This offers a picture of Aino as the cool, sensible partner, calming Aalto's emotional reaction, and able to facilitate in him the process whereby his ability to see problems as stimulating, and not as threatening, comes to the fore, engaging in his almost primal urge to "strive" for harmony.

Organised Chaos

Aalto arrived in Cambridge again on 7 October 1948, ready to tackle some remaining design problems. However, soon after arriving, Aalto had to return to Helsinki because Aino's cancer had spread. She died in Munkkiniemi, on 13 January 1949.

Some of Aalto's few user-critics say his departure was a desertion, blaming unresolved areas of the design on his retreat.[89] In fact, a committee comprising Wurster, Robert Dean, and Hammerström, was left to oversee the design.[90] One issue which remained to be resolved was the cladding for the cantilevered stair, which Dean felt was "organised chaos", preferring a totally glazed stair to Aalto's most unorthodox of solutions (pers.com; 31.7.1985).[91] However, the irregularity of the cantilever expresses the form and function of the cascading stair (fig.13.96), the aluminium cladding of which Aalto thought would contrast with the brick of the building's mass. Aalto reluctantly agreed to ceramic tiles instead of aluminium, yet a subsequent memorandum from Killian, dated 18 November 1948, indicates that Aalto's compromise of tiles instead of aluminium was abandoned, and pinkish stucco was actually to

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[88] Letter from Aalto to Aino. 10.1947.

[89] Comments from residents of *Baker House*. July/August, 1985.

[90] Hammerström was Aalto's new assistant with P.S.H..

[91] The remaining decisions concerned the front trellis and cladding of the bifurcating cantilevered stair. In a letter to Aalto, 16 August 1948, Wurster indicates that he believed the trellis was not necessary in the inner two curves of the south facade. A memorandum from Killian (18.11.1948) indicates that Aalto's compromise of tiles instead of aluminium was abandoned, and brown-red stucco was to be used.

be used. Sadly this solution apologises in texture for its form, and is too close in colour and texture to challenge the brick, as aluminium or ceramic tiles would have done (fig.13.97).

THE BRANCH OF A PINE TREE

> *"[...] where the needles and smaller branches group more closely at the ends of the branches as an element of sun absorption."* (Aalto, 1950)

Despite having accommodated the extra rooms in the north facing lounge space, still no rooms actually faced north, although the serpentine corridors were unfortunately less light. As the curved solution was revisited in more detail in the redesign, the parts of the building facing west grew, as Aalto explained in an article in 1950, although failing to indicate that he was forced into the ingenious solution. The west wing was as "the branch of a pine tree, where the needles and smaller branches group more closely at the ends of the branches as an element of sun absorption." (Aalto, 1950:64). This is indicated in the sketches from a meeting between Wurster and Aalto in October 1947, referred to above, which were found by the author in the M.I.T. archives (fig.13.98).

The press release from the day the ground was broken proudly announces the "wholly new departure in design for student living", although M.I.T. authorities and the P.S.H. team had failed to support Aalto's radical approach from the start.

THE SYMPHYSIS OF BAKER HOUSE: ELEMENTS OF AFFINITY OR AXIS OF ANXIETY ?

> *"architectural methods [...] a combination of technical, physical, and psychological phenomena, never any of them alone [...] An architectural solution must always have a human motive based on analysis"* (Aalto, 1940b)
>
> *"[...] the ideal outcome of architecture [...] mediated all the positive influences and intercepts all the negative influences affecting man"* (Aalto, 1941b)

The course of the design's development indicates the interwovenness of psychology and creativity, in both the articulated desire to create an architecturally balanced *harmonia* (i.e., that could facilitate "the individual and the organically harmonious life."; Aalto, 1958a), and in Aalto's move from the stand-offish position to the re-engaged determination to "strive" for such harmony. Despite great procedural conflict, Aalto was able to move from a reactive ('victim') position, in which he refused address the conflict with the authorities at M.I.T. / P.S.H. and fight for the vision in the threatened scheme by addressing the conflict, to one where he grasped the scheme's potential collapse, preventing it from falling into dissonance, and forging an important, innovative solution to the economic problem in hand. In doing this he surpassed the initial design as an innovative solution to student housing. Aalto indicates that, in part at least, Aino stimulated this change of heart, appealing to his ego-strength and helping him to



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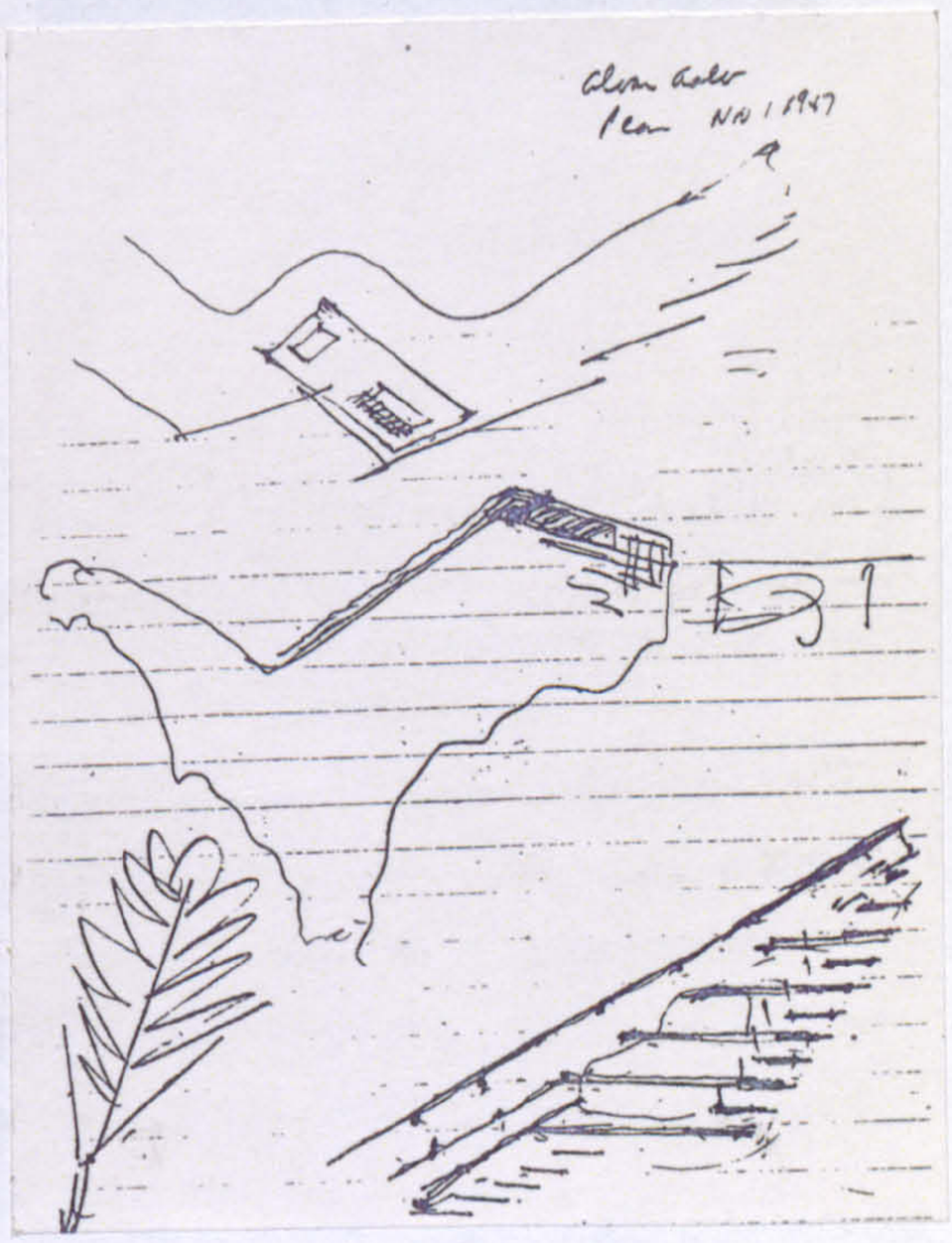

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Fig.13.97 Stucco finished cantilevered stair, *Baker House*

Fig.13.98 Sketch of changes to west wing, *Baker House* ; Aalto, November 1947



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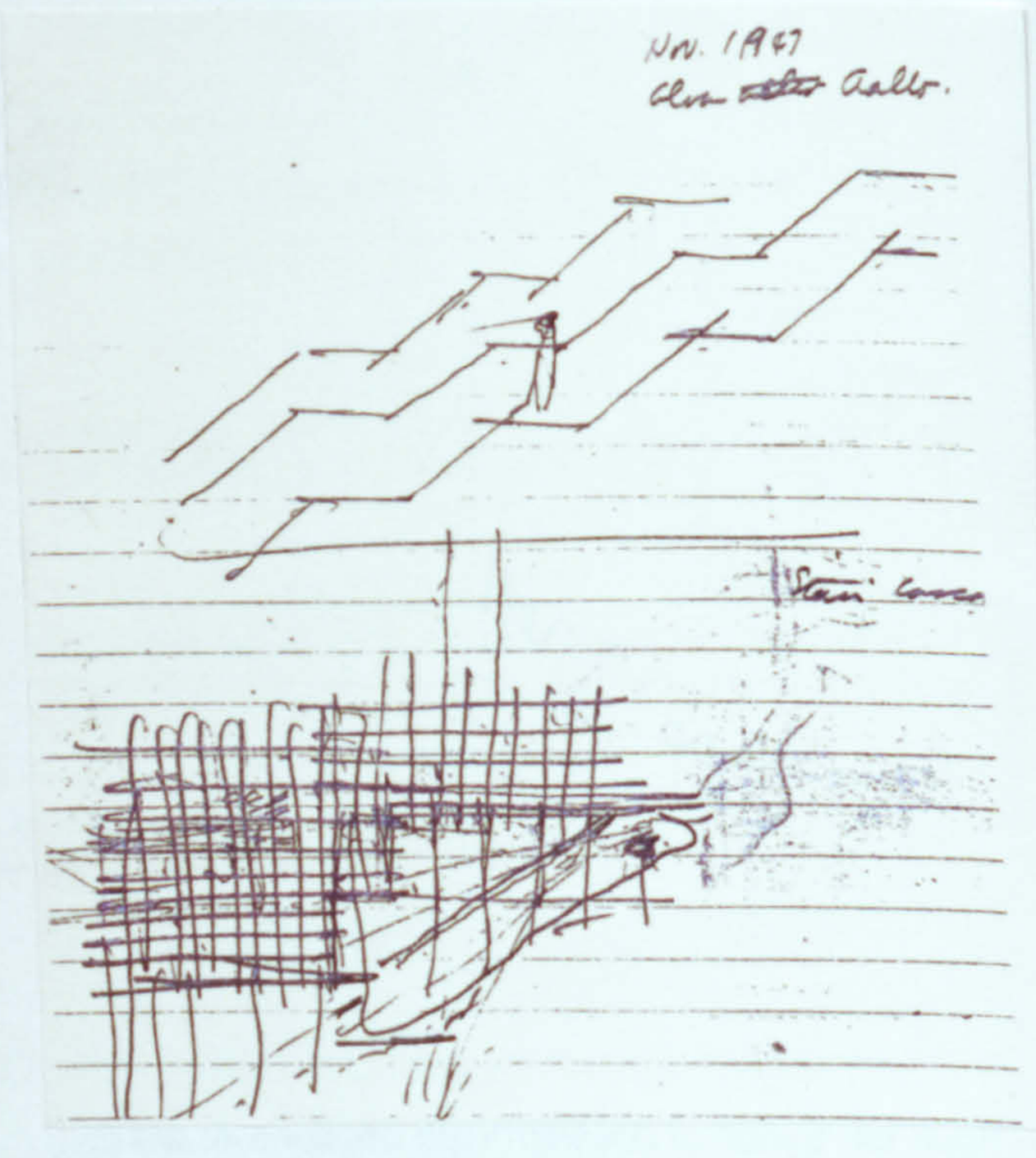

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Fig.13.99 Pine branches

Fig.13.100 Sketch of view out from cantilevered stair, *Baker House*; Aalto, November 1947

engage his intelligence (and drive) in what may have become an emotional battle with P.S.H.'s Robert Dean.

Throughout the thesis it has been shown that the building is designed "*von Innen nach Aussen*" (from inside to outside), in Häring's terms, which paraphrases Aalto's mentor Goethe.[92] Indeed, *Baker House* manifests the demand that "the house should be an organ for its user and its final form should result from [...] the purpose for which it is intended (*Leistungsform*)" (Šlapeta, 1980:119); demonstrating the integration of the psycho-social opitulation of relating one to one, and one to a group,[93] and the practical facilitation of basic life tasks.

Relating Elements of Form and Function

Aalto foresaw a "natural flow pattern" of students approaching the building across the campus like a social stream, splitting up at the entrance, as a river divides at its delta, and going their several ways to their rooms. Understanding the necessity for a single, controlled access to the dormitory, Aalto's delta was manifested within the building as broad divergent stairs, cantilevered dramatically from the north facade (fig.13.98). The gentle climb both avoided the physical and psychological separation of floors, and limited the need for mechanical transportation as much as possible. Ascension offers an uninterrupted view out over the neighbouring sports field (fig.13.100). From a distance there is no mistaking the function of the cantilevered bulk. The wide, spacious cascading stair element acts as a motif of unity, undermining any sense of 'floor loyalties' by spatially relating the different floors (fig.13.101).

RELATING: THE INDIVIDUAL AND THE GROUP

" [...] the individual and the organically harmonious life." (Aalto, 1958a)

The original notion of the expanding north corridor-lounge spaces offered an easier transition between individual and group than a traditional single or double loaded corridor with a separated, isolated common space, which require a greater degree of confidence and intention to enter. The elastic-corridor spaces that Aalto intended would be traversed in any route to an individual room, and thus revisiting something of the vernacular Ostrobothnian courtyard and Karelian hall spaces. While refusing to alter the design and demanding "a clean shirt", during the summer of 1947, Aalto offered a new plan which loses the exciting spaces, and any innovative character. The outline of the serpentine plan is overlaid on the new idea (fig.13.102). Aalto's final, although altered serpentine solution maintains the elastic-corridor spaces to a reduced, yet nevertheless effective degree (fig.13.103).

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[92] This approach had been met by Heidegger's advancement of Husserl, in which letting things be what they are phenomenologically without their being framed. Heidegger's (1975) paper *Building, Dwelling, Thinking* was originally given at the Congress *Man and Space* in Darmstadt, in 1951.

[93] A student a Baker House indicated that it is known as "the largest fraternity on campus." (Dean Phillips, 1985, pers.com.).

Breaking the 'checker board'

It would be simplistic to say that there is one best way for students to live. Some enjoy living alone, some in groups, some enjoy loud music, others prefer peace. Aalto's personal experience and continual exposure to his students at M.I.T. helped him grasp their desire for a breakdown of the ant-hill atmosphere so often associated with halls of residence, and, on the contrary, the potential for building community. Indeed, Aalto mentioned that the exceptional form of *Baker House* arose from the need to break "the powerful and inhuman monotony" which he saw in the American contexts (1950); citing both the "checker board netting" of the North American city plans which lacked sensitivity to 'little man', and the 'grand-speed' highways which had the same effect (1950). One such road is Memorial Drive which separates the site of *Baker House* from the straight-line basin of the Charles River.

Elasticity of Relations

The innovation of *Baker House's* communal elastic-corridor space was carried into other designs, for instance the Otaniemi residences TKY 2 (designed 1950, built 1963-6, fig.13.104).[94] To a small, yet significant extent the same is apparent in the Bremen *Neue Vahr* apartment block (1958-62, fig.105), and the *Schönbühl Apartment House* (1964, fig.13.106), although the brief of self-contained accommodation is different from that of student housing. The unbuilt *Gammelbacka Suburb Housing*, Porvoo (1966, fig.13.107) was to stand between the two briefs, being largely one and two room apartments.

The fan form plans which virtually became a trade mark for Aalto, derive, at least in part, from the altered west wing of the *Baker House* scheme. His solution to the knotty problem of balancing his own demands for light, views, and social-spatial integration with M.I.T.'s economy-driven demand for more beds, eventually resulted in his seeking to modify the serpentine solution to a different, restricted context was imbued into his palette as a prime solution to the problem of spacial configuration in a wide variety of contexts and functions, including *Vuoksenniska Church* (1956-59, fig.13.108), *Bremen* (1958-62, fig.13.105), *Wolfsburg Cultural Centre* (1958-62, fig.13.109), *Seinäjoki Library* (1963-65, fig.13.110), and *Mount Angel Library* (1965-1970, fig.13.111).

Relating Divided Reality Through the Pedal and the Wave

The three formal elements which comprise the *Baker House* scheme (the serpentine body, the rectilinear cantilevered stairs / rear facade and the dining pavilion) are function-derived forms which are related through access flow axis (fig.13.112).[95] Incidentally, only two of these are considered in Griffiths' arguments about the axis in the scheme; i.e., the serpentine "bar" (or Pedal) and the pavilion (1992:127) (fig.13.113). This interpretation denies an important

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[94] TKY 3-4 (designed 1950), TKY 8 (designed 1962) and TKY 6-7 (1964-5), were not built.

[95] As cited earlier, contrast of form arose as an expression of the various functions. These functions were not isolated, but were to be visually differentiated by the juxtaposition of materials and form. For instance, the stairs were to have been clad in aluminium, to contrast in colour, texture and density with the main mass of the building. The contrast of the smooth glass and lime dining pavilion and the rough handmade brick of the 'wall' is a further example of this differentiation. Although externally the dining room is a separate entity, its spatial fluidity links it closely with the fireside lounge in the entrance area (fig.13.115).



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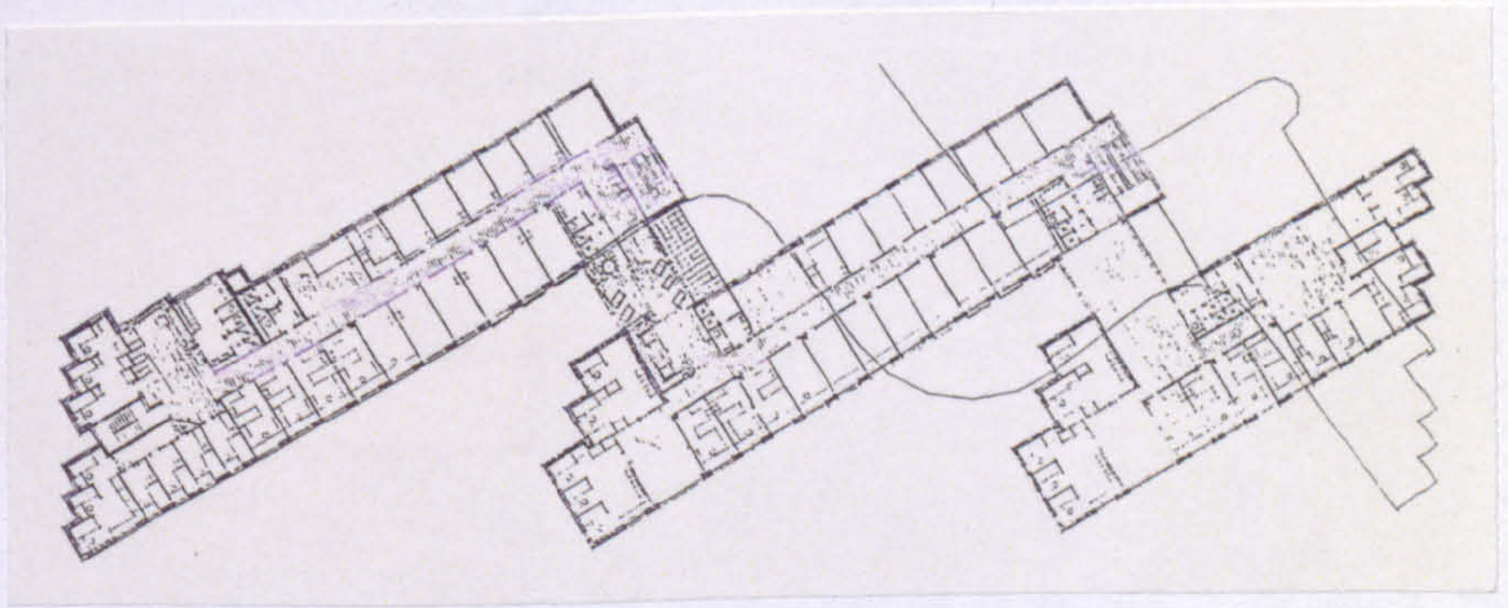

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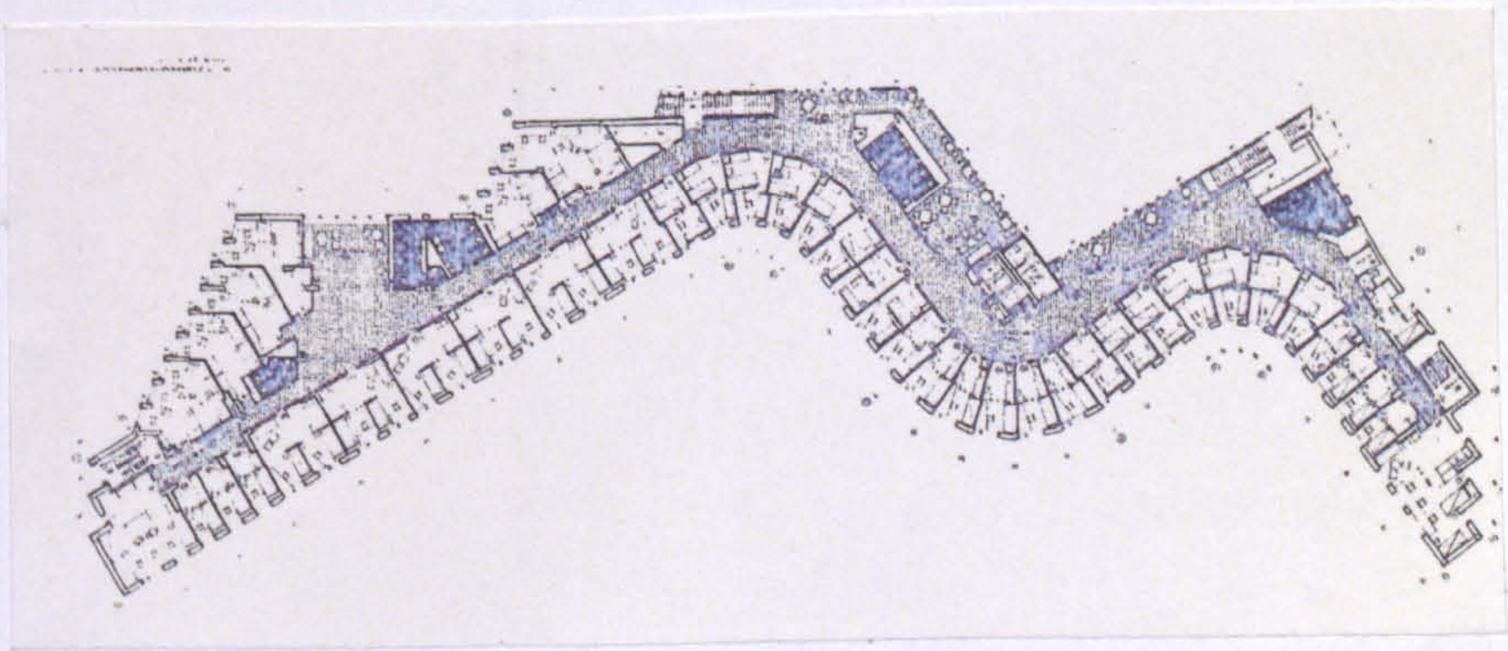

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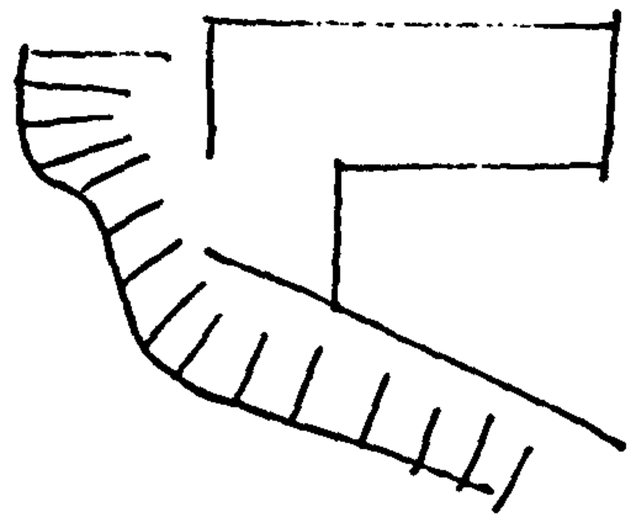
Fig.13.101 View down cantilevered stair, *Baker House*; Aalto, 1947-9

Fig.13.102 'H' plan solution with undulation superimposed, *Baker House*; Aalto, Autumn, 1947

Fig.13.103 Fifth floor plan, *Baker House*; Aalto, 1946-9



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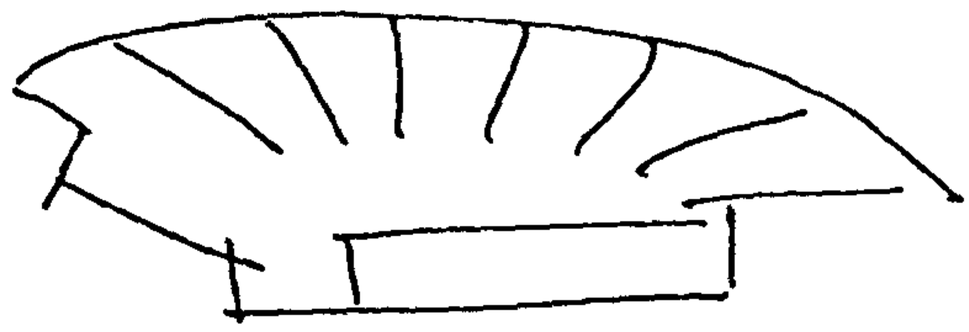

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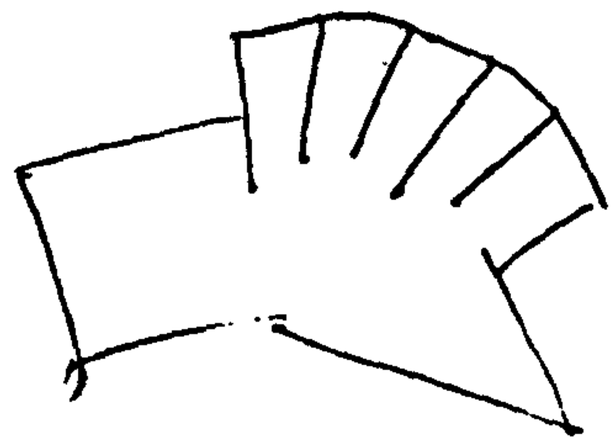

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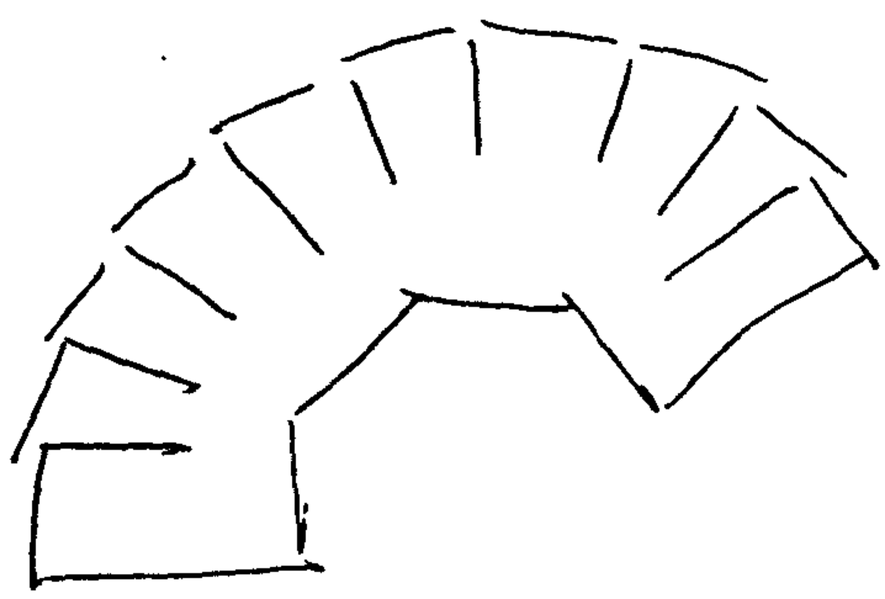

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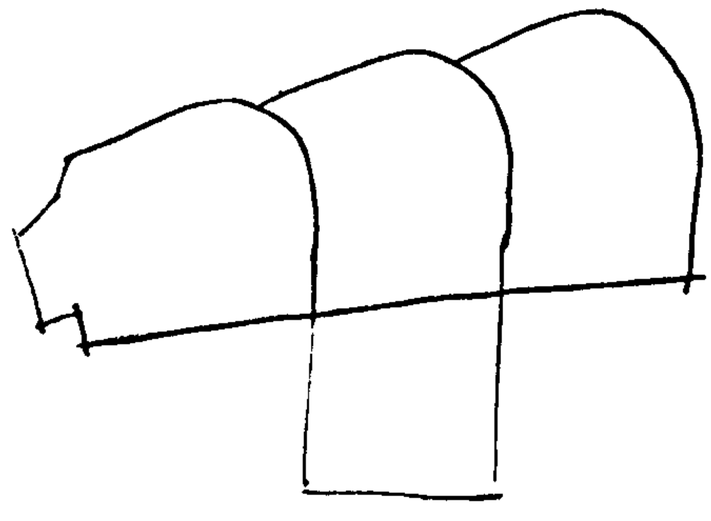
Fig.13.104 Plan form of *Helsinki University of Technology TKY2 Domitories*, Otaniemi; Aalto, 1962-6

Fig.13.105 Plan form of *Neue Vahr Apartments*, Bremen; Aalto, 1958-62

Fig.13.106 Plan form of *Schönbühl Apartments*, Lucerne; Aalto, 1965-8

Fig.13.107 Plan form of *Gammelbacka Housing*, Porvoo; Aalto, 1966



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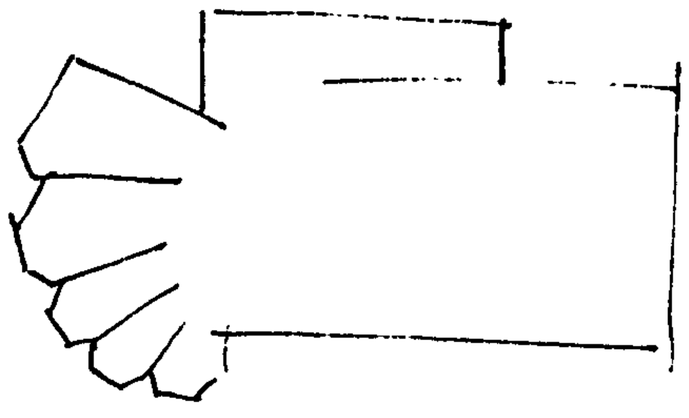

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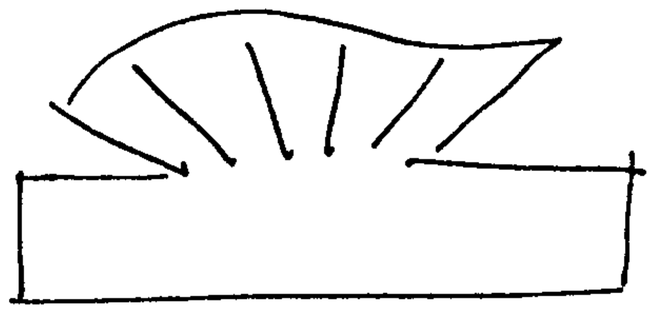

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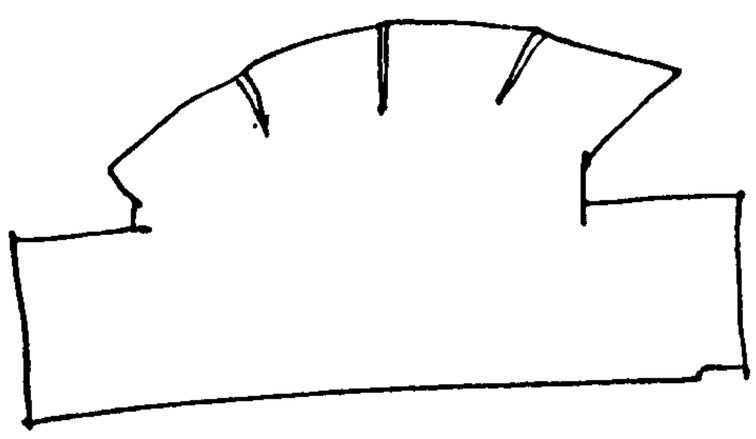

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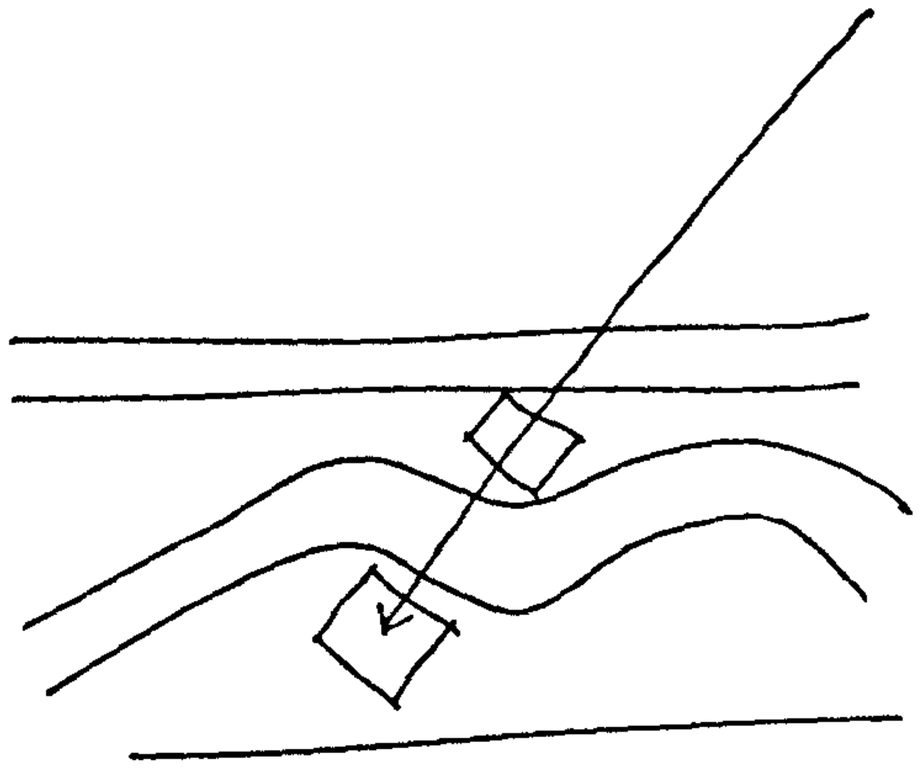
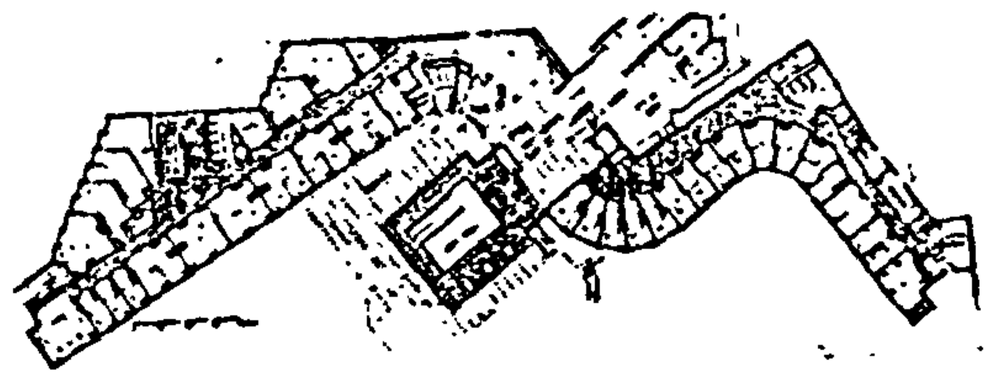
Fig.13.108 Plan form of *Vuoksenniska Church;* Aalto, 1956-9

Fig.13.109 Plan form of *Wolfsburg Cultural Centre*; Aalto, 1958-62

Fig.13.110 Plan form of *Seinäjoki Library*; Aalto, 1963-5

Fig.13.111 Plan form of *Mount Angel Library*; Aalto, 1965-70





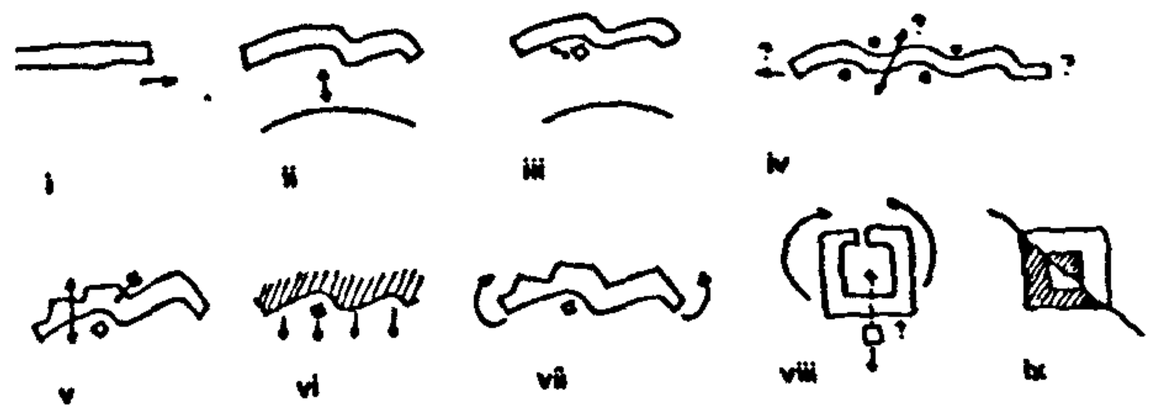


Fig.13.112 Axis from main campus to *Baker House* entrance and through to dining pavilion

Fig.13.113 Griffiths' analysis of the 'bar' element in the *Baker House* formal layout

relationship between the forms and the uses of the building, rather seeing them as purely aesthetic forms. Despite being sceptical about formal analysis which ignores the experience of building, Pallasmaa also writes in a manner which seeks to separate the symbolism of the building from the form; "a real work of art pushes our consciousness away from its everyday practices and aims it at the deep structure of reality." (Pallasmaa, 1985:44). Aalto sought to draw attention to the deep structures through the experience of the practical; i.e., attention to the simultaneous realities of the needs of 'little man'; the material (practical and earthy) with the spiritual (intuitive and 'divine'). This is vital, since it is in contradiction to Pallasmaa's notion of consciousness separated from everyday reality.

Deferring to Community

Aalto's intention is affirmed in the idea that experience of art and architecture is "an interaction between our embodied memories and the world" (Stenros & Aura 1987:98); thus identifying a role for the "threads of unrecorded reality". It is for this reason that the nature of the *Leistungsform* in *Baker House* demands that any formal analysis addresses the nature of the forms and their relation to the functional or practical (e.g., human) considerations. For instance, the north side of the original scheme housed the service rooms, the stair and relaxation space. Largely this was manifest in a rational and economic plan and facade treatment, but at certain points this seems to defer towards the intangible functions Aalto held so dear, when, for instance, the darker corridor flexes to comprise the psycho-social invitation to the students to group together in the fully glazed elastic-corridor space before the stair descends.

Aalto clearly felt that this vital relationship of elements in this synthesis were threatened by the President's demands (of July 1947) for more beds. However, *Baker House* was eventually to comprise a *harmonia* which was generated by the kernel of an idea; the relation of the Wave and the Pedal or straight line. Herein functional-poetic (i.e., expressive) Wave energy is given to the priority spaces (i.e., study bedrooms) which the practical Pedal functions serve (i.e., bathrooms). The functions of one are not necessarily subordinate to the other, yet their spatial expression is appropriate to their right relationship. Aalto was not one to heighten the expression of the toilet as an icon of modernity.

As early as 1935 Aalto had expressed his search for an architecture which was built on,

> "variability, the possibility of interaction between man and his environment and his objects, where the environment fulfils the psychological need for constant regeneration and change." (Aalto, 1935)

Here the integration of the Wave and the Pedal (straight line) signifies the integration of the private and the public, or even the inner and the outer realities. It may also represent the relation of the emotional and the rational. The Wave and Pedal may be understood, in Transactional Analysis terms, as the relation of the Child (inspiration) and the Parent (critical

function), brought together by the Adult (that which mediates and draws both into reality). This is the place of the *logos*, that which offers the profound rationale behind the need to relate the inner and the outer, the intuitive and the rational in the search for *harmonia*.

This was an emergence (i.e., *techne* or coming to being) of Aalto's own broad understanding of functionalism as a concern for every aspect of the life of 'little man' tied, not to the back-woods Finnish heritage, but rather inspired by it to be fully active in the reality of modern society. This thesis demonstrates that the delicacy and the depth of Aalto's motivation to forge all these parts of life into an integrated built environment may have been related to the dual reality (and inevitable repetition) of both his deep psychological chasm, and his experience of out-going life. Aalto's trauma-related reaction to Compton and Dean was eventually overcome, and consequently a more profound solution was realised.

The Sumphusis *and the* Logos

It has been shown that in *Baker House* the undulation is a Wave of logical origins, acknowledging user-needs for light, view and individuality. However, there is also a key recognition of the need for connection, manifest through the corridor and its flexible expansion into the microcosmic social context of the relaxation space leading to the stair. Together they manifest the building's larger *kosmos*. The corridor mediates between the Wave of the south side and the Pedal of the north side. The bifurcating stair slung onto the north facade is another expression of Aalto's user-inspired logic, linking the communities between the six floors.

From these origins the relation of the Wave and the Pedal may be seen to represent the longing for a *kosmos* (natural order) which was modern, being enshrined in freedom and new technology, and which also acknowledges the need for a 'classical' relation of parts into a living *harmonia*; one in which people were able to participate freely, withdraw freely, and find expression freely.

Building Harmonic Entity

Revisiting the criticism cited in chapter four, namely that *Baker House* was not an entity, it is appropriate to re-sketch the manner in which therein the symphysis (growing together) of the functions is total, manifest in fluent episodes of mediation (fig.13.92 & 13.115):- (a) the entrance axis and the dining pavilion, (b) the dining pavilion and the stairs, (c) the entrance and the stairs, (d) the stairs and the view, (e) the view and the north lit communal spaces, (f) the stairs integrating the communal spaces, (g) the communal spaces and the elastic corridors, (h) the bedrooms and the corridors, (i) the corridors and the stairs, (j) the stairs and the entrance, and (k) the entrance axis and the main campus. In short, all the parts of the building are in relation to each other facilitating the life of the whole, through enhancement of the life of the part; accommodating 'little man' in facilitation of communion of the group.

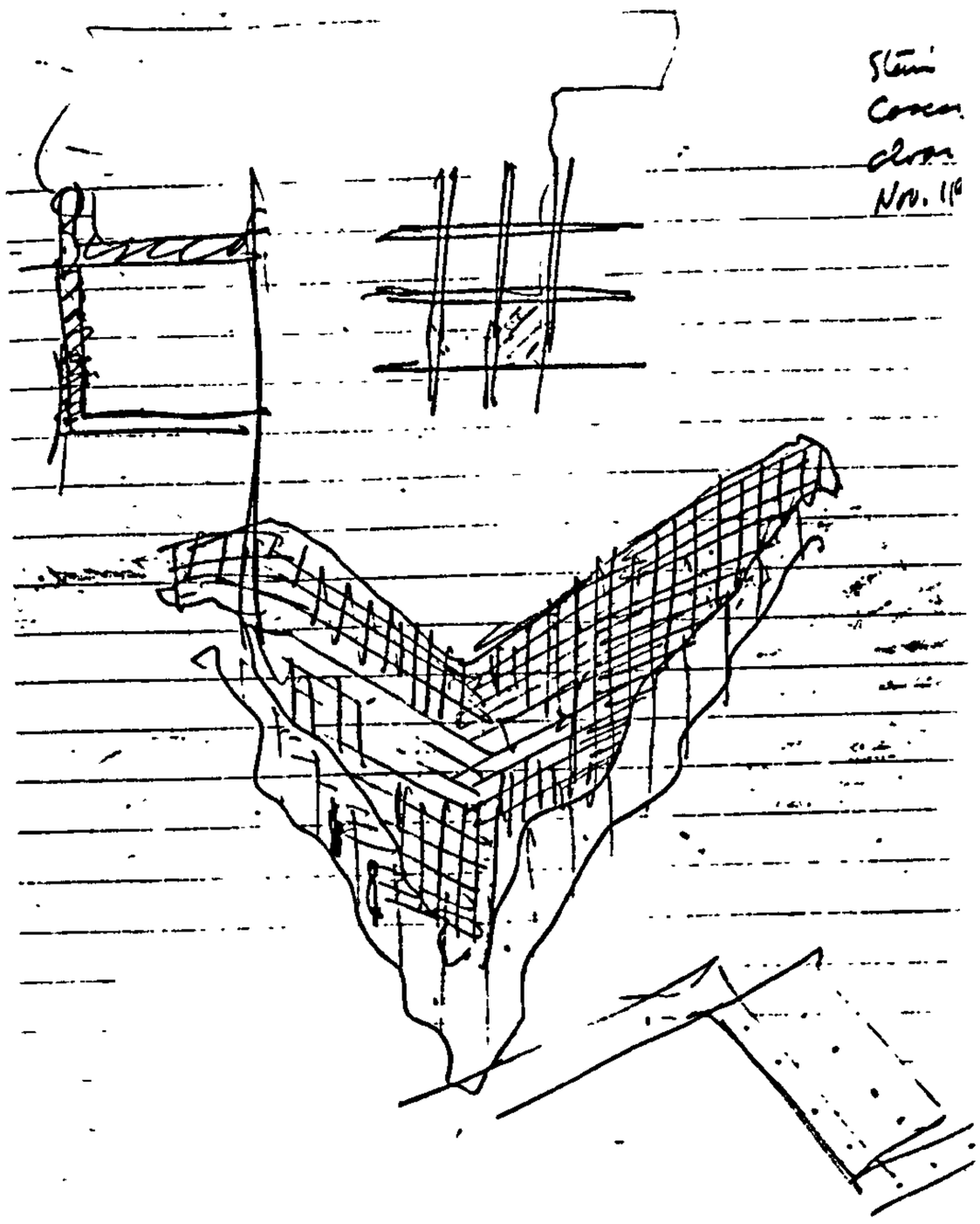


Fig.13.114 Design sketch of bifurcating cantilevered stair, grwoing from the entrance to unite the six floors of *Baker House*; Aalto, November 1947



13.115

Fig.13.115 Relections on stone outside dining pavilion, *Baker House*

"An architectural solution must always have a human motive based on analysis." (Aalto, 1940b).

Renunciation of the criticism that *Baker House* is not an entity makes it necessary to understand the meaning of the word 'disparate' as being different or diverse in kind (Brown, 1993:696). While acknowledging the complexity of the disparate forms of *Baker House* (e.g., the serpentine slab and the square dining pavilion), this is not cause to make a pejorative judgement, automatically presuming such disparity should preclude coherence. On the contrary, this thesis has demonstrated that, indeed, although the elements demand a heightened manipulating *logos* (because individually they cannot rely on the automatic relation which may be inherent in formulaic design), the vital compositional element of relation is mastered, and such juxtapositions are able to riddle the design, without detracting from the strength of the whole. This strength is attained through such compositional devices as the capacity of the corridor to flex. Aalto plays curves off against the rectilinear, light against dark, solid against void and tall against short, but not without fitting, and indeed fundamental relations and mediations, some of which have just been cited. Aalto is not afraid to simultaneously express and relate these instances of differentiation and complexity, generated as they are by programme and structure; they are not the result of pure whim. The articulation of such contrasting, and even competing functions is a vital phenomenon in many of Aalto's designs, reflecting the requisite relation of different parts in profound, rather than superficial, whole compositions.

Another criticism of the anonymous article, concerning the opinion that Aalto was trying too hard to make too many impressions, has been answered through foregoing explanations of the generating concepts, difficulties and changes which threatened to inhibit the building's fulfilment. Aalto himself wrote that,

"Only where form arises at the same time as content or in a faithful combination with it [...] can we speak of a step forward." (Aalto, 1930)

This section has demonstrated the nature of Aalto's attempts to allow different demands of the brief to shape a whole building, and that seemingly opposing interpretations of elements of the brief stimulated rather than stunted the manifestation of compositional "harmony" through the symphysis (the growing together) of elements of the building's form.

CONCLUSION:
MUTUAL ADJUSTMENT OF THE DISPARATE TOWARDS *HARMONIA*

> *"Unity [...] the establishment of the utmost relatedness between all component parts"* (Webern, 1963:42)
>
> *"[...] the profound logic that created an inner connection between all the motives"* (Sibelius in Ekman, 1938:191)
>
> *"[...] bringing into balance the whole of the milieu that surrounds us"* (Aalto, 1955a)

The foregoing indicates that there was no separation between the *technikos*, the technical in art by which things are made to appear (Heidegger, 1971:159), and the *eidos* or the form and idea of what that something actually is.

Thus, for example, it may be said that the *Seventh Symphony* grew to be a unified form, demonstrating that, as Sibelius repeatedly indicated, the content forged the form of his work. This chapter has sought to elucidate something of the "profound *logos*", as Sibelius put the object of this thesis' enquiry. Essentially, this concerns the relation of elements to each other within the whole of a Sibelius symphony or an Aalto building. This naturally includes all the areas studied thus far; i.e., the socio-historical, the psychological, the creative, the environmental and organic, the Ancient precedents, and the Goethean inspiration. For example, Sibelius sought a *sumphonia* (sounding together) of ideas which produced a *sumphonos kosmos* (harmonious order). It seems that the more personally and stylistically isolated Sibelius was, the more he turned to nature and the symphonic problem, and indeed, the more classical he became.

The story of the design of Aalto's *Baker House* demonstrates the way in which the ideal of a "harmonious" environment was achieved through the continual adjustment and mediation of elements of human need (i.e., functions derived from the brief). Read in conjunction with the foregoing explanations of the *Baker House* commission, this chapter has demonstrated the nature of the process of *sumphusis* (growing together) in Aalto's design process as it leads to the building's unique *kosmos* (natural order) derived from what it needs to be. When read in light of chapters five and six (concerning his personality and creativity) the story brings to light the precariousness of the process of what Heraclitus described as "mutual adjustment" (i.e., *harmonia*) of Aalto as designer, the sacrosanct nature of his initial idea, the dynamics of a corporate client group and the adjustment of the brief. This reiterates the fact that the foregoing phenomena of inspiration were fully integrated in Aalto's, as in Sibelius' mind.

The final chapter will continue to explore the congruence between the psychological '*gap*' and the creative 'urge' in Sibelius and Aalto through an enquiry into their understanding of and need for "harmony", and their attempts to imbue their work with symphysis, the joining of often disparate 'bits' in search of the ideal whole, in which the parts are intricately related through a process of "mutual adjustment" (i.e., *harmonia*).

Chapter Fourteen



14.1

KOSMOS COURTING *CHAOS*?:

The Ultimate *Sumphonos*

Fig.14.1 Wood Experiment; Aalto, 1930-47

INTRODUCTION

> *"Artistic conception is a final symbolic form making revelation of truths about actual life."* (Langer, 1988:39)
>
> *"Keep to the clarity, the plasticity and refinement of the symphonic in your art. Don't allow yourself to be lured away from it"* (Sibelius, 1910; T2:139).
>
> *"[Architecture's] purpose is [...] to bring the material world into harmony with human life."* (Aalto, 1940b)

The foregoing discussion about the notion that "it is through making that *kosmos* appears, or does not" (McEwan, 1993:43), has drawn the thesis towards the vitality of creativity for Sibelius and Aalto, and indeed the creation of form which was specifically imbued with harmony. This resulted in complex and ingenious jointing mechanism, demonstrated above, through which the wholes were brought to appearance through technique (i.e.,τεκνε, *techne*, letting appear and
τικτειν, tiktein, being born). Such mechanisms imbibe the whole with a certain tension. If *kosmos* did not appear (i.e., was not constructed by their creativity), failure and even acute depression resulted.

This study has sought to explore that which correlates Sibelius and Aalto at the discursive level of their similar life experiences (based on similar '*gaps*') and their choice of a similar creative model (closely connected to their primary, creative response to the '*gap*'), yet this does not preclude finding a non-discursive phenomenal relation between their work.[1]

Weaving together the foregoing areas of study, this final chapter explores the works of Sibelius and Aalto as end-products of what they witnessed in the world and how they sought to respond. The works are also informed by the real world as perceived by them, and are modified by their motives, wishes, intentions and skills, which are all a residue of earlier experiences (Segall, 1976:99), including, but not exclusively those of the '*gap*'. In drawing the foregoing ideas together with the conclusions of the previous chapters, this section asks whether, in the case of Sibelius and Aalto, weaving threads of unrecorded reality into artistic *kosmos* (i.e., created constructs) enriched the growth of those forms, thereby "making known the unknown" (Wetzels, 1990:84); i.e., their inner reality, the past, and whether the desire and need for order (e.g., *harmonia* and *kosmos*) which addressed their inner turmoil stimulated the particular character (e.g., organic) of those forms.

---

[1] If, as stated, one apprehends everything which impacts on one by imposing images which stress salient features, filing them in one's memory, their recollection depends upon an incomprehensible pattern of neural connections, neural relations between related phenomena which one's mind believes to be perceptually congruent, in terms of one's emotional, phenomenal or paradigmatic life. (Edelman, 1992; Humphrey, 1992)

ORDER, DISORDER OR DELIBERATE DISARRAY

"[The] dialectic of separation and connection is typical of organic structure [...] Its image in art is the image of individuating force, unequal growth, which underlies all morphology and is the fundamental mechanism of evolution; hence its power to raise artistic expression to a level of complexity that reflects not only universal vital rhythms, but particularly human ones." (Langer, 1988:93)

"The clarity at which [Sibelius] aims is not easy to attain at a time of general chaos" (Ekman, 1935)

"The dilemma of an artist is basically metaphysical. He tries to find the truth." (Juhana Blomstedt, 1987:5)

Before establishing a correlation between tension, reconciliation and the search for *kosmos* and unity, this chapter will argue that the interest in both the Ancients and in nature which enriched and even motivated Sibelius' and Aalto's creation of form is subordinate to the motivation rooted in their "threads of unconscious reality". The argument will also seek to demonstrate that the latter, in turn, was at the root of their emotional drivenness and their 'urge' to create which repeatedly tended towards the building of a precarious *kosmos*.

ACCORDING TO AN 'OTHER' ORDER: *KATA KOSMON* [2]

"I liked Ekman's words that the dissonances were beautiful." (Carpelan to Sibelius, 1916. T3:ch.10).

"[...] allow them to unfold their own forms" (Häring, 1925:1)

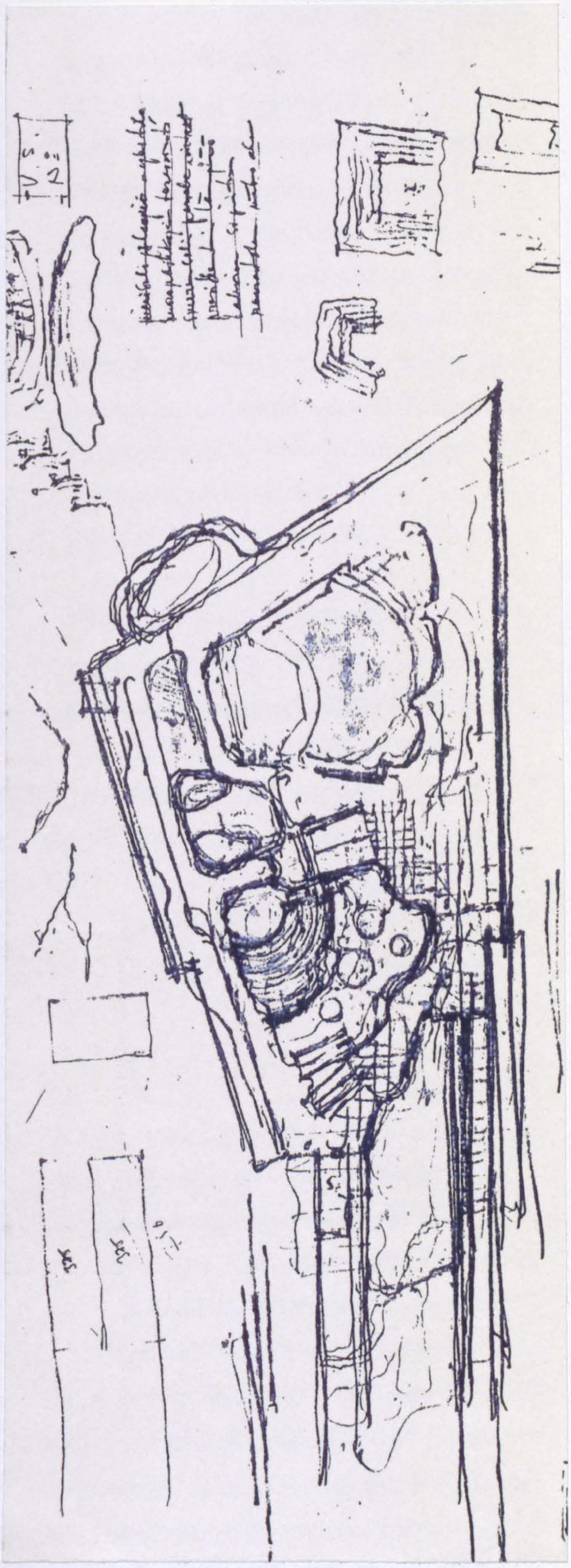
McEwan indicates that in pre-classical Greece κατα κοσμος (*kata kosmos*, according to order) is always qualified but the prefix of ου (*ou*, not) or ευ (*eu*, well),[3] demonstrating a judgement by some 'other' standard (1993:14). Indeed, to Anaximander *kosmos* (natural order) is the *genesis* (coming to being, emergence) for existing things. In the present context this concerns not a pre-Socratic mystical order, but rather practical psychological and artistic *kosmos* (i.e., homeostasis and formal order), which nevertheless have both an analogical, and to some extent a practical root in Anaximander's Fragment B1; "ετερα τις φυσις απειρος" (*hetera tis phusis apeiros*, some <u>other</u> boundless nature-as-coming-to-be) (Khan, 1960:166). It is significant Anaximander allows both the *genesis* and destruction (or χαος, *chaos*) to come forth from *kosmos*, i.e., from within a boundless source (απειρον, *apeiron*) which was unknown and unnameable; an other (ετερα, *hetera*).

Joining with an Other

Interestingly, Porphyrios concentrates his analysis of Aalto on the notion of <u>heterotopia</u> - "That order, which western rationalism mistrusted and derogatorily labelled disorder" (1982:2). Porphyrios borrows this notion from Michel Foucault's *The Order of Things* (1977), but does not address pre-Socratic sources cited here. Foucault himself explains that heterotopia is "the state of things laid, placed, assigned sites so very different from one another that it is impossible to define a locus common to them all." (1973:xvii). Recently St.

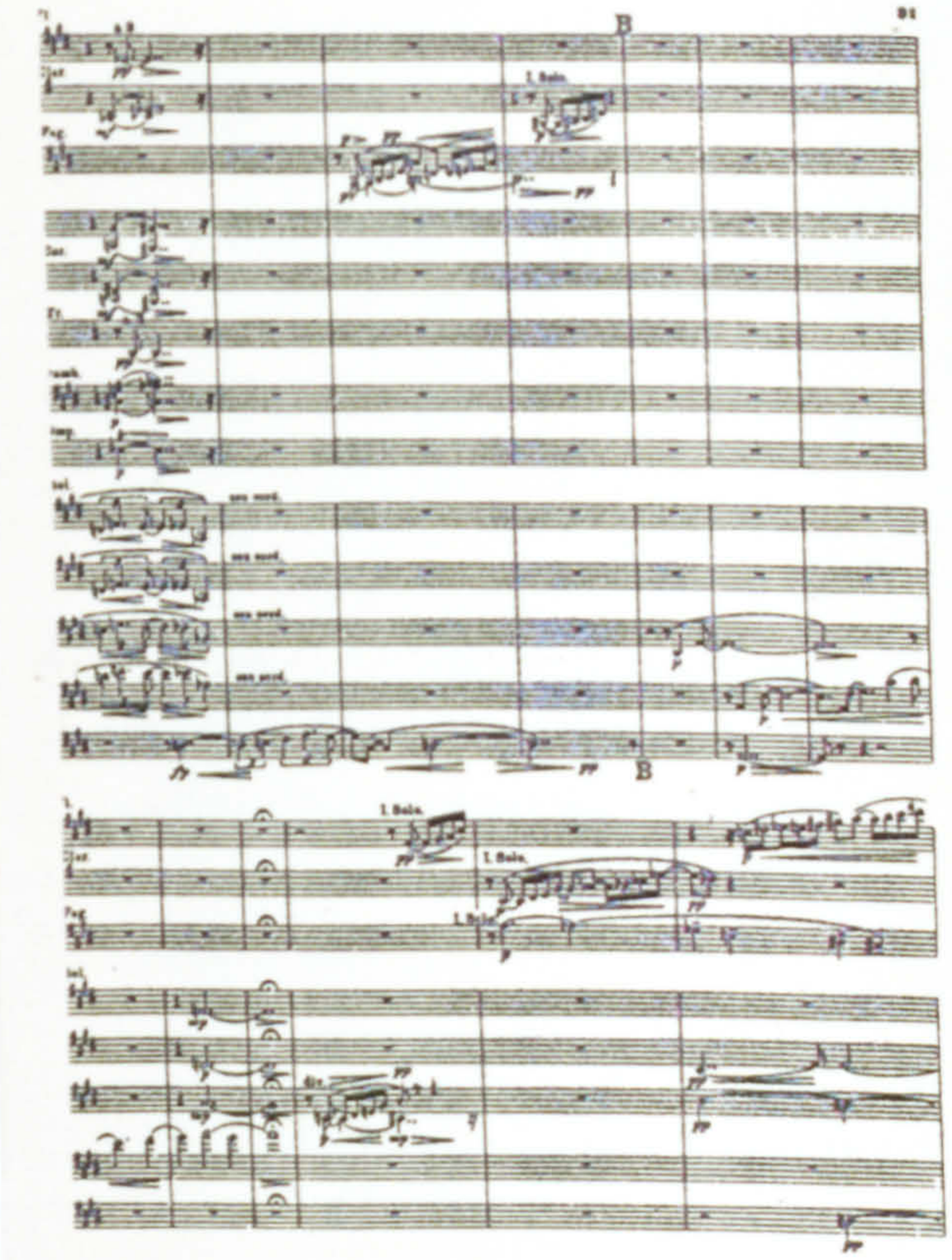
[2] Translation; Greek for 'according to order'.

[3] For example; *Iliad* (2:214), (11:48) etc. and *Odyssey* (3:138), (14:363) etc.



14.2

Fig.14.2 Design sketch of *Finlandia Hall*; Aalto, circa 1963



14.3



14.4

Fig.14.3 Seeming disorder of parts in the *Fourth Symphony*, Sibelius, 1911

Fig.14.4 Mingling in the foyer of *Finlandia Hall*, Helsinki; Aalto, 1962-71

John Wilson has used the same appellation of 'other' in *The Other Tradition* (1995), but again without citing the parallel with the Greek word *hetera*, nor connecting with Porphyrios' important thesis (1982). This omission may be due to the fact that St. John Wilson finds what can be recognised as a *kosmos* emerging from the fulfilment and manifestation of function (i.e., Häring's maxim "allow them to unfold their own forms" or *Leistungsform*; 1925:1) - rather than suggesting that he accepts that there is no discernible order. While broadly concurring with St. John Wilson, this thesis ventures to suggest that the Hellenic root of <u>other</u> is extremely significant since it can refer to an 'other' element inherent in the coming of order to disparate parts, which is at the root of in the search for *harmonia* (i.e., relating, joining of parts). Another reason for its significance is that this bases the *harmonia* inspired integration at the root of Western civilisation back beyond Aristotle, in Sophistry wherein "nature-as-coming-to-be" was central, as it was in the Finnish forest, and as it is in the psycho-anthropological work of Cobb's "world-building" (1993), and Winnicott's primary creativity.

Returning to Anaximander it is possible to draw together the ideas of creation and order, since it is apparent that <u>some</u> (τις, *tis*) other boundless nature (the vital element of life which causes, for instance, humankind's need to seek physiological and psychological balance) is the source of the *kosmos*. From *kosmos* comes the *genesis* (i.e., natural creation and therefore Winnicott's primary human creativity) for both human Being (ον, *ont*) and for the works of art (McEwan, 1992:17). It is recognised that this demonstrates order in which the 'logic' is a pre-Socratic one (i.e., a "logic of ambiguity"; Vernant, 1974:250). This may explain why scholars like Giedion described Aalto's work as "illogical and organic" (1950:77) and Adorno dismissed Sibelius so vitriolically ([1938] 1980),[4] since they seek only Socratic logic, not pre-Socratic *logos*.

Informing Order

This thesis ventures to suggest that for their own deeply personal reasons, which later became equipped with intellectual vigour, Sibelius and Aalto revisited the progression from the pre-Socratic "logical ambiguity" to the Platonic *paradeigma* by responding to the undefined need to create (i.e., the "inner urge"), in order to explore and demonstrate to themselves an external *kosmos*. The argument maintains that they did this by looking for a pattern (*paradeigma*) with which to facilitate the genesis of a work's being (*ont*), which in many cases could be said to mirror the *kosmos* of their own Being (*ont*). In other words, rooted in their indefinable, precarious inner *kosmos* (or homeostasis), there comes an idea which takes the form of a building or symphony, for example, through the pattern of what the building or symphony wants to be (i.e., the broadened character of the elements <u>inform</u> the whole). This may have been an image of exactly what they could not be themselves, but strove to construct.

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[4]By the time Plato was writing a definite pattern or *paradeigma* (i.e., <u>the</u> ;τεσ, *tes*) has developed, as compared to Anaximander's less certain <u>some</u> (τισ, *tis*) other.

After all, concurring with Cobb, McEwan observes that, "[t]he discovery of a pattern seems [...] to be an inherent feature of the human experience of making" (1992:41), and in light of the creative egalitarianism of Winnicott's notion this may be understood as a feature of the very creativity of life. Continuing by stating that the *paradeigma* both "measures the work and is measured by it" (1992:42), McEwan seems to concur with Sibelius' self-acclaimed role as a slave to his themes and their demands (Ekman, 1938:254), and Aalto's belief that a prerequisite of new form is new content (1928). Indeed, in the case of the creation of art inspired, to some degree, by the process of natural creation (including primary human creativity), the art may give (i.e., construct and therefore reflect) a 'measure' of nature (including human life).[5] It should be recalled that McEwan makes an important note regarding the manner in which the *kosmos* (order) is rediscovered by each tracing of the *paradeigma* (pattern) (1992:43), which itself is allowed to appear through the process of composing, designing, making (or just 'being' in Winnicott's definition). This suggests that something of the order (*kosmos*) of human Being (*ont*) which may have been damaged or missing due to childhood trauma, for instance, may be rediscovered through the tracing of an other model or pattern (*paradeigma*) of Being, say an organic model of nature's growth process or an Ancient insight in a model of *kosmos*.

The conclusion of this thesis is therefore that in light of their common cultural roots, childhood '*gaps*', experience of the transitional environment of the forest, interest in classical ideals and in natural phenomena and processes, the works of Aalto and Sibelius are according to order (*kata kosmos*) primarily within themselves, and concomitantly within nature. However, the transition between the inner *chaos* and the outworking of constructed creative *kosmos* (order) remains to be demonstrated.

CONFRONTING CHAOS: THE FLUX OF THE MATTER

> *"[...] process, becoming, is taken as a primary constituent of physical existence and where [...] existing entities can interact"* (Prigogine, 1985:303)
>
> *"Disorder, as well as order, has contours of its own"* (Parmet of Sibelius; 1957:53)

Bergson believed that any arrangement of things must, by definition, have some order (i.e., vital order, geometric order or the absence of order), since disorder is simply the absence of a certain kind of order we were expecting (Bergson, 1911:248; Lacey, 1989:185).[6] In a discussion of Sibelius Parmet concurs, stating that "disorder, as well as order, has contours of its own", and that conductors must emphasise the contours which bring life to the disorder (1957:53); the interweaving of apparently unimportant thematic particles. It seems that those contours also prevent any collapse into the disorder, rather providing a framework for the process of experiencing the disorder.

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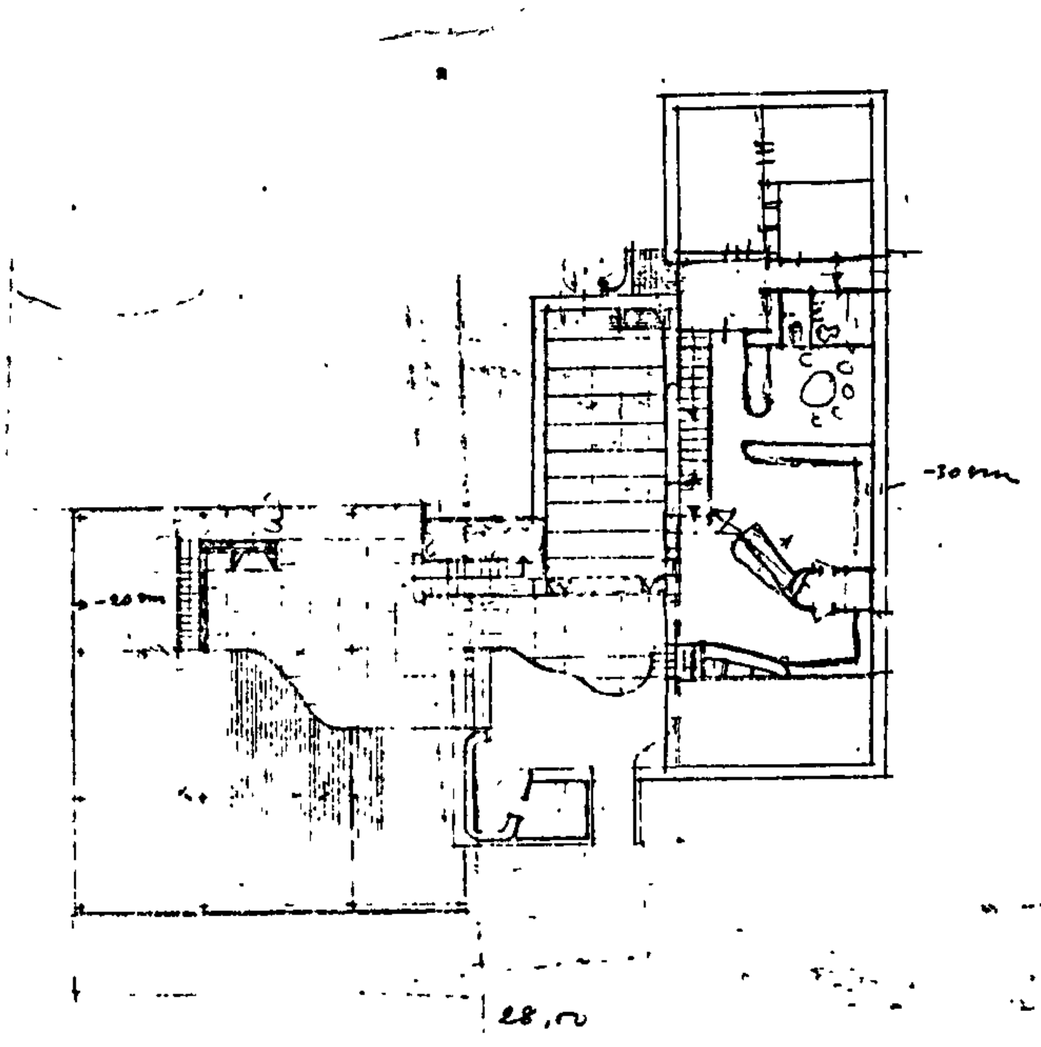
[5] This recalls Langer's biological forms of feeling (1988).

[6] Bergson does not answer the big problems which concern the nature of randomness, but his notion of vital order inherent in the *élan* is comparable to the Goethe's *Urphänomen*, and may agree with McEwan's reading of Anaximander's notion.



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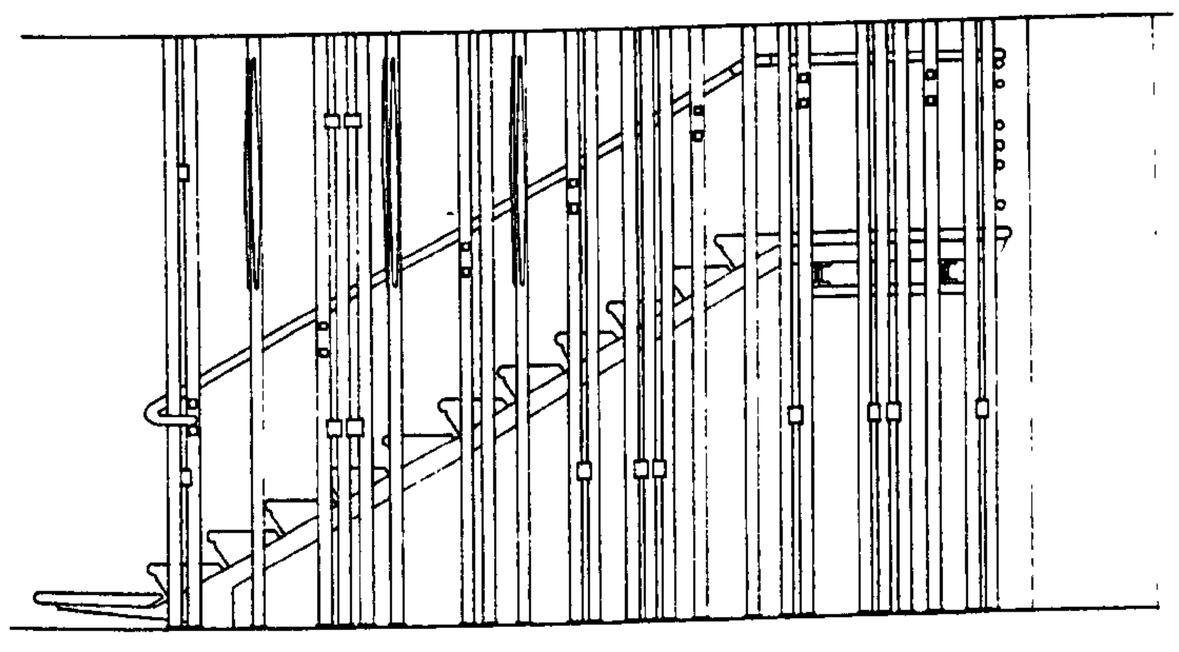

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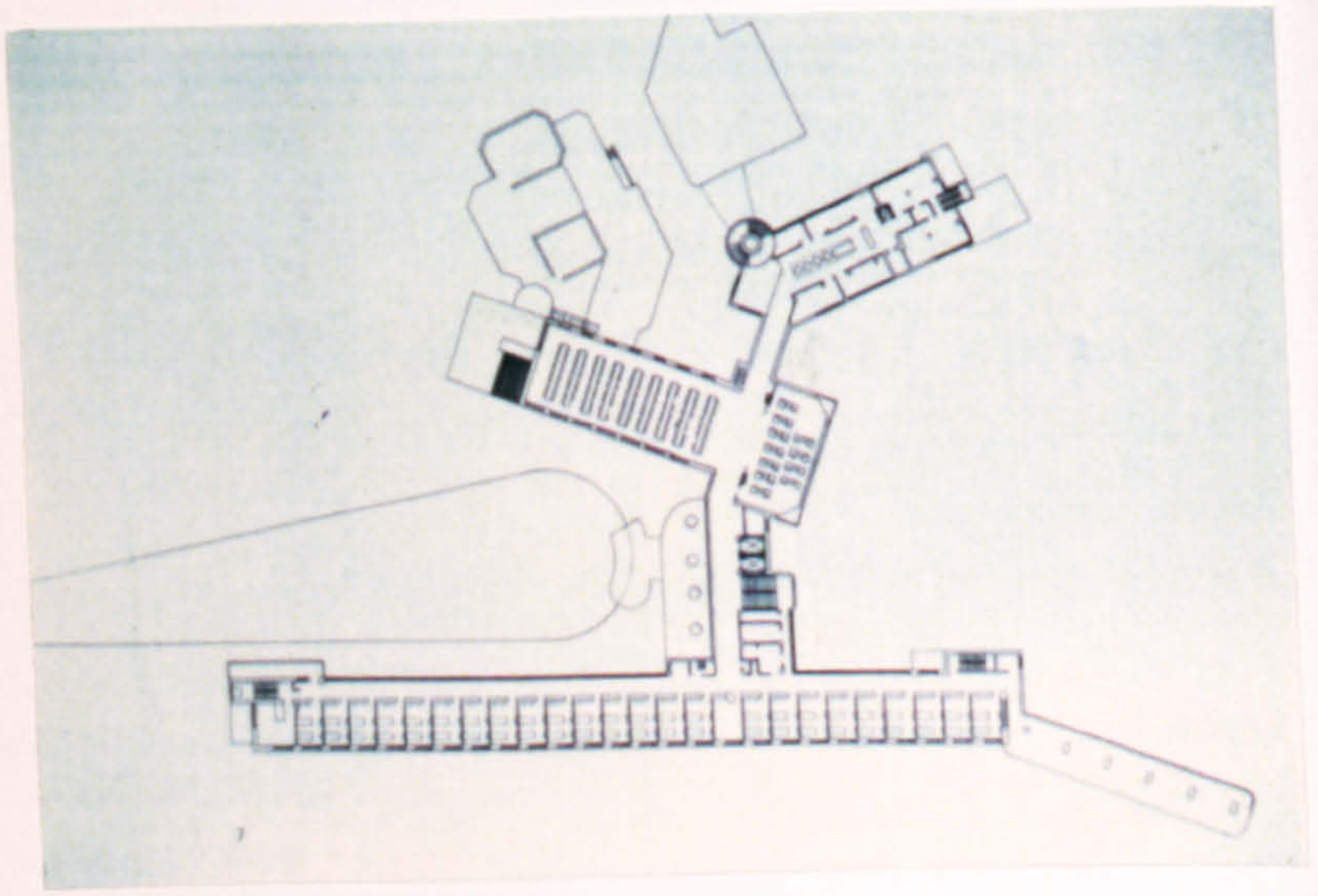
Fig.14.5 Plan of *Villa Mairea*; Aalto, 1936-9

Fig.14.6 Stair of *Villa Mairea*; Aalto, 1936-9



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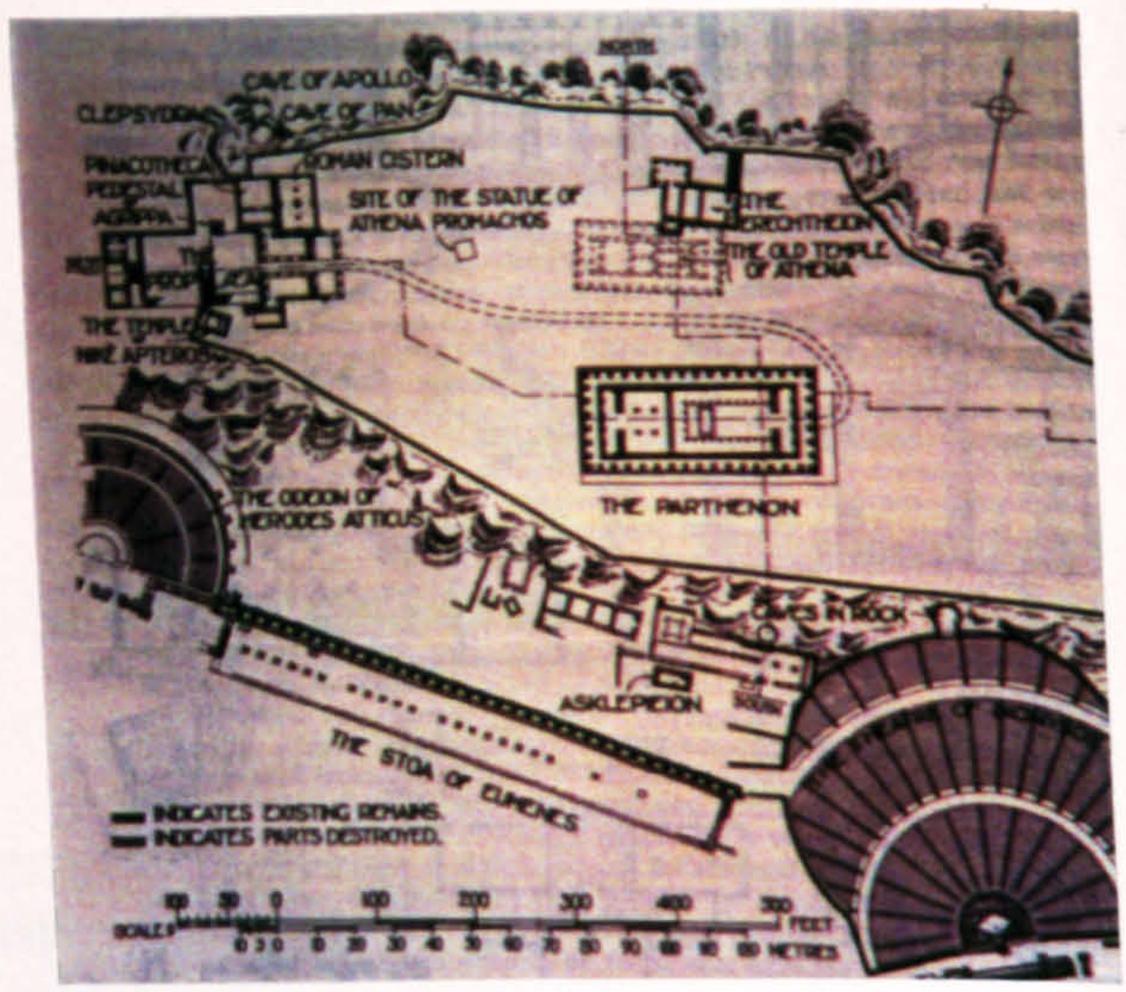

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Fig.14.7 Plan of *Paimio Sanatorium*; Aalto, 1928-33

Fig.14.8 Plan of the *Acropolis*, Athens

Experience of both art and nature comprise continuity and perceptual immersion, and may also exhibit order, sharing what Berleant describes as "deliberate disarray" (1993:238). Examples include the seeming disorder of parts of Sibelius' *Fourth Symphony* (1911, fig.14.3; tape e.g.55) and the internal piazza's of Aalto's cultural centres (fig.14.4). Both Sibelius and Aalto set up, then challenge order. For example, Weston finds that the axiality of *Villa Mairea* (1937-9, fig.14.5) is "undermined" by the asymmetry of the screen of wooden poles on the ground floor (1992:4).[7] This is evidence of Aalto's ability to establish and simultaneously to challenge a seeming order, for example by encouraging diagonality and laying out forms which counter the strictures of the perpendicular (fig.14.7) which roots his work in the likes of the subtle jointing of forms (relational harmony), which accords with the *logos* inherent in Athenian Acropolis (fig.14.8).[8] Berleant's caveat "deliberate" is significant, questioning the conception that such phenomena is out of 'control', or in some way 'illogical'. This suggests that the contours which Parmet discerns in Sibelius are the 'deliberate' element of control within the disorder.

Indeed, far from describing stable balance in his description of organic music, Zuckerkandl pictures "a state in which every element continuously dissolves and reconstructs itself" (1974:185). The reconstructed order is an advance on the earlier *kosmos*, if nothing else, because it is appropriate to the ideas, the intellectual, emotional, functional context of the moment; the same goes for physics (Prigogine, 1985). Such a contract with nature is inherent in the equilibration described in chapter six; i.e., the balance which the psyche of most people is able to afford in overcoming '*gaps*'.[9]

This suggests that, in both their art and their lives, Sibelius and Aalto share 'inseparable concomitants'. In other words their art and lives 'coincide' with something of the essence of both the tortuous alienation described in chapter five (which, to varying degrees, is universal), and equally the wonderful, innate creativity which facilitates life.

> "The older I grow, the more classical I become [...] The more I see of life the more I am convinced that classicism is the way of the future." (Sibelius, Törne, 1937:86).

Yet, when Sibelius sought to forge the symphonic for the fifth time (1915-19) he found that the process "made him impossible" (24.4.1915; T3:ch.4). Indeed, thereafter it seems that the *Sixth Symphony* (1923) is both deeply classical and formally enigmatic, demonstrating the "deliberate"

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[7] The axiality is further undermined by the Wave in the pond, the studio wall, the fireplace, the entrance hall wall, and the entrance canopy for example.

[8] The diagonality seen at Paimio may also be inspired by Asplund's work. For example *Villa Snellman* (fig.14.15)

[9] Michel Serres discerns a pinnacle of Greek wisdom, writing that, "Where man is in the world, of the world, in matter, of matter, he is not a stranger, but a friend, a member of the family, and an equal. He has made a pact with things. Conversely, many other systems and many other sciences are based on breaking this pact. Man is a stranger to the world, to the dawn, to the sky, to things. He hates them, and fights them. His environment is a dangerous enemy to be fought, to be kept enslaved [...] Epicurus and Lucretius live in a reconciled universe. Where the science of things and the science of man coincide" (Serres, 1977:162). Serres expands the notion in Lucretian physics of falling atoms to attend to the laws of fate (*foedera fati*) governing the ordered and monotonous world of determinism, which at breakdown, is replaced with *foedera natuae*, denoting not only the laws of nature, but an "alliance", a contract with nature. See also Prigogine, (1985:303-4).

disorder which Berleant discerned in the creation of art, and what Baranova described as overcoming "the standard constructive limits" (1995). Here Sibelius was challenging what may be seen as the simplistic notions of "noble simplicity and quiet grandeur" of the classics.

The processes discussed here are intrinsically tied to a *technika*; i.e., the technique which brings forth the essence and order. This is worked out through the design of Sibelius' and Aalto's art, but which, more significantly (and more generally) is worked out in all lives through the coupling of what Winnicott calls primary human creativity and what Lake discerns as the dynamic life cycle. Psychologists agree that the prerequisite for these natural processes of growth and (any human) creativity is an experience of acceptance, which offers sustenance, from which status is experienced and achievements are made. However, the achievement of natural human growth (the basic human drive to continue nature's creative process) is stunted by the '*gaps*' from early deprivation, and must be jump-started later by the adoption of an external order which is strong enough to allow the inner turmoil to surface, to allow the deprived child to rage and scream, without disturbing the embrace; i.e., to re-enact the primal holding environment. It is this very relation, or "wonderful *logos*" as Sibelius put it, through which the disparate split off '*bits*' or threads of unrecorded reality are joined (*harmonia*), and woven into their art. In this, Sibelius' and Aalto's art may display the dynamic of human life. Both the character of this and their own acknowledgement of the connection between their art and life which will be examined below.

JOINTS, TENDONS AND TENSION: *SUMPHONOS* AND FORMAL *HARMONIA*

> *"[...] the crystallisation of ideas from chaos"* (Sibelius, T2:66).
>
> *"Abstract art at its best is the result of a kind of crystallisation process"* (Aalto, 1947b)

Although the latter quotation refers to abstract art, which was integral to Aalto's work (as his paintings and wood experiments show; fig.14.1, 14.46 &14.47), and the former to Sibelius' 'classical' *Third Symphony*, these two citations recall something of what unites the two men in their work and in their understanding of Greek notion of finding *kosmos* in disparate ideas; i.e., crystallisation. The *techne* (process of appearance) of the *harmoi* (joining mechanisms) brings the art form and its import into being. In other words it is the bringing into being of an order which joins disparate phenomena, be they aesthetic or psychological polarities. This section will seek the symbolic import of the jointing mechanisms.

Such crystallisation was also a mechanism of uniting, or relating fragments of ideas. In his praise of "the profound logic that created an inner connection between all the motives" (Sibelius; Ekman, 1935:191) it seems that Sibelius knew that such profundity was not without tension;

> "Why do I have to endure this tension and torment while I am composing [...] This compulsion to write [...] without any compromise" (Sibelius, 8.6.1918; T3:ch.9).

Indeed, Stenhammer admired the "strange and unique power that radiates from [Sibelius'] symphonies",[10] ironically using the notion of their being "all embracing", the very subject of Sibelius' disagreement with Mahler, cited in chapter four. In Sibelius' work the motives cohere through such strange and unique power, which creates a formal tension. This suggests that living and working "with the friction" (Peck, 1993b:108) gave Sibelius transforming power. The same is apparent in the cellular elements of Aalto's work, each of which seek to manifest a human element of life (fig.14.9); i.e., they were based on an outworking of a human need. Integration of these elements through the adoption of notions of the 'organic' imbues a work with a continuity which otherwise might be offered by a strong method or module. Yet, the concatenate tension manifest by this continuity (a logic or relation which may even be experienced as "ambiguity") is the source of an important richness in Sibelius and Aalto's work. In other words here tension is used as a tool for relation, and therefore the nature of the continuity is dynamic rather than offering the security of stasis.

To reconnect with ideas of the classical world, Spitzer's exacting study of world views of harmony cites Philolaos' remark regarding "the making concordant of the discordant" (*Diels*, n32:B12) which draws forth the two antagonistic forces of 'harmonious unification' (Pliny's "*concordia discors*")[11] and 'discordant manifoldness' (1963:9).[12] Spitzer confirms that for the Ancients the "thinking together" is triumphant over the discordant, and this may be the logical ambiguity in practise. In light of both large and small scale jointing mechanisms, this section cites examples in which, but for the skill of creating such a formal joint, *harmonia* would be lost and discord and disarray would abound.

RELATING TO TENSION: *LOGOS* AND THE 'GAP'

> *"[...] organic, dynamic, full of tension and tendency."* (Ghiselin, 1952:14)

In creative work tension may result from the attempts to unite divided elements (or selves) in attempts to avoid psychological chaos. Chaos, it should be noted, is rooted in χασκειν (*chaskein,* gape) leading to an identification of chaos and a primordial (or indeed primal) chasm or, indeed, gap (McEwan, 1993:11& 61; Kirk, Raven and Schofield, 1983:38; Vernant, 1985:377). The opposition between *kosmos* and *chaos* is "a purely modern invention" (Jaeger, 1947:13).[13] Pre-Socratic thought and ideas were not conceived in terms of what are now understood as oppositions, but rather both/and notions which tended towards a whole; i.e., a *kosmos*.

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[10] Wilhem Stenhammer (1871-1927) was a Swedish composer and conductor who regularly promoted Sibelius' work.

[11] Cited, without source, in Spitzer, (1963:9).

[12] Spitzer examines how these became manifest as the basis of Catholic and Protestant world views of harmony (1963).

[13] Concurring with Hesiod, an early Greek poet who followed Homer, McEwan believes that there is no opposition between kosmos and chaos, believing, with Ovid in mind, that it is a Roman invention. (1993:62).

Referring to the 'threads of unrecorded reality' evinced in part one, Langer notes that "the creative symbol represents the tensions, rhythms and activities of the unfelt substructure of life" (Langer, 1988:xiii). The relation of parts (i.e., the jointing inherent in *symphonie* and *harmonia*) often results in stress-filled energy or tension. In other words, tension is a bi-product of the making of a whole if that whole derives from a relation (*logos*) of parts. It is the resolution of such tension which is a characteristic of *harmonia*. Indeed, Spitzer explains that in the Renaissance the tuning of the artistic instrument to create harmony did not represent the artistic genre alone, but rather a tuning of humans with nature to the mood of God (1963:135).

To recall, Sibelius complained, "Why do I have to endure this tension when I am composing. This compulsion" (Sibelius, T3:ch.9). Indeed, he repeatedly referred to his struggles with God, associating both the nature and appellations of God and *logos*.[14] This tension is inherent in the musical and architectural examples of *harmoi* (joinings) in the last chapter, especially those related to the dichotomy of the Pedal and the Wave. These were shown to be a major formal characteristic of both Sibelius' and Aalto's work.

Techne, Birth and Renaissance Influences

In his polyphonic *Sixth*, Sibelius replaces the traditional tonic-dominant conflict with other tension producing factors. Indeed, such tension is a vital component of Sibelius' "organic and resilient form" (Murtomäki, 1993:217). Again, the C centrality of the *Seventh* draws that work, too, to the heart of Renaissance polyphony, where the *finilis* of the mode is the only real centre. Yet the work opened amid the tension of tonal ambiguity (Jordan, 1984:136). A "multiplicity of material" is spun around the Adagio theme (a Pedal episode in terms of its rooting capacity alone), all of which has intricate "inner connections" (Murtomäki, 1993:250), which incidentally Murtomäki associates with the 'profound logos'. Together these techniques allow Sibelius to achieve unity of harmonious unification "on his own terms" (Layton, 1978:57); i.e., drawing out what is inherent in the material. Murtomäki refers to this as "motivic synthesis"; the root of Sibelian organicism (1993:250).

Attending to such Renaissance-like episodes, Pike explains that suspensions are created and resolved through the exposition of consonance and dissonance in chords, tonality and rhythm (1978:204-9).[15] Descending step motives, chromatic contrary motion, upward and downward suspensions all indicate the struggles and attempts to resolve such tonal suspensions. Thus, according to Pike, the *élan vital* of the *Sixth* is the resolution of the opposition between dissonance and consonance as found in the difference between contrary and parallel motion, or chordal motion and part writing (1978:208). Indeed, this *élan* recalls the juxtaposition of

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[14] In Johannine writing *logos* referred to the second person of the trinity.

[15] Murtomäki also cites the unifying nature of the rhythmic-melodic asynchronism in the *Seventh* (Pike's "rhythmic dissonance", 1978:209), for example the circling motives in the woodwind being countered by "rhythmically differentiated comments of the bass", based on the same movement idea (after 10:4-).

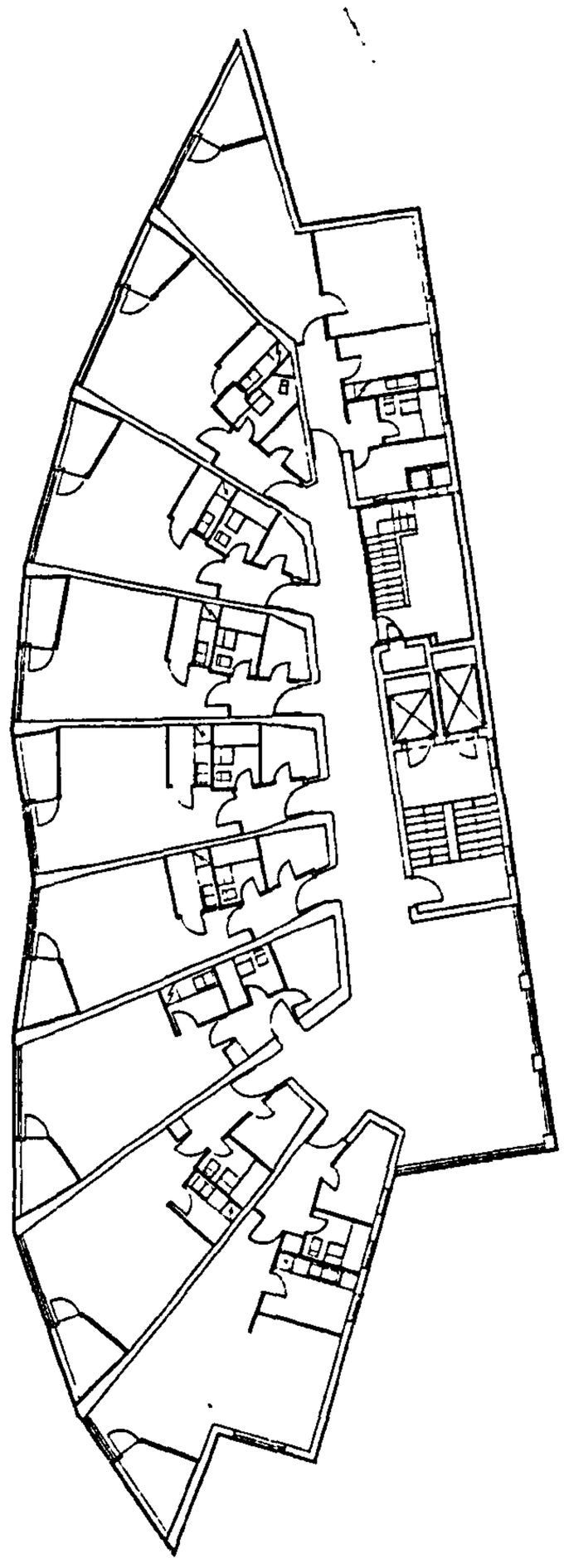

Fig.14.9 Plan of *Neue Vahr Apartments*, Bremen; Aalto, 1958-62

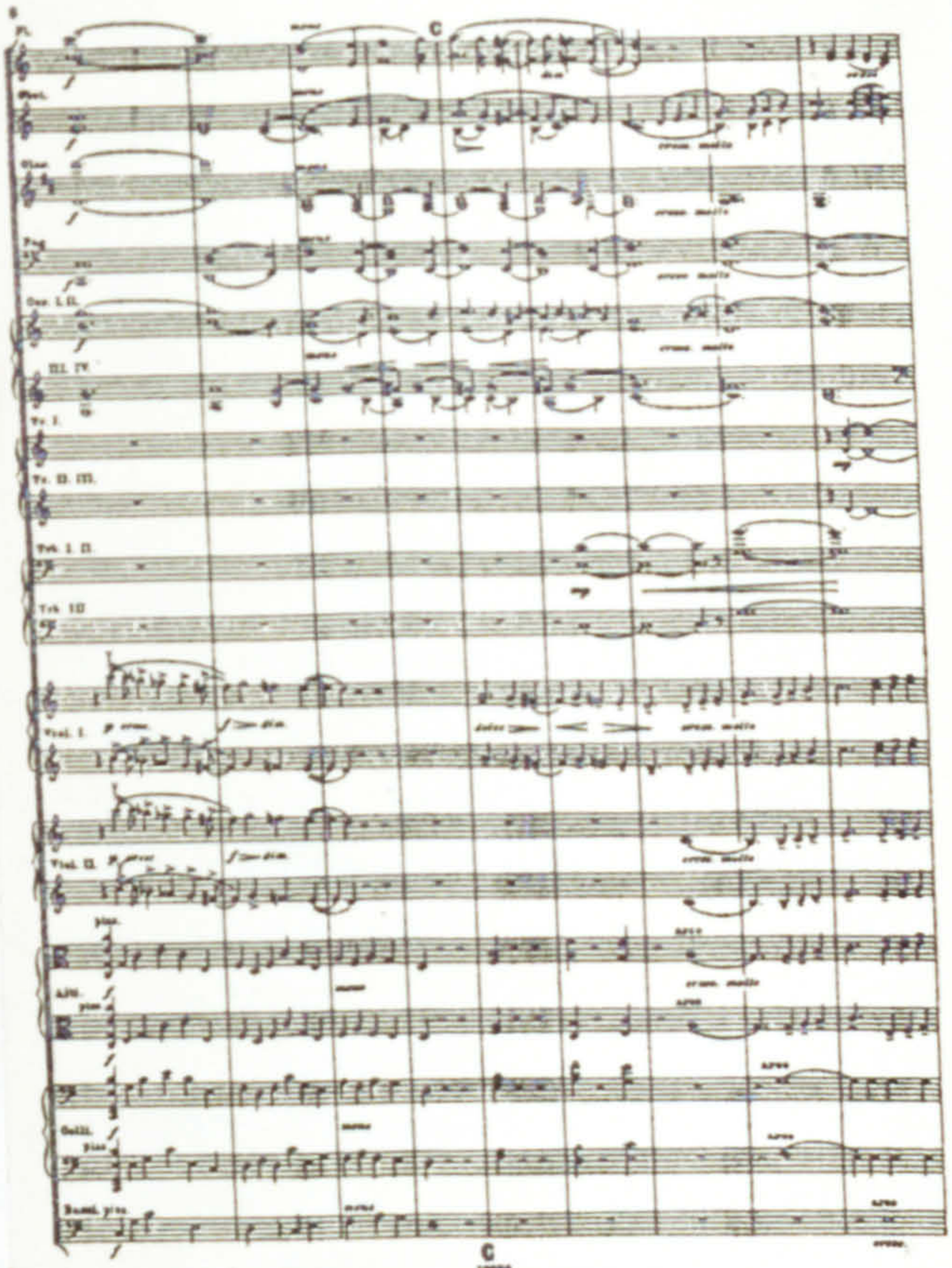

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Fig.14.10 The 'sigh' of the Olympian trombone theme, *Seventh Symphony*, Sibelius, 1924

Fig.14.11 View of rear of the *Enzo-Gutzeit Headquaters Building*, Helsinki; Aalto, 1959-62



14.12

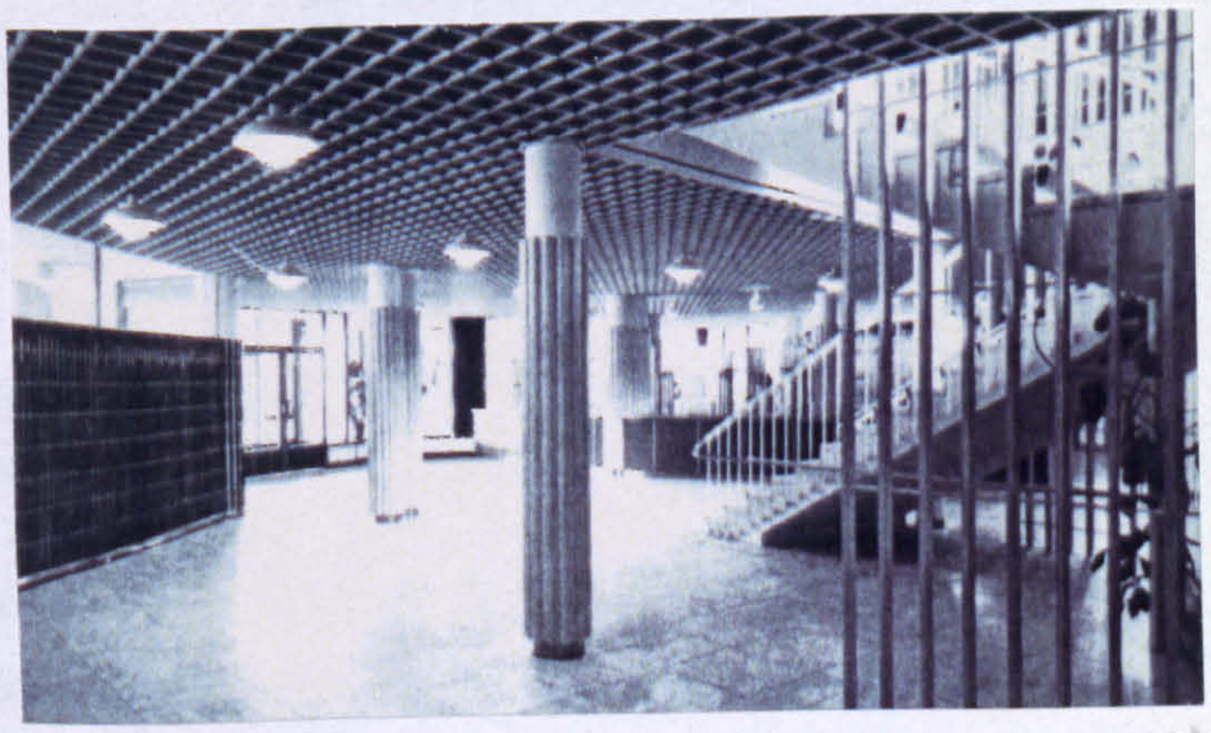

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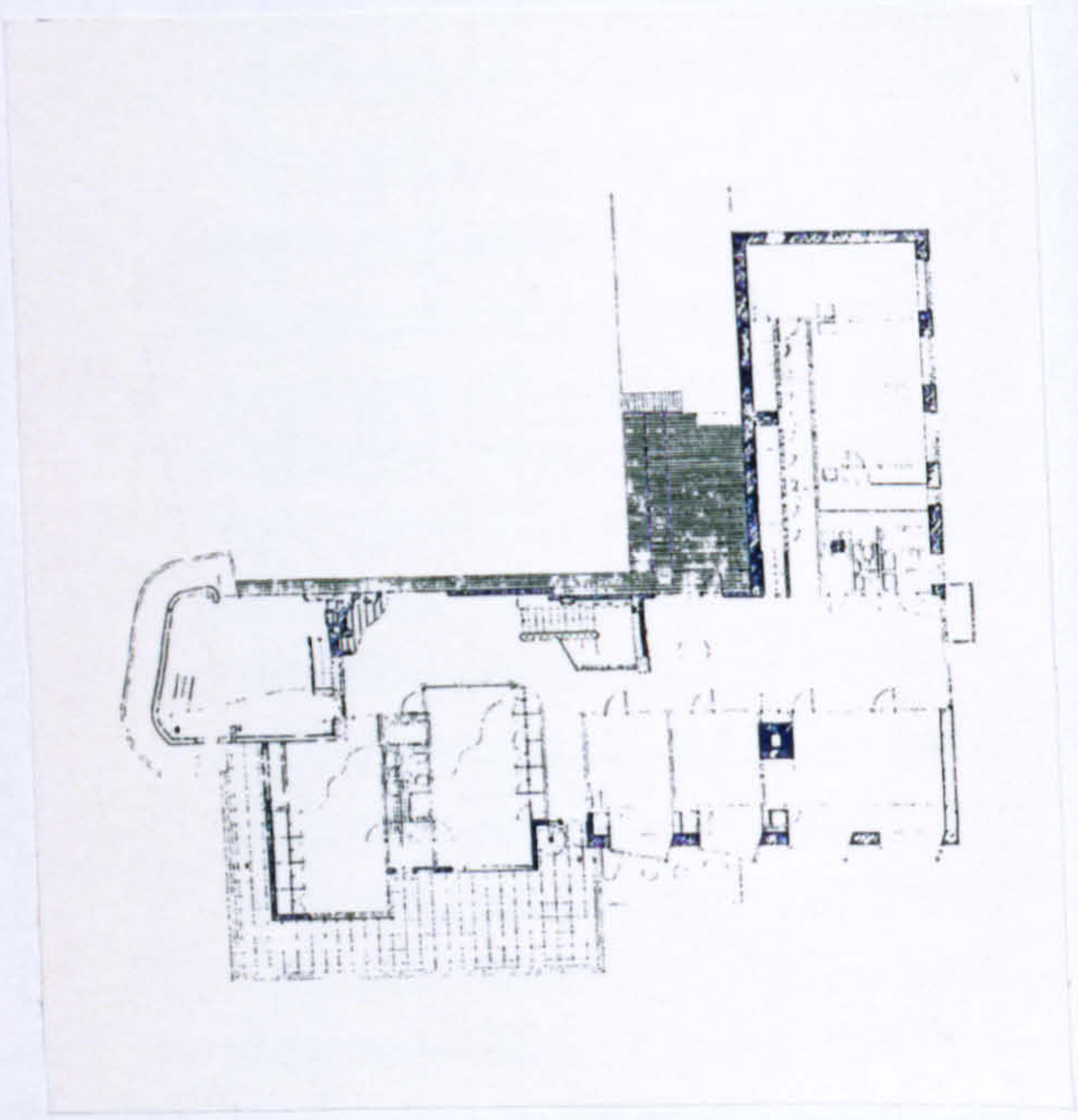
Fig.14.12 View of *Neue Vahr Apartments*, Bremen; Aalto, 1958-62

Fig.14.13 Foyer of *Wolfsburg Cultural Centre*; Aalto, 1955-8



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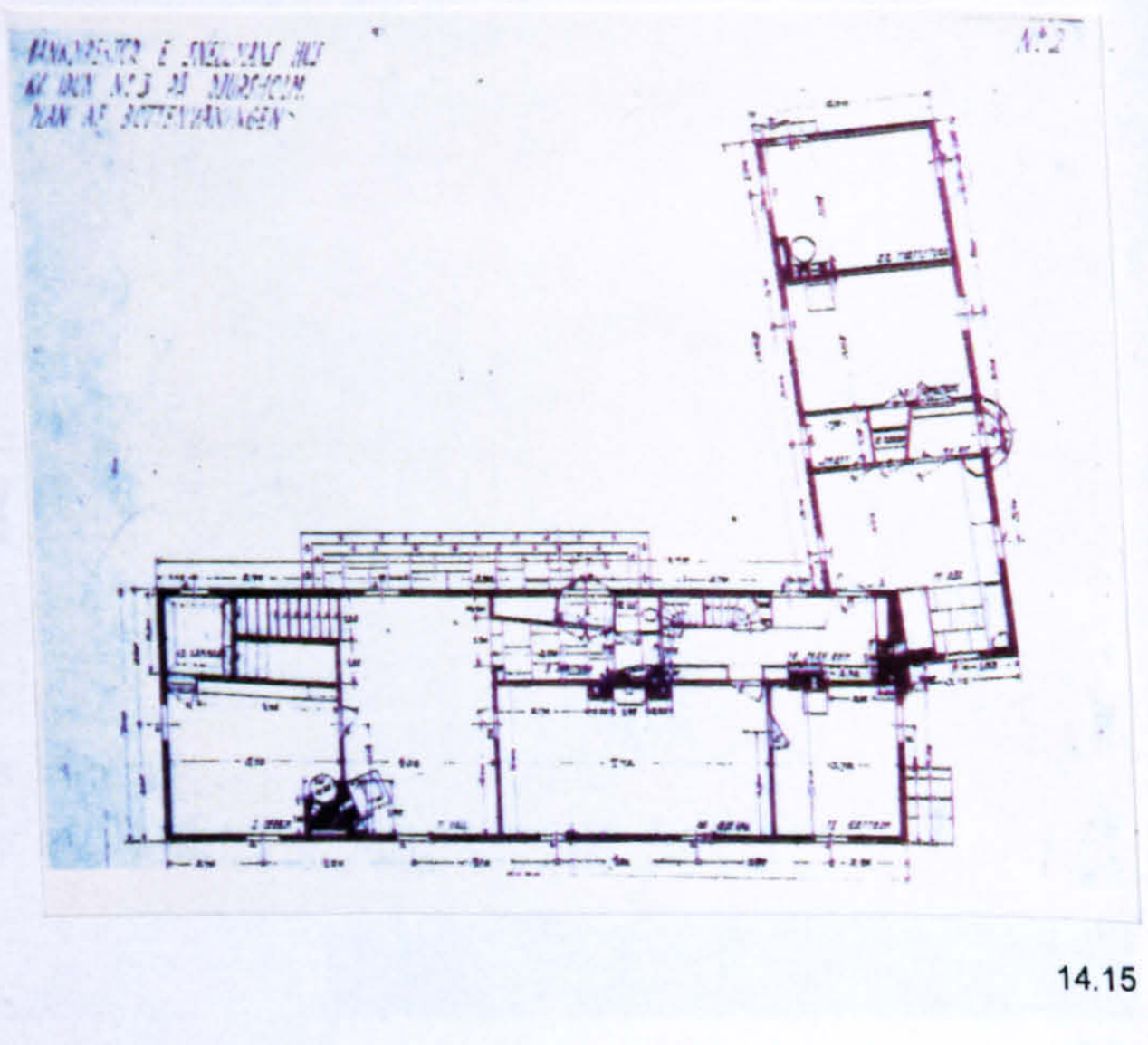

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Fig.14.14 Plan of first floor, *Villa Mairea*; Aalto, 1936-9

Fig.14.15 Plan of *Villa Snellman*; Asplund, 1917

the undulation and the rectilinear (i.e., the Wave and the Pedal) in Aalto's work. These examples all address ways of relating and resolving suspensions and tensions. The psycho-spiritual corollary may, by now, be discerned.

From the initial bars of the *Seventh* the bassoon's D creates tension in relation to the C centre. The admittedly late establishment of C is achieved, not by a triumphant cry, but rather through a "veiled conclusion", the 'sigh' of the "Hellenic" / "Olympian" trombone theme; i.e., the arpeggiation of C major chord (fig.14.10; tape e.g.56) (Murtomäki, 1993:264). However, the dissonant tonal axis (E*b*, B*b*, A*b*) is established and grows in opposition to the consonant axis (D, G, C) (Pike, 1978:210), until, ultimately there is a final "struggle" for the tonal centre with C ("the serene Olympian motto-theme that forms the symphony's credo!"; Tawaststjerna, T3:ch21.). At this moment a fragment of the trombone theme is planted (attesting to its fecundity and significance). This grows into the tonic sphere through a chain of suspensions leading to the subdominant. Eventually, with the assistance of the last appearance of the dissonant sphere, the tonic C is precariously attained, but not without what Murtomäki describes as the "assistance" of the dissonant axis (1993:273). Here, too, the extra-musical corollary is plain. Indeed, the whole of the first part of the *Seventh* is a transition-continuity process establishing the tonic's very being. Rather than confirming a new situation, the Scherzo seeks to establish maximum distance from this tonic space in what Murtomäki describes as a "considered preparation" for C minor, which is only thwarted by the trombone theme; as Sibelius put it, "Mount Olympus is shrouded by dark clouds." (Sw,T4:200).[16]

Tension, Distorting and Harmonia

Unlike the consistency which Schildt often seeks, the architect, Robert Venturi, discerns "tension" as the mechanism which relates disparate elements in Aalto's work (1976:66). The "barely maintained balance between order and disorder" which Venturi finds in Aalto's work (1976:66), and the way this is rooted in deviations (i.e., side ways glances at issues, functions or norms) manifests Aalto's scepticism; indeed, believing that the power of his work "comes from the tensions their deviations produce." He cites the rear of the *Enzo Gutzeit Headquarters*, (1959-62, fig.14.11), and the *Neue Vahr Apartments,* Bremen, (1958-62, fig.14.9 & 14.12) in which he finds distortions to an original order. He also finds an example of order on the verge of disorder in the *Wolfsburg Cultural Centre* (1958-62, fig.14.13).

A further example of this may be found in the first floor plan of *Villa Mairea* (1936-39, fig.14.14), which takes Asplund's rotunda of *Villa Snellman* (1917-18, fig.14.15) a stage further, by liberating the interior from the restrictive skin of the building's rectilinear container (Wrede, 1985:174).[17] This produces an external curved vertical slatted protrusion of the studio, as if

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[16] Jordan further identifies the same invention in which Sibelius put aside the traditional tension-creating form, generated by modulations away from the tonic, in preference for "successive juxtaposition of harmonically stable and unstable sections" (tonal ambiguity) early in his symphonic career (1984:181).

[17] *Villa Snellman* may also have been a precedent for the splayed plan found in the *Paimio Sanatorium.* (fig.14.7)

Aalto used the form to signify the creative, which breaks the bounds of the restricting rationale. However this excursion brings tension between the freedom of *Leistungsform* and the order or coherence of the whole; i.e., the organic and the geometric. This may be an important key to both Aalto and his most inspiring work.

In addressing the configuration of Aalto's work Griffiths explores the recurrence of difficult wholes (1995), identifying an "axis of anxiety between perimeter and centre" in the palazzo/villa forms (1995:124) (fig.14.16), and an "anxiety of boundary" as these relate with other urban forms. He suggests that such discordance between the *Enzo Gutzeit* whiteness and the Uspenski (Russian Orthodox) Cathedral redness (fig.14.17) occurs only in certain "ranges". This, however, is an example of *concordia discors* since the buildings are also united by their common copper roofs (1995:137-9). Thus, in Aalto's work, it may be said that such tensions are invariably countered by sufficient equivalences to prevent overwhelming discord.

RUINOUS CREATIVITY?

> *"[...] sure symphonic logic behind the deliberately fragmented structure"* (Greenfield of Sibelius, 1988)[18]
>
> "Horror Vacui, *the horror of emptiness [...] Man has to weave and weave a believable net around something he cannot face otherwise: his own meaninglessness"* (Juhana Blomstedt, 1987:14)

It is apparent then that tension infers a dichotomy of bipolar forces with the capacity for continuity and discontinuity, for fissures, fractures or even fragmentation of a whole (Brown, 1993:3249). It is no coincidence that there is scholarly agreement that the work of both Sibelius and Aalto is imbued with a phenomenon of erosion, decay, deconstruction or fragmentation (e.g., Hepakoski, 1993; Murtomäki, 1993; Quantrill, 1983; GS3).

DECAY, DEATH AND BECOMING

> *"For the early Greeks [...] Nature was a vast living organism. The problems which so profoundly exercise modern thought, the problem of the relation between dead matter and living matter [...] did not exist [...] for no difference of principle was recognised between the seasonal rotations of the heavens and the seasonal growth and the fall of leaves on a tree"* (Collingwood, 1945:111)

Revisiting the discussion of *Sterben und Werden* (death and becoming) it appears that *harmonia* and *kosmos* are neither simplistic nor superficial. On the contrary, they comprise a complex yet intrinsically well-handled order. Although fragmentation is a natural process in which the small germs are separated from the whole, it is by no means anathema to explore it alongside the phenomenon of growing, creative structures.[19] For instance at conception the growth process comprises the splitting (or what may be understood as the fragmentation) of the fertilised egg. Later growth occurs with gradual the integration of cells in different

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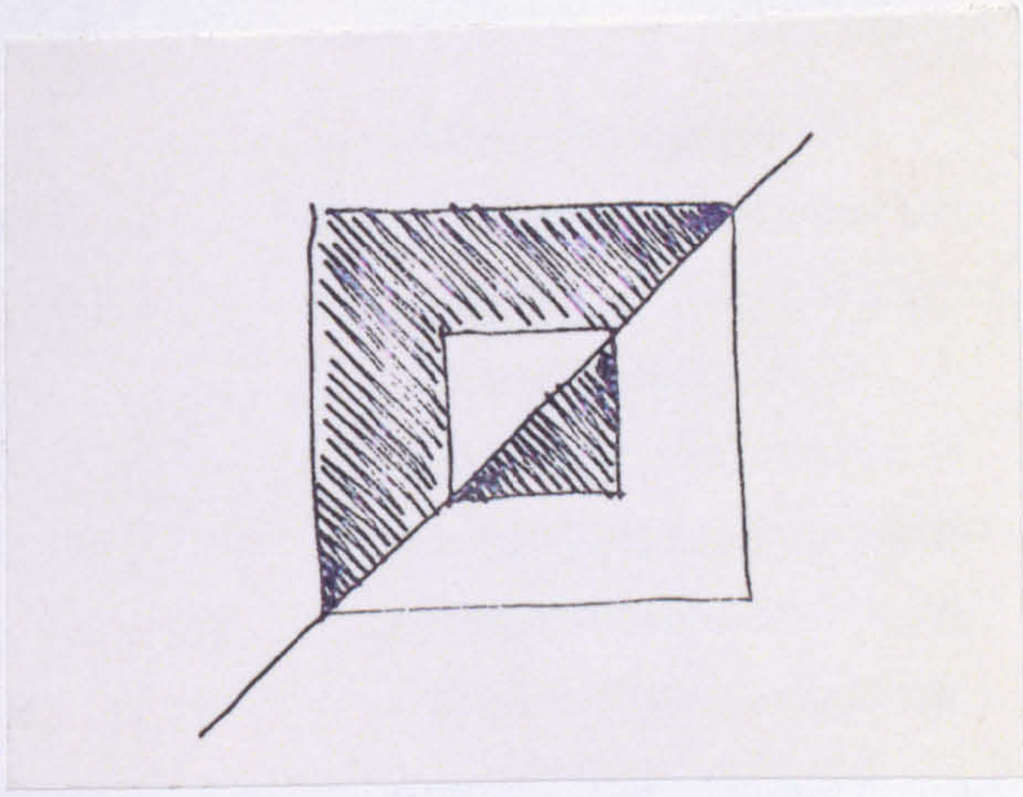
[18] Edward Greenfield, BBC World Service, 13 July, 1988.

[19] In biology fragmentation refers to asexual reproduction in which the parent breaks up and each fragment develops into a new individual (Curtis, 1992:173). In geology fragmentary rock is composed of previously existing rock or other substances (Brown, 1993:1018).



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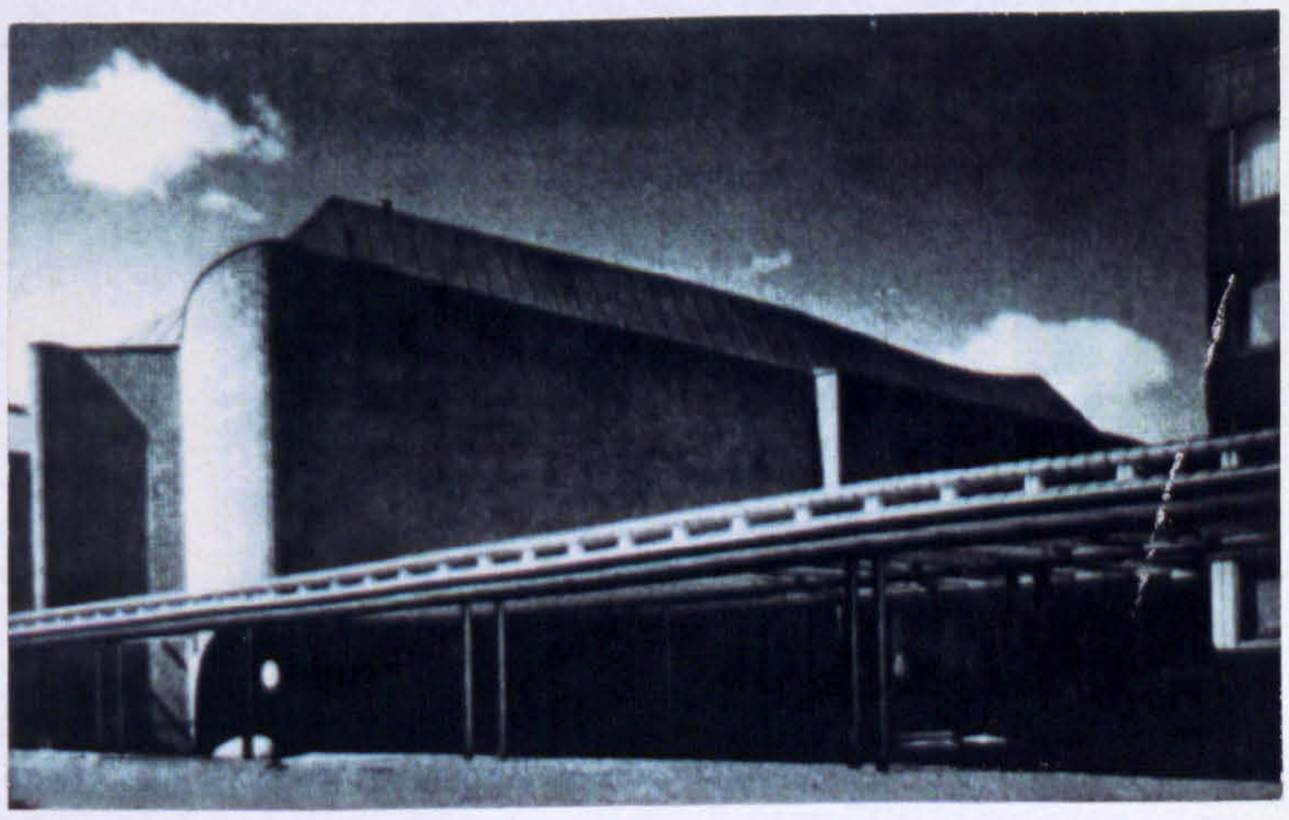

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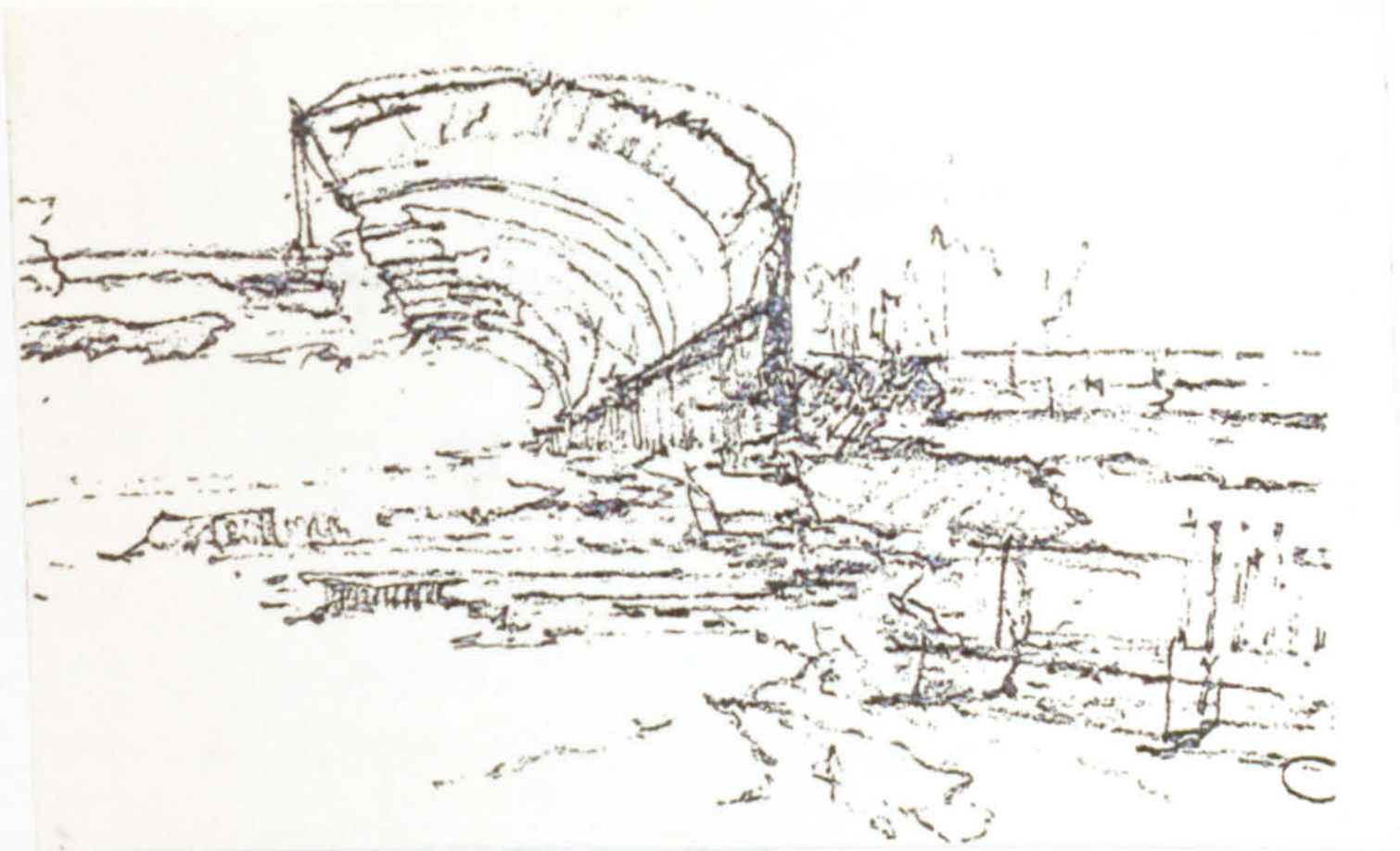
Fig.14.16 Griffiths' Palazzo / Villa condition anxiety of axis

Fig.14.17 View of the *Enzo Gutzeit Building* in front of the Orthodox Cathedral, Helsinki

Fig.14.18 View of the *House of Culture*, Helsinki; Aalto, 1955-8



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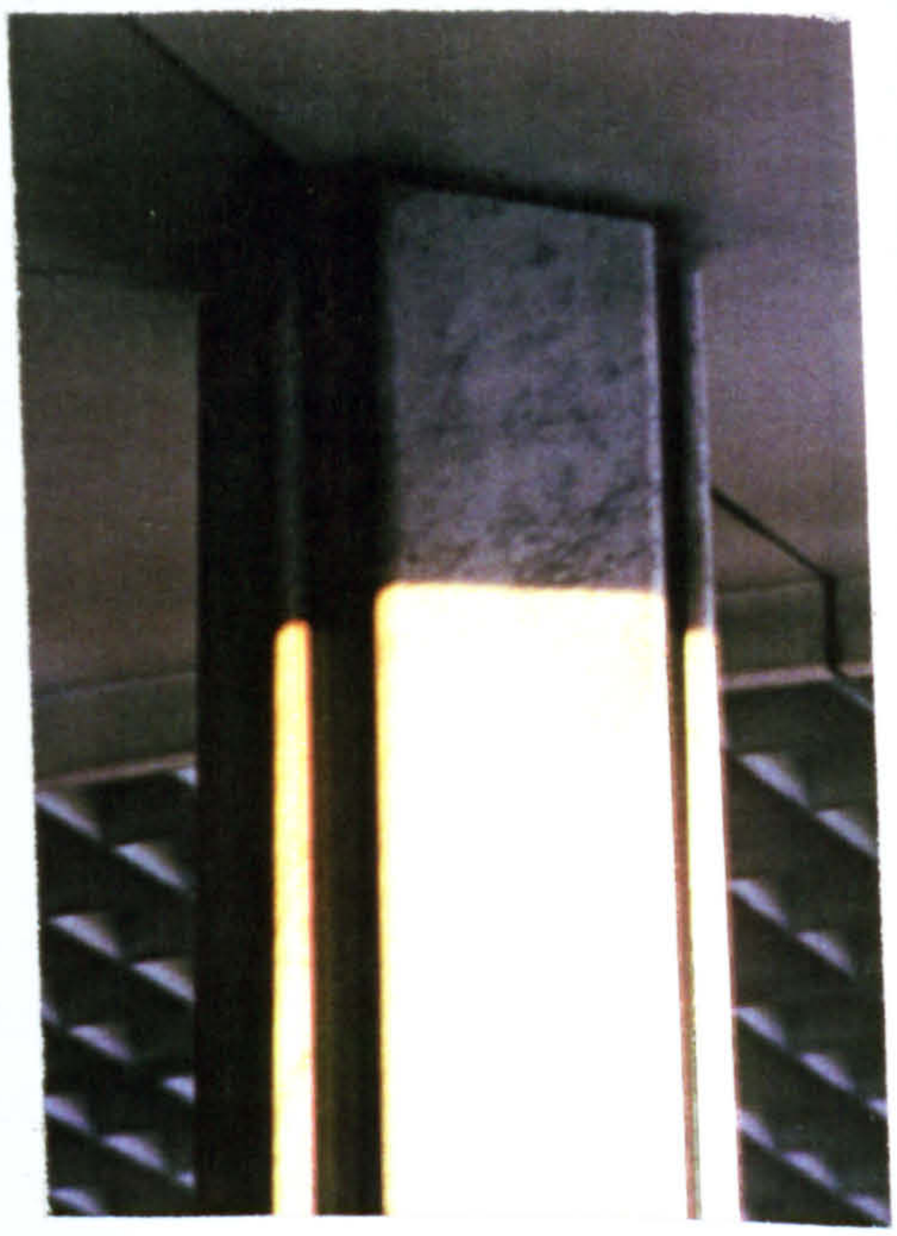

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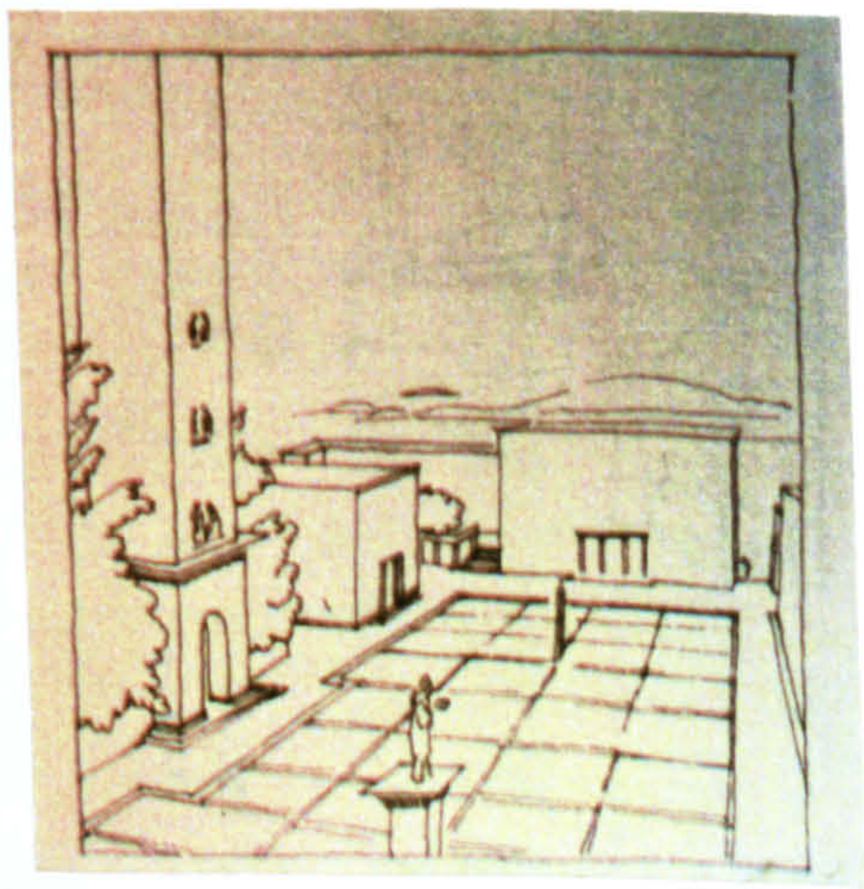

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Fig.14.19 Design sketch of *Helsinki University of Technology Lecture Theatres*, Otaniemi; Aalto, circa 1956

Fig.14.20 Column at *Finlandia Hall*, Helsinki; Aalto, 1962-71

Fig.14.21 Design for *Jyävaskylä Church*; Aalto, 1926 (not built)

permutations, depending on the nature of the growing thing (*Leistungsform*). This angle of analysis introduces the idea, inherent in nature, that creations do not go on growing for ever, but to the point of their full potential, returning incidentally to the Greek notion of the whole *kosmos* comprising living and dying. As demonstrated above, Aalto's *House of Culture* (1955-58) in Helsinki is an example of the handling of organic composition in the context of finite form. "The different organic elements seem to grow without restriction, and are strung together at the last moment when its fruition is reached." (Blomstedt, 1988; pers.com.).[20] The seemingly amorphous form of the hall (the Wave) is yoked together at the last minute by a completely alien tangential stake (the Pedal), in the form of the covered walkway (fig.14.18).

Hepakoski suggests that in the *Sixth Symphony* (1923) Sibelius is actually trying to grasp wholeness, while the shadow of decay advances (1995). He finds the supposedly dichotomous phenomena of growth and decay (or ruin) to be in some way isomorphic in the music. The *telos* is imbued with coming dissolution. In other words, the moment of fruition is concatenate with the beginning of the decay activity. As with the *Seventh*, the *Sixth* begins off the tonic, moves towards a *telos* of the tonic, then falls back away from the tonic again and towards silence. At the heart of this Hepakoski has discerned a new, deepened 'modern classicism' striving to produce unique structures - "freely logical, intuitive, or *ad hoc* shapes" (Hepakoski, 1993:21) which were dictated by the "will of selected material" as Sibelius put it (Levas, 1972:82-3).[21] These content-based forms comprise local germination of small "sound objects" which grow 'naturally' "with very few preconditions to produce larger architectural shapes." (Hepakoski, 1993:22). This incisively describes Aalto's *Neue Vahr* (1958-62, fig.14.9 & 14.12), in which the accommodation units freely expand to respond to the solar or panoramic advantages of aspect, as indeed does *Baker House* (1945-9), and in so doing contributing to the overall architectural form. The interplay of the rectilinear layout of 'services' to the rear and freer outworking of the lived-in spaces to the front of these buildings evinces that the *élan* arises from the latter, enhanced and served by the form and content of the former in both buildings.

Yet more importantly Hepakoski's suggestion of "few preconditions" brings a restriction to the scope of the teleology to something closer to Bergson and D'Arcy Thompson, in which the totality of Aristotle's Finalism is resisted.[22] It will be recalled that there is a degree of determinism in teleology in which things realise a programme previously arranged. The emphasis on "content-based structures", in which "few preconditions" outside the *élan* of the content (be it a fragment, a

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[20] Severe Blomstedt, Sibelius' grandson, and ex- Director of the Museum of Finnish Architecture, (pers.com. 10 July, 1988). He spoke of the courage needed to let the cells "swim" into what ever form the brief demands, and the creative wisdom needed to "catch" them at the right moment.

Salmenhaara (letter to the author, 2 July, 1988) wrote about the same growth process in Sibelius, in which the "very fragmentary" material becomes "an organic whole."

[21] Levas reports Sibelius' comment, "The content is always the primary factor, while form is secondary, the music itself determining its outer form." (1972:82-3).

[22] Chapter ten noted that scholars disagree about the justification for Bergson's position of a radical Finalism. (e.g., Kolakowski, 1985; Collingwood, 1945)

phrase or series of phrases) are compositionally impulsive, demands more understanding of the nature of the *élan* in the creation of art form, as opposed to philosophical speculation. The remaining sections of this chapter seek to explore the *élan* to demonstrate this thesis' contention that the nature of the *élan* may be close to the nature of the '*gap*'.

Ruinous Relations with the Past

Both Sibelius and Aalto establish discussions between their genre's traditional formula and an inventive challenge to such sanctioned *paradeigma*, which may either appear as a diminution of the tradition, or as an enhancement or modernisation. An exploration of Sibelius and the modern mind has indeed sought to identify his capacity to modify tradition, extending it to meet contemporary needs (Mellers, 1948:178). Whether this takes preference over the need to draw out form inherent in the content is debatable. However, the adaptation of tradition still stands. Examples of Sibelius' use of ancient modes and polyphony, and Aalto's references to Greek amphitheatres (fig.14.19), remnant columns (fig.14.20) and Latin courtyards (fig.14.21) come to mind. It will be recalled that Aalto believed that a "dilapidated Karelian village is somehow similar in appearance to a Greek ruin" (1941). Indeed, Schildt suggests that Aalto's pre-occupation with ruin may signify a Nietzschean pessimism, in which "complete reconciliation with nature is perhaps only possible after life has ebbed out." (GS2:230).

Such musical ebbing away is identified by one commentator who noted "aphoristic concision" in Sibelius' work, describing the opening of the last phase of the first movement of the *Fourth* as "the tenuous whimper of a fragment" (fig.14.22; tape e.g.57); an "inversion of the Sibelian method of thematic evolution and the destruction of the nineteenth century symphonic tradition" (Mellers, 1948:180). In his later works, Sibelius is understood to use formal deconstruction in his quest for a unity of subject matter and structure (Tarasti, 1995:177-202).[23] Indeed, Tarasti has even spoken of Sibelius' use of deconstruction of traditional approaches to form, believing that Sibelius breaks and fragments the traditional compositional *paradeigma* by the inter-weaving of the little cells or roots. Yet Sibelius' is not iconoclastic compositional management, but rather may be described as structural arrangement arising from the essence of the musical ideas. Here *Leistungsform* assists both the notion of creating according to inherent ideas, and the formation of such in an manner which infers a disinclination from a norm; even resulting in a form which appears ruinous; *Sterben und Werden*. With reference to Aalto St. John Wilson refers to this as the two-way relationship between tradition and innovation (1992).

Discussing the compositional gap at the heart of the *Enzo Gutzeit Building*, Griffiths believes Aalto had a simple desire to infill the Enlightenment city grid (1995:152); recognising there Aalto's disinclination towards the *eidos* of such urbanity. Porphyrios, on the other hand identifies the root

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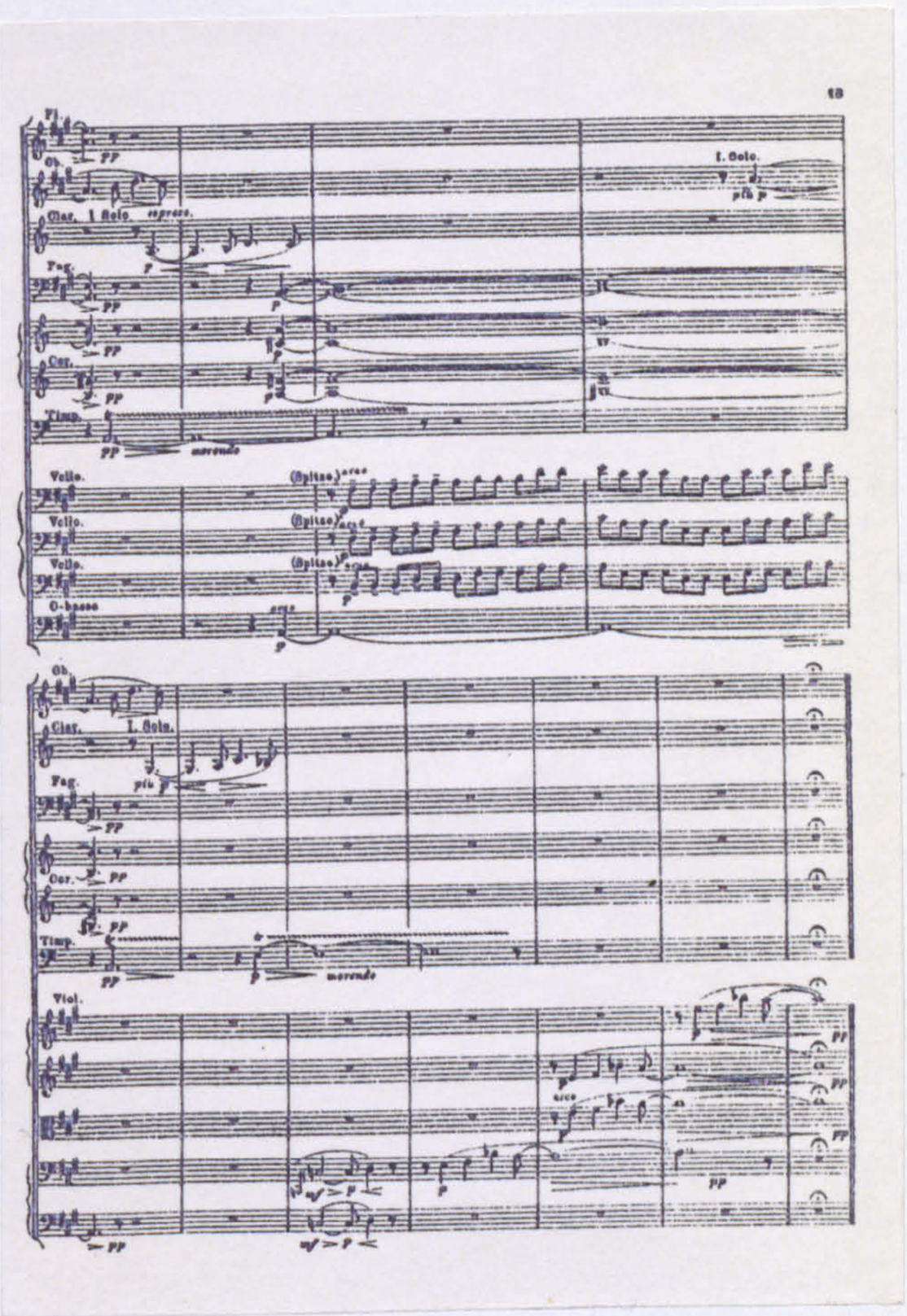
[23] For instance, in the *Seventh* Sibelius introduces a small phrase, which he then fragments further, which then grows along side others into the constant renewal of inter-related motifs.



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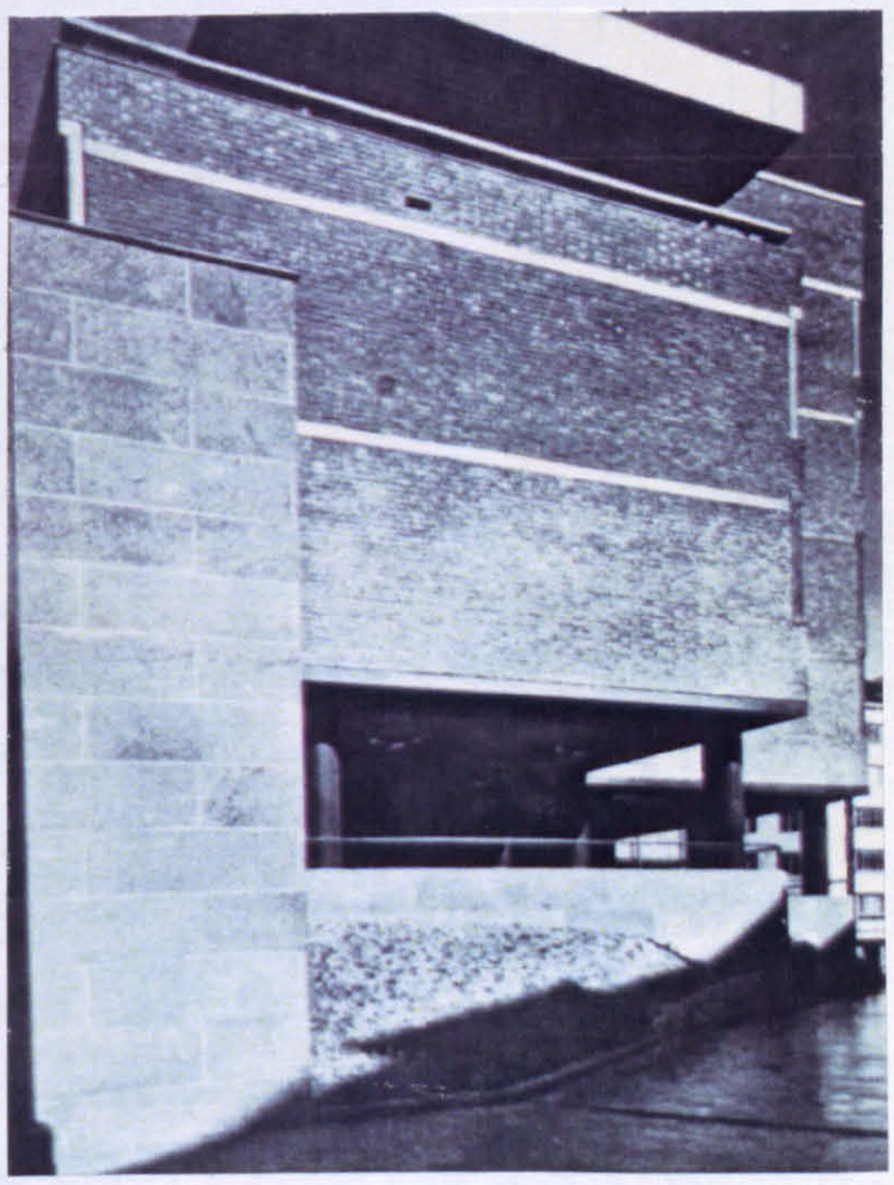

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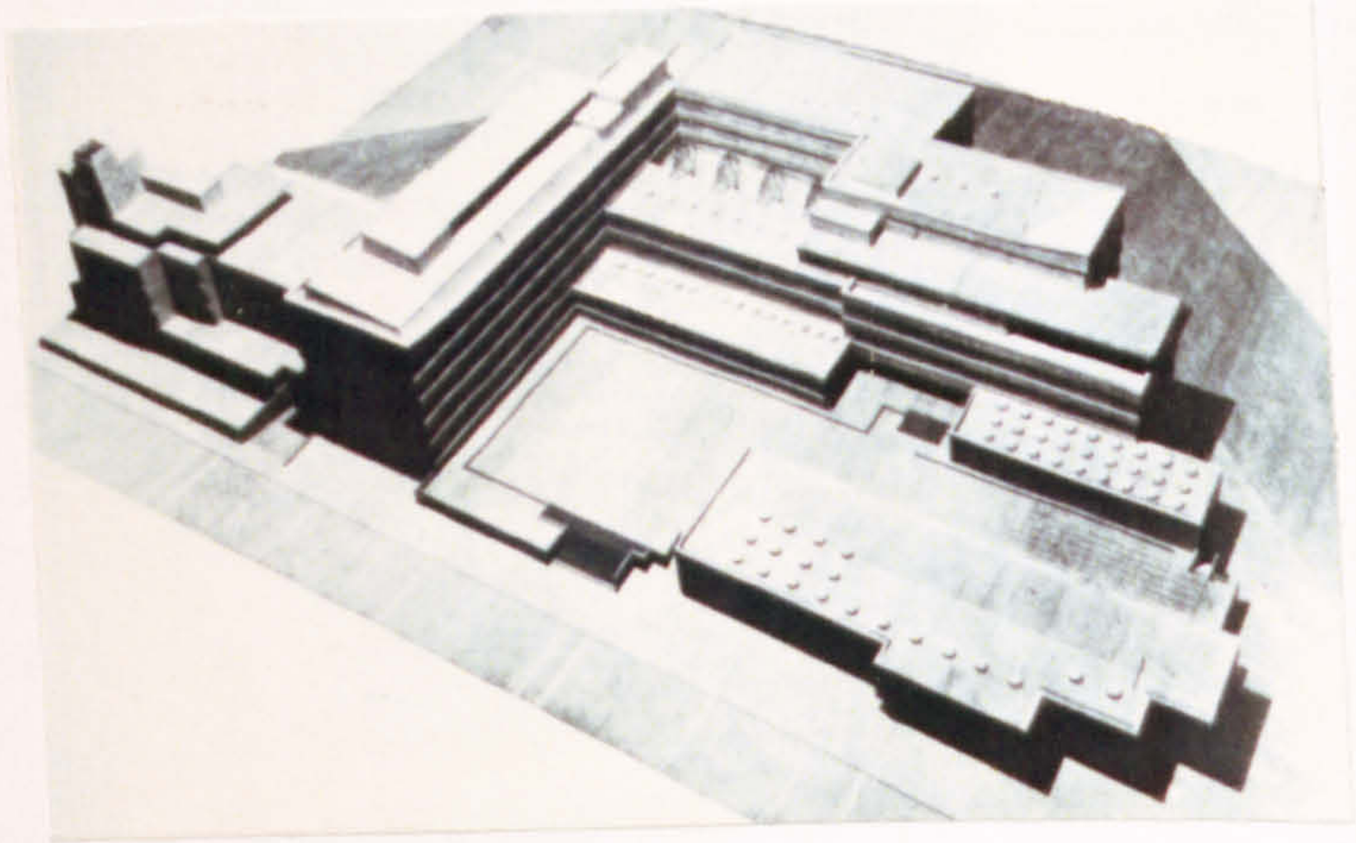
Fig.14.22 'Tenuous whimper' at the close of the first movement, *Fourth Symphony*; Sibelius, 1911

Fig.14.23 Exposed granite on which the *National Pensions Institute Building* is built, Helsinki; Aalto, 1948-56



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14.25

Fig.14.24 Model of the *National Pensions Institute Building* showing its different responses to the surrounding building heights, Helsinki; Aalto, 1948-56

Fig.14.25 View from living space, *Villa Mairea*; Aalto, 1936-9

of such recesses, or gaps, in "the classical iconography of the niche and the semicircle [...] inflecting toward" something (1982:94). Such "inflection composition" (Porphyrios, 1982:91) may also be read as a deflection from something else. Indeed, Griffiths argues, Aalto often "denies the expected", citing denial of such a city grid (1995:161-3). Denial infers an illicit declination, yet, here again Aalto's decisions may rather be an acknowledgement of simultaneity, in which, for instance, there is an inference of the Picturesque foliage which cascades down many of Aalto's walls, signifying the passage of time, and the simultaneity of *Sterben und Werden*. In other words this may be the coincident disintegration of humanly constructed form and the continuation of natural form.

Thus Aalto dealt with time, nature and ageing by dematerialising, or in some way dismantling a building's totality. The *National Pensions Institute* (1948-56) seems to be all things to all the streets which neighbour it, varying from bare rock (fig.14.23), garden, low and high rise offices (fig.14.24). Aalto also confronts ageing by use of textural manipulation, made possible by his unfashionable use of a variety of building materials, such as wood (fig.14.25). Indeed, Porphyrios identifies Aalto's symbiosis of building typologies within a single envelope as the building as a city (1982:10-12) (fig.14.2), which both recalls Strengell's ideas (1922), rehearses the notion of the *sumphonos* which Sibelius' achieves in the *Seventh,* and revisits Coleridge's Romantic notion of multeity (1993:156). This is inferred too, by Venturi, who has recognised the multi-faceted reconstruction of the urban norm in Aalto's work, stretching ("distorting") the rectilinear in *Neue Vahr*, Bremen in search of "light and view" (1983:50, fig.14.12). The distortions (or resultant formal deaths) are not whimsical, but rather demand of tradition a respectful relationship with the reality of modern human experience.

One commentator has approached this notion in terms of a "metaphor of ruin" in Aalto's work, finding "a radical fragmentation of the volumetric integrity" (Baird, 1971:11-14). Such ruin is often a contextual response, referring to the immediate environment, the historical, or the time context. At *Baker House* (1946-49), in the context of old Boston Bay brick buildings, this was achieved by using water-struck bricks and creepers (fig.14.26 & 14.27). Aalto said he wanted the building to be like "an old tweed coat",[24] fitting with his concern for how buildings looked in thirty years time. On the other hand, the *Enzo Gutzeit Building* (1959-62) can be said to defer both to the context of classical facades (fig.14.28), and to the neo-Byzantine Orthodox Cathedral (fig.14.17). Indeed, the schema for the taxis of classical architecture which Griffiths discovers in Aalto's work explores a trace or palimpsest; "a thematic transparency, enabling different configurations." (1995:209), finding that this facilitates the full integration of the "(classical) taxis and (functional) plasticity" (1995:210).[25] This is illustrated by a discussion of Aalto's uses of the 'palazzo' and 'pavilion' conditions, and thus inferring both 'ruin' (GS3; Baird, 1971:12-3) and 'accretion' (Tallqvist, 1984)

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[24] Aalto to Robert Dean, 1947. (Dean, 31.7.1985; pers.com.) .

[25] Griffiths discerns significant distance between Deconstruction and classical architecture. (1995:210).

or even growth, and in which "various asymmetries and localised symmetries be reconciled in a larger scheme" (Griffiths, 1995:188). Griffiths demonstrates that Aalto achieved this through axiality rather than symmetry, evinced in both *Baker House* and the *House of Culture*. Such axiality therefore produced tension as plan and massing were joined (i.e., *harmonia*), rather than resolving the whole through a simpler, traditional (visual) proportional 'balance'.

Waiting for Logos*: Incompleteness or Anticipating Synthesis?*

Thus, many of Sibelius' and Aalto's compositions can be read as either gradual growth or gradual disorder or fragmentation. It can be said that the wisps of ideas and fragmentary motifs interleave and inflect, as if they are alive, exploring other permutations of their arrangement in pursuit of a form appropriate to their essence or generating idea. This "corresponds to the splendid, biologically beautiful essence of variety in man himself", and are thus allowed "to shape the form" (Aalto, 1958); i.e., "The structure of each episode is imposed on it by its intrinsic character." (Sibelius; Törne, 1937:65); Leistungsform.

The Precariousness of Progress

Moments of precarious tonality, or unstable composition have something in common with the entropy law, the evolution towards disorder. Physicists explain that the moment of bifurcation brings an unpredictable break up to facilitate the beginning of a higher level of order (Prigogine, 1985:xxiii; Bohm, 1983 & 1989).[26] The unpredictability of this opposes Finalistic determinism, yet the chance element may be eradicated if sufficient is known of the content's *élan*. However, there is no doubt that entropy is inherently creative, since it is inclined towards progress and change to a higher order. The difficulty is located in the fear of not being able to predict or define the future form or order; "gaps in knowledge and understanding need not scare me" (Darwin).[27]

Aalto's buildings have just such a paradoxical isomorphism, illustrated in the steps at *Säynätsalo Town Hall* (1949-52, fig.14.29), the building mass and marble 'columns' outside *Seinäjoki Towm Hall* (1961-65, 14.31 & 14.32),[28] and the stepping rear form of the enigmatic *Enzo Gutzeit* (1959-62, fig.14.11). Each of these play simultaneously with the signs of classicism, and what might be described as images of that civilisation's death, and equally, each also evinces the simultaneous handling of 'classical' elements and organic processes; the two way dialogue between tradition and innovation to which St. John Wilson refers (1992). Equally, Tawaststjerna finds that in his *Piano Quintet* (1889-90) Sibelius uses small germinal cells that provide the basis for subsequent growth, while the main theme has a classical triadic shape (T1:70), relating again to Goethe's

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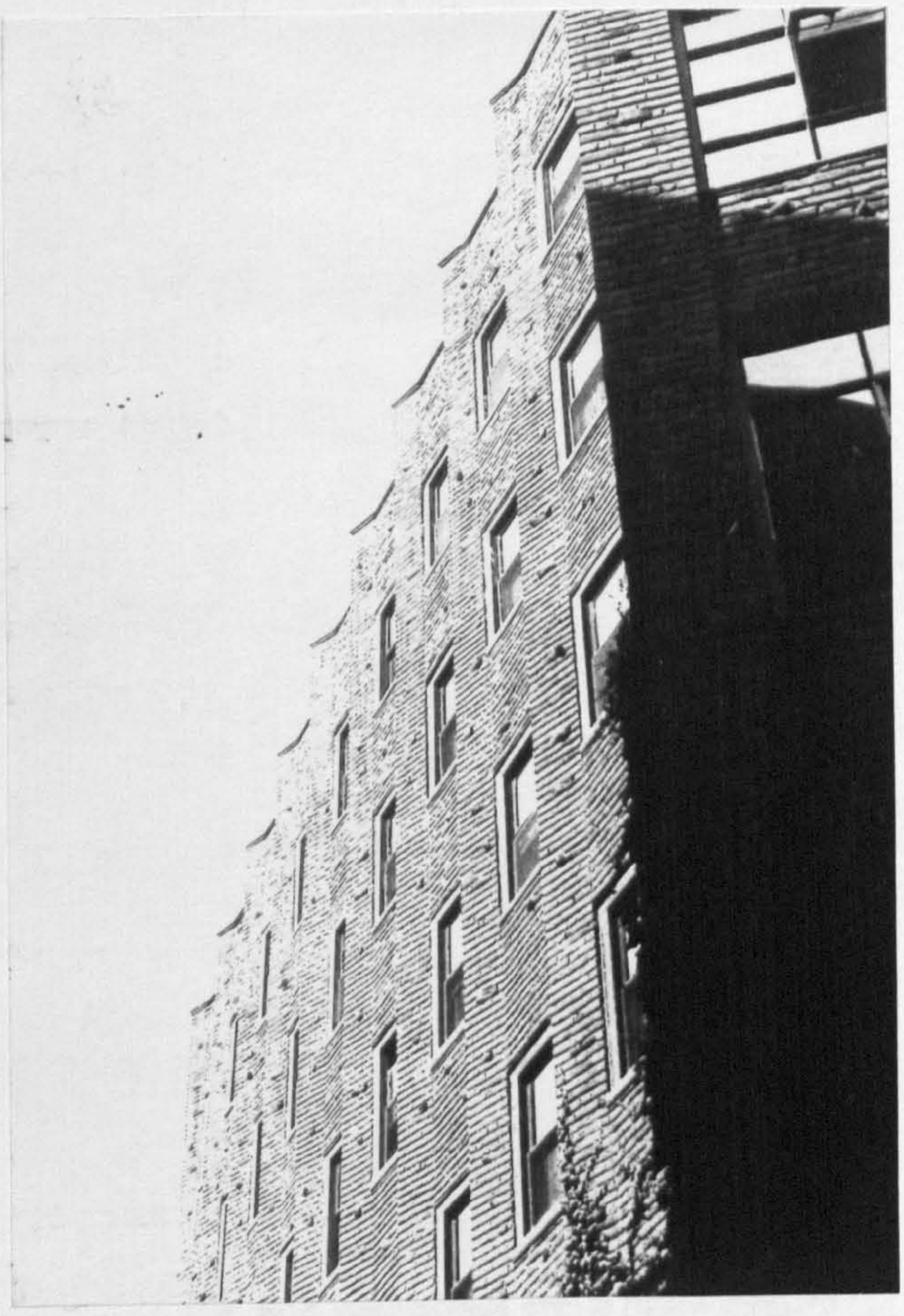
[26] Far from being irreconcilable opposites, chance and necessity facilitate the process of reordering, as indicated in the new physics, in which 'seeming' disorder is actually the movement from one level of order to a higher such order. Implicit in this disorder, caused by fluctuations from within the system, is the potential progress; "Chance nudges what remains of the system down a new path of development [...] and determinism takes over again" (Prigogine, 1985:xxiii).

[27] Cited in Davis and Wallbridge, (1983:24).

[28] It is said that Aalto desired to have 'original' ancient columns shipped to Finland from the Mediterranean, but had to make do with the 'mock-up' of marble clad piers. The columns and the marble facing of the architecture school was unashamed subject preference.



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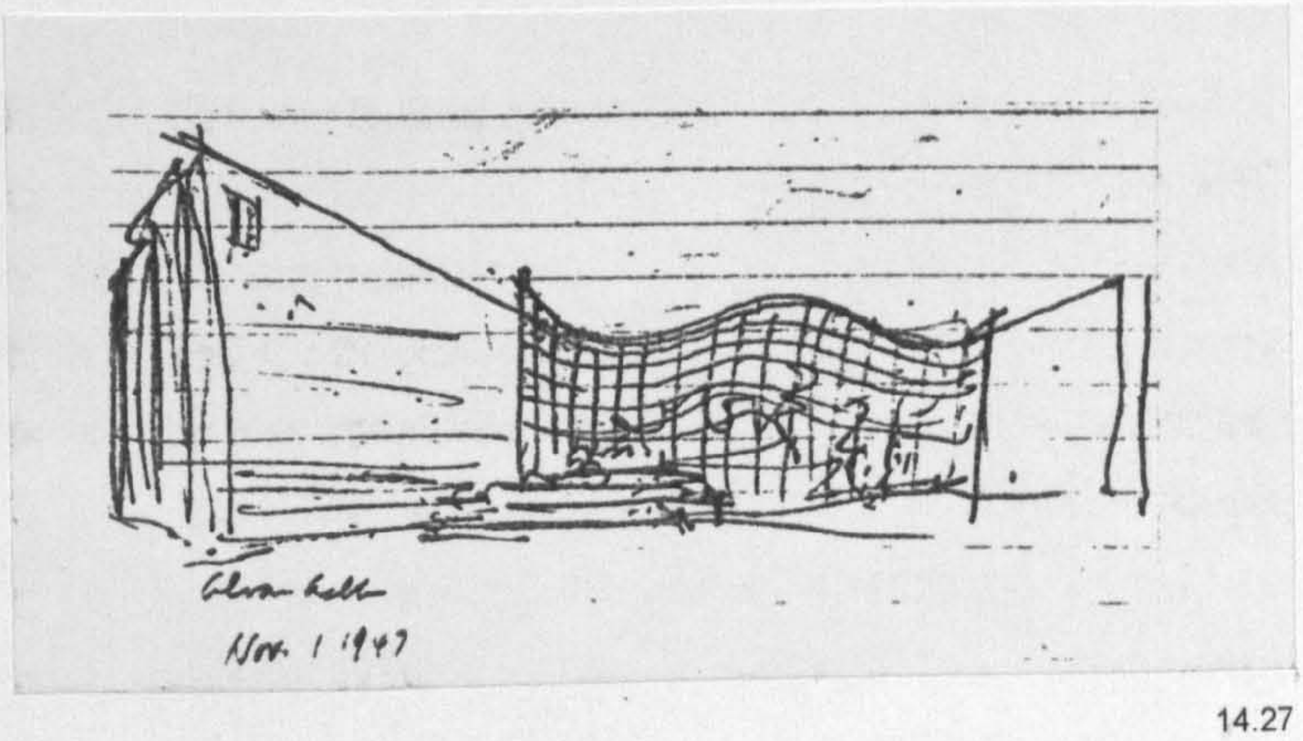

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Fig.14.26 West end of *Baker House* turning towards the sun; Aalto, 1946-9

Fig.14.27 Sketch of *Baker House*; Aalto, November 1947



14.28



14.29

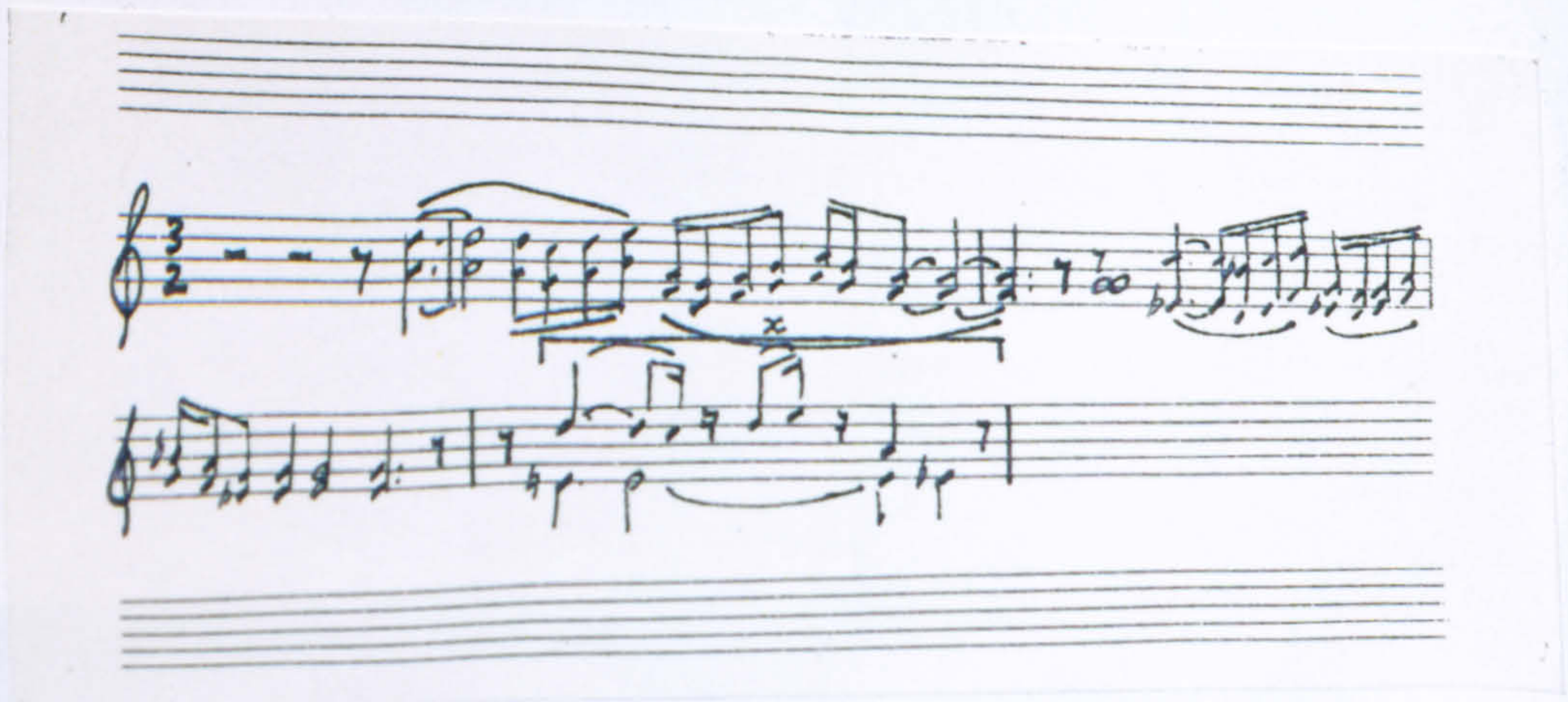

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Fig.14.28 Harbour approach to neo-classical Helsinki

Fig.14.29 Overgrown grass steps, *Säynätsalo Town Hall*, Aalto, 1949-52

Fig.14.30 Skeletal form of fragments, *Seventh Symphony*, Sibelius, 1924

Sterben und Werden (death and becoming). This suggests that many of the episodes of form which have been described as kernel motifs or cells can also be read as fragmentations, however, being simultaneous parts of a complex, cyclical whole which both seeks to represent and reorder the '*gap*'.

Throughout this chapter the discussion addresses *harmonia* in terms other than the attainment of what Alberti demanded, i.e., "proportion and connection" (1955).[29] Here the question is whether a whole inhabited by a gap is oxymoronic. Chapter five indicates this to be a central feature of the lives of both Sibelius and Aalto. One scholar suggests the metaphor of ruin in Aalto's work "casts its ironic shadow all the time." (Baird, 1971:14). Alberti maintained a compositional tenet, namely that wholeness is destroyed if a part is removed. This defies the notion that a whole may be 'complete' if there is a loss (gap) or ruinous element within it. Experience suggests that the balance of human life is a process of continual adjustment of tensions, pressures and energy to maintain homeostasis. The same can apply to a compositional construct; but whether this may be 'whole' or not is still open to debate. Perhaps it suggests that the reaching towards wholeness and *harmonia* is what is important; i.e., the process inherent in the experience of the piece or the building.

Layton offers a parallel understanding, noting that at the beginning of the *Seventh Symphony,* Sibelius launches into the process of metamorphosis with the rising scale on the strings, leading to an important phrase, which he quickly fragments into a skeletal form (**x**) (fig.14.30) (Layton, 1978:58-60). This motif then appears as a linking segment, and later grows into a more mature "life-giving" motif in its own right. Fragmentation and *Sterben* (death) is transmuted into growth and *Werden* (life, becoming).

This study has suggested a further interpretation of the relationship of disparate elements in which tension (understood as a combinational tool) becomes a zone in which a *logos* is active. In other words, tension may (but need not necessarily) be a sign of the process of relating disparate elements. Indeed, there are innumerable such zones of form (or compositional '*gaps*') between order and disorder in both Sibelius' and Aalto's work which may be understood to represent Winnicott's 'potential space'; i.e., the space, in this case in the temporary environment of a building or a piece of music, in which inner and outer reality may be related.

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[29] Alberti defined beauty "to be a harmony of all parts, in whatsoever subject it appears, fitted together with such proportion and connection, that nothing could be added, diminished or altered but for the worse." (*De re aedificatoria*, VI:2; translated as Ten Books on Architecture, [1726] 1955).

"All vital action [...] is interaction, transaction" (Langer, 1988:10)

The concern from the relation of parts, (i.e., the experience users have within and between buildings) peppered Aalto's writing, further evincing the foregoing interest in classical issues of order and *harmonia*. Much of Aalto's writing expresses notions which are close to what has since become the study of ecology, relating his interests in *harmonia* (jointing) and nature, and offering the most natural model of interconnectedness. Yet, this interconnectedness is not unordered intermingling, nor is it *chaos* as the phenomenon is commonly understood, since *chaos*, it will be recalled, need not be in opposition to *kosmos* (natural order) as pre-classical thought and ideas were not conceived in terms of oppositions, but rather both/and (Jaeger, 1947:13); this revisits the naiveté of Winckelmann's dismissal of Heraclitus.

Guaranteeing the Fruit of Tension

Indeed, Ghiselin recognises the limitations of the notions of chaos and disorder to describe the indeterminacy of the inner life, since the phenomena is "organic, dynamic, full of tension and tendency" (1952:14).[30] Paul Valéry, too, suggested that disorder is the condition of the mind's fertility and promise (1940). In other words, the offering of a degree of disorder is inherently bound to a deeper order, albeit the processional rather than extant and static. Such a dynamic was explicated when, describing housing construction in existing cities in Finland, in 1930, Aalto applauded the "guaranteed relationship" which houses enjoyed with their neighbours (1930c).

There is no doubt that dissociations and internal tensions can be addressed through creative activity. Design briefs comprise the isomorphism of human interaction and separation inherent in most building schemes. For Aalto to repeatedly face into the need for separation of human activities, building functions and the definition of space may, at some level, have triggered his own, almost psychotic fear of separation. Yet, the tenderness with which he then handled the transitions between public and private, be it the elastic corridors (fig.14.9), or the screening devices (fig.14.25), is one of the most moving aspects in his buildings (fig.14.33), and may be a beneficial result of his determination (or need) to resolve his own internal tensions. Indeed, it is his sculpting of such relationship between open and closed spaces which characterises his most profound buildings (fig.14.34).[31] Although these may only be symbolic solutions, they represent creative management of the human condition of separation from, and desire for integration with others within the whole (fig.14.35).

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[30] Ghiselin believed that world crisis could be solvable only through, "a profound and thorough alteration of our inner life and of the outer forms in which life finds expression". (1952:12).

[31] In Strengell's vision of *The City as a Work of Art* (1922) the notion of the relationship of the individual to the whole community was explored. This was an important expansion of the notion of harmony from formal proportions to personal relations. The book was thus an important interpreter through which the notion of harmony and balance was mixed with a visual, spatial anarchism.



14.31



14.32

Fig.14.31 Elevation of *Seinäjoki Town Hall;* Aalto, 1961-5

Fig.14.32 Columns,*Seinäjoki Town Hall;* Aalto, 1961-5



14.33



14.34



14.35

Fig.14.33 Entrance canopy, *Villa Mairea*; Aalto 1936-9

Fig.14.34 View from the sauna to the forest, *Villa Mairea*; Aalto, 1936-9

Fig.14.35 View from the front door of *Villa Mairea*; Aalto, 1936-9

OIKOS, LOGOS, AND RELATING FORMS

"[...] the comparison between the child and the poet serves as a valuable guide to progression in learning and to the development of the rich and whole personality within our evolving, dynamic world image, in which ecology as the science of mutual relations between organisms and their total environment now plays a leading role. In the creative perceptions of poet and child we are close to the biology of thought itself - close, in fact, to the ecology of imagination" (Cobb, 1993:109)

"Natural forms become articulate and seem like projections of the "inner forms" of feeling [...] Art is the objectification of feeling and the subjectification of nature." (Langer, 1988:40)

"[Composition] is brought to life by means of the Logos, *the divine in art. That is the only thing that has real significance; yet it is impossible to explain it through words."* (Sibelius to Levas, 1972:80)

It has been suggested that the logic of "the whole" is in some way inherent in initial inspiration behind a work of creativity (Sessions, 1952:48). In Sibelius' work the inherent logic may be understood as a complete process of relation; "the *Logos*, the divine in art". This section revisits the inquiry into the 'essence' of the *harmonia* or interrelation of parts in Sibelius' and Aalto's form, returning to the forest through the model of the community of elements which imbued it; i.e., to ecology.

HARMONY AND ECOLOGY: RELATING OIKOS AND LOGOS

"Ecological harmony was a guiding principle basic to the Greek's understanding of nature" (Krebs, 1978:4)

It has been demonstrated that Sibelius' and Aalto's inherent drive to create building 'organisms' may have been rooted in a need to 'forge' *harmonia* in the *kosmos* that they created in their works. Indeed, Mikkola has stated that he discerns a preoccupation with ecology in Aalto's work (1976). Ecology concerns the relations of parts, or functions to a whole, not in their growth pattern, but in their relationship or interdependence.[32]

Langer's belief, cited in conclusion to part two of this study, stated that creativity can facilitate the "realisation" of unresolved past experience through creativity, continuing that the bringing of the past experience into consciousness, brings into artistic form the "nature of feelings conceived, imaginatively realised and rendered by a labour of formulation and abstractive vision." (1988:42). If Aalto's or Sibelius' forest experience could trigger early memories or the ongoing dichotomy of personality, or even stimulate symbolic engagement with 'other', it may also have stimulated the creation of forms which were both recognisably related to the forest, such as the stairs at *Villa Mairea* (1937-39) or *Tapiola* (1926), and those which may bear compositional affiliation to the

[32] The word ecology was first used by Henry Thoreau in letters, in 1858, and was later used by Ernst Haeckel in 1869, being defined by him as the total relations of the animal to both its organic and inorganic environment (Krebs, 1978:9). The definition of ecology was subsequently narrowed to become clear and restrictive; the scientific study of the distribution and abundance or organisms, and the interactions that determine their distribution and abundance (Andrewartha, 1961).

Steadman (1979) explores the functional (i.e., concerned with the fitness for use) and the geometric (i.e., concerned with balanced appearance) aspects of the ecological analogy.

inner life of the forest (growth, ecology) such, arguably, as *Baker House* (1945-9) or the *Seventh Symphony* (1924).

In turn, experience of this work may trigger realisation of experience of either the user's / listener's own 'nature' experiences, or any of the symbolic meanings of nature, the forest, engagement or detachment discussed in part two. Relating to such ideas discussed in part two of this study, the artistic construct (i.e., the work) can be seen as a temporary home for associated experiential or memorial phenomena, or put another way an οικοσ (*oikos,* abode); oikos being the etymon of 'eco'. Sibelius' and Aalto's work is riddled with often complex, and thus intriguing relations (*logoi*) of the disparate elements imbued with vitality and tensions, and may be described as ecologies in which elements are related.

POTENTIAL SPACES AND TEMPORARY ECOLOGIES

> *"[...] culture is the ability to bring into balance [...] the whole of the milieu that surrounds our lives"* (Aalto, 1955a)

In other words a work such as *Baker House* or *Tapiola* is an abode of relations; an *oikos* of *logoi* (or an ecology) which may facilitate the relation of the detached elements of experience, be they aesthetic or psychological gestalts. Aalto was certainly absorbed in creating temporary places for people to commune together. As such, the works may become what Winnicott called Potential Space, a hypothetical area which may facilitate the reception of another reality (1971:118-20), as the forest had been in childhood.

Similar to an ecosystem this space comprises interaction between elements of experience of the creator (e.g., the psychological '*gap*' and forest as refuge), the user (e.g., the primary human need for engagement transfused symbolically into art and nature) and aspects of the work itself (e.g., the structural composition and the taxa),[33] within the wider context of each of these (such as the historical and environmental '*lack*'). Indeed, Langer describes the work as "extra-organic" (1988), retaining the relation with characteristics of an organism, but differentiating it from living form. In ecology both organisms and the "extra-organic" elements are in relation to one another and to their environment or context (Curtis, 1992:217; Brown, 1993:781).[34] In this case the 'organisms' of the creator and the user, and the 'extra-organic' element of the work are in relation to one another and to their environment, in this case the Finnish socio-cultural context. As such the work's Potential Space may be understood as a temporary *oikos* (abode) riddled with *logoi* or relations; what may be called a temporary ecology.

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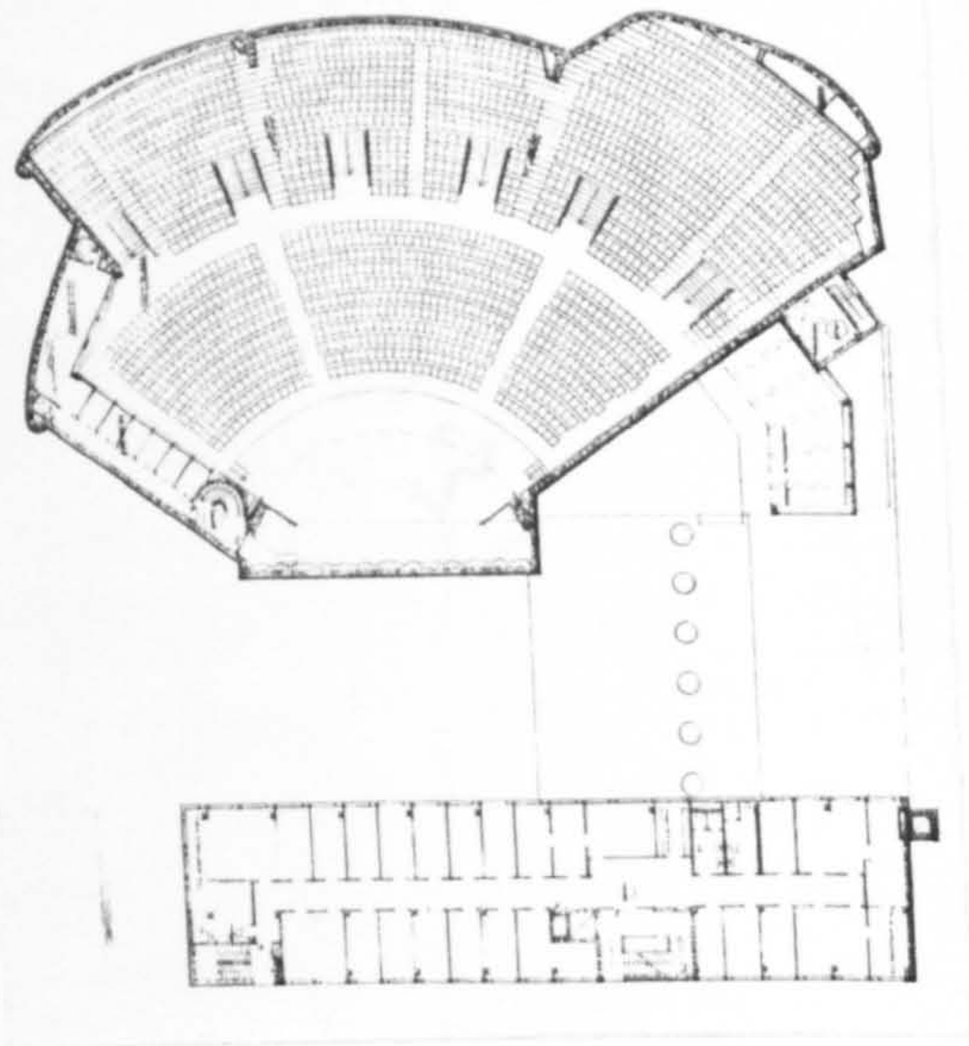
[33] The 'organ' of the work includes the nature of the taxon (singular of taxa; the general term for any group in a classification) in relation to its taxa, (e.g., what dormitories have traditionally been like), the form (both tangible and compositional) and the content (both its *élan vital* and meaning).

[34] See also Meeker (1974) discussing works of art as organic wholes and the ecosystem.



14.36

Fig.14.36 Birch forest



14.37



14.38

Fig.14.37 Plan of the *House of Culture,* Helsinki ; Aalto, 1955-8

Fig.14.38 Aerial view of the *House of Culture,* Helsinki; Aalto, 1955-8

Every organism exists in a matrix of space and time, and thus, by its nature this notion of a temporary ecology, like other ecosystems, demonstrates a moment of multiple-integration ("organic, dynamic, full of tension and tendency"; Ghiselin, 1952:14). This also defies any permanent interpretation, but in doing so is no less valid. Rather it is more so, recognising the place of "our labile and volatile memory" and the uniqueness of each person's experience of the work each time it is experienced (Langer, 1988:xiii). Such an approach rightly challenges traditional objectification of art offered in traditional art history (Peckman, 1967), and demonstrates the common insight that both the creator and user bring something to the experience of the work, which is affected by a wider environment, or context.

BUILDING ON THE TENSIONS OF LIVING

> *"[...] the image of feeling created by artists, in every art - plastic, musical, poetic, balletic - serves to hold the reality itself for our labile and volatile memory"* (Langer, 1988:xiii)

Use of the model of ecology in non-scientific quarters has come to mean a web enabling diversities to relate, as exemplified by Cobb (1977). In this context the concept of a temporary ecology also brings to the fore the debate regarding whether expressiveness in art is specific (Kivy, 1990) or non-specific, as Langer argues. In Langer's terms it comprises expressive ambiguity, since the motivation, experiences and the feelings of the user-viewer-listener cannot be theorised, nor helpfully generalised (1993).

A Moving, Sentient Work?

Being "extra-organic" a work (be it music or architecture) is set in motion as it is experienced, and being temporal is thus imbued with many of the tensions inherent in any interaction encountered by a sentient being; i.e., feelings and haptic sensations are projected onto the work (Fisher, 1970; Bloomer and Moore, 1977; St. John Wilson, 1992). Comprising the tensions of living "from the fused diffused somatic tonus of vital sense to the highest intensities of mental and emotional experience" (1988:51), Langer believes that the work therefore <u>seems</u> organic (1988:46). This augments the foregoing compositional organicism.

Langer's notion that "[a]ll vital action [...] is interaction, transaction" (1988:10) demonstrates the continual impingement of external, environmental factors on an organism (creator, user). Such interaction is therefore developmental, the organism is changed by the contact[35] just as organisms are by other elements in an ecosystem. This change may be active or a result of being impacted upon. All realms of being thus meet in the temporary ecology which exists around a work when it is experienced, including many ingredients which are unique since the users bring their own phenomena of experience into the 'ecology'. Incidentally, from a different path of reasoning the

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[35] Here Langer leases Whitehead's creative advance of nature (1920).

semiotician, Tarasti, has offered a less defined notion which borders on this notion of a temporary ecology when discussing *eco-form* in relation to art (1992:178).

STEADY HANDS AND SYNTHESES

> *"Only Connect"* (E.M.Forster, 1910)[36]
>
> *"[E]ven in the seemingly disordered work of art there had to be harmony, that is the disharmony willed by harmony and subservient to it; in addition, the correspondence of the outward features of a work of art with its source of inspiration, was itself, 'harmonious'."* (Spitzer, 1963:91)

Although the process of creativity (and in this context the specific indwelling of relations in form and the forging of these into artistic order) may be close to the *chaos* of the primary processes, it actually relies on rational faculties for the work to be drawn out from undifferentiated *chaos* (Ehrenzweig, 1967:19 & 262; Ghiselin, 1952:14). Such notions, which evince the seeming paradox of *kosmos* and *chaos*, also intimate the potential that the integration of such opposites through creative activity can lead to reconciliation, such as the restoration of concord, *harmonia* or even *sumphonos*. Indeed, Spitzer suggests that such *sumphonos* can then be seen to grow from within seeming incompatibility (1953:51). It is apparent that from reconciliation, which may have been facilitated in this case by the model of nature (whether it be forest ecology, growth processes or the intricacies of human relations), an identity of 'unity', *harmonia* or *sumphonos* may grow. In the case of Sibelius' and Aalto's work, the character of this has been found to be profound because of the very fact of its complexity and precariousness, just as that evinced in chapter ten through exploration of the Greek ideal of nature and society in which the opposites were drawn into *harmonia*.

Harmonia *Born of Nature?*

It is significant that Schenker believed harmony was more than its musical precedent. He wrote that,

> **"In contrast to the theory of counterpoint, the theory of Harmony presents itself to me as a purely spiritual universe, a system of ideally moving forces, born of Nature or of art."** (Schenker, 1954:1).

Indeed, before Sibelius' long 'Silence of Järvenpää' he wrote, "Struggling with God. I want to give my new symphony a different, more human form."[37] His silence finds a parallel in E.M.Forster's endings for both *Passage to India* and *Howard's End;* namely "only connect". Storr speculates that having written this Forster's motive power had gone (1991:280), but knowledge of Forster's life suggests that he, like Sibelius, may actually not have been able to reconcile the knowledge of this need for connection with his inner conflict (Wilde, 1965). Tawaststjerna reports that, at the turn of 1908, Sibelius was weighed down with pondering whether he could hold the destructive forces

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[36] E.M.Forster uses this phrase repeatedly in *Howards End*, (1910) and *Passage to India* (1924).

[37] Sibelius, diary entry, 26 January, 1916. (T3.ch.6).

within himself in check (T2:83), yet he went on to compose the most integrated, and arguably the most significant music of his life in the late symphonies and *Tapiola*.

WEAVING THE THREADS INTO TANGIBLE REALITY

> *"Somehow, a creative product must give a sense of reconciliation, of having resolved in an aesthetic and harmonious way the discords and disharmonies present in the original situation "* (Gough, 1964:5-12)

This study has demonstrated that there is a complex *harmonia* in the works of Sibelius and Aalto, however, chapter five indicated that these provided only symbolic resolutions to the original deprivation or '*gaps*'. In other words, the men could not bring about a biblical "new creation" in which there was reconciliation of deep things which haunted them.

The Cloth of Reality

Even as early as the time of garrulous nationalism, Frosterus (Aalto's mentor and support) describes how firmly and steadfastly Sibelius holds the inner conflicts of the *First Symphony* in equipoise; "an artistic trial of strength that he carries out with a steady hand" (1932). This observation increases in relevance in the later symphonies where the inner conflicts are more keenly apparent (and by which time an alcohol-induced tremor often gripped the composers writing hand). The same could be said of the progressively symphonic work of Aalto, in for example the relationship of the divergent elements in the plan and facade of the *House of Culture* (1955-58, fig.14.37 & 14.38).

As has been cited, Sibelius fundamentally believed that he was "producing something new" (17.12.1914; T3.ch.1): a synthesis of content and form, and, in 1967, Aalto said "synthesis is what is actually needed. Nothing is more dangerous than to separate analysis and synthesis: they belong inevitably together." Schildt describes Aalto's credo of a "synthesis of all opposites in a final harmony",[36] likening this to Aalto's hero, Goethe - who believed in an in-built balance in existence (GS1:84-5). Such "synthesis" is also Sibelius' and Aalto's personal credo of determination to close the '*gap*', literally their *élan vital*; to seek and forge appropriate *logos* in any given situation. Yet it is easy to be simplistic about their achievement of *harmonia*.

Driving Through Conflict to the Ultimate Sumphonos

To recall, examining the nature of *kosmos* (natural order) McEwan demonstrates that in pre-classical thought the process of creativity was a process in which "*kosmos* clothes the body" [or form] "to make it appear" (1992:45). This suggests that the substance clothed by *kosmos* (i.e., the content) appears through the making (1993:42 & 47), or that the unseen finds order. Certainly chapters five and six suggest that creative drivenness was central to Sibelius' and Aalto's lives, and that through this they strove to wrap themselves in a constructed *kosmos*. Such a suggestion of self-discovery (or maintenance; i.e., homeostasis) through making, or any 'doing' of human

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[36] In *Kerberos*, a student cultural magazine.

creativity, correlates with the notion of healing or reconciliation (restoring *harmonia*) through the process of living and being naturally (humanly) creative; i.e., life imbued with exercise of primary human creativity. This offers confirmation of the conclusions of chapter six; the idea that order in the art form may resolve inner conflicts.

Indeed, experience of the tensions of relating extremes can offer sensory reinforcement of the inherent interplay within the form of the art work. Such relation in form (i.e., the *logos*), may be a place of unity, however precarious, just as the essence of Heraclitus' *harmonia*.

> "The work of art, for example, for a moment re-orders and brings into balance the tensions of form and space, and in so doing, moderates the inner tensions of the observer, giving him a sense of encounter and fulfilment." (Gough, 1964:6)

The ultimate *sumphonos* was that which became an expression made visible (literally *technika* or making appear in form); "a spiritual creed, a phase in one's inner life", as Sibelius put it in 1923.[39] The next section will examine these creeds by a detailed demonstration of Aalto's agenda of creating "harmony" and Sibelius' of creating "symphony".

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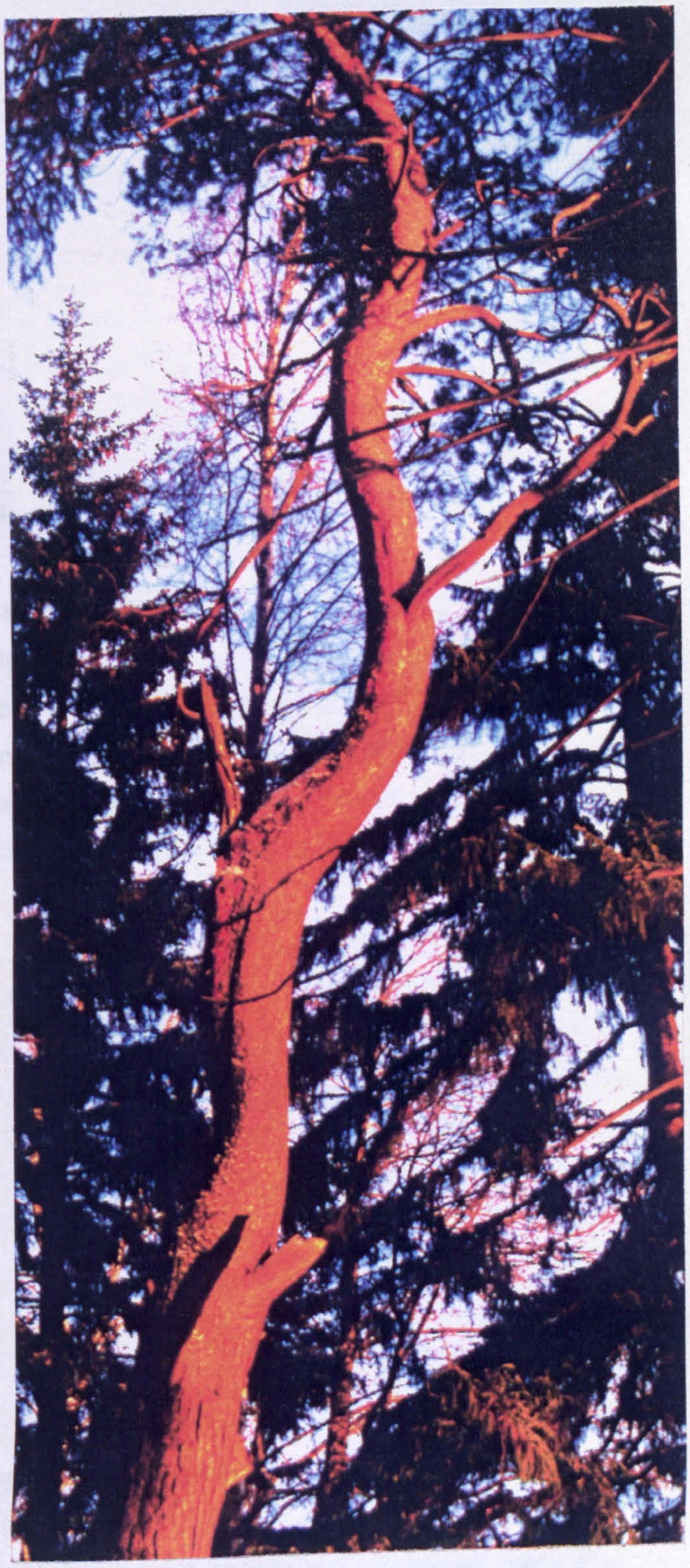
[39] Sibelius in an interview with *Svenska Dagbladet*, 25 February, 1923. (T3:ch.15).



14.39

Fig.14.39 Twisted pine



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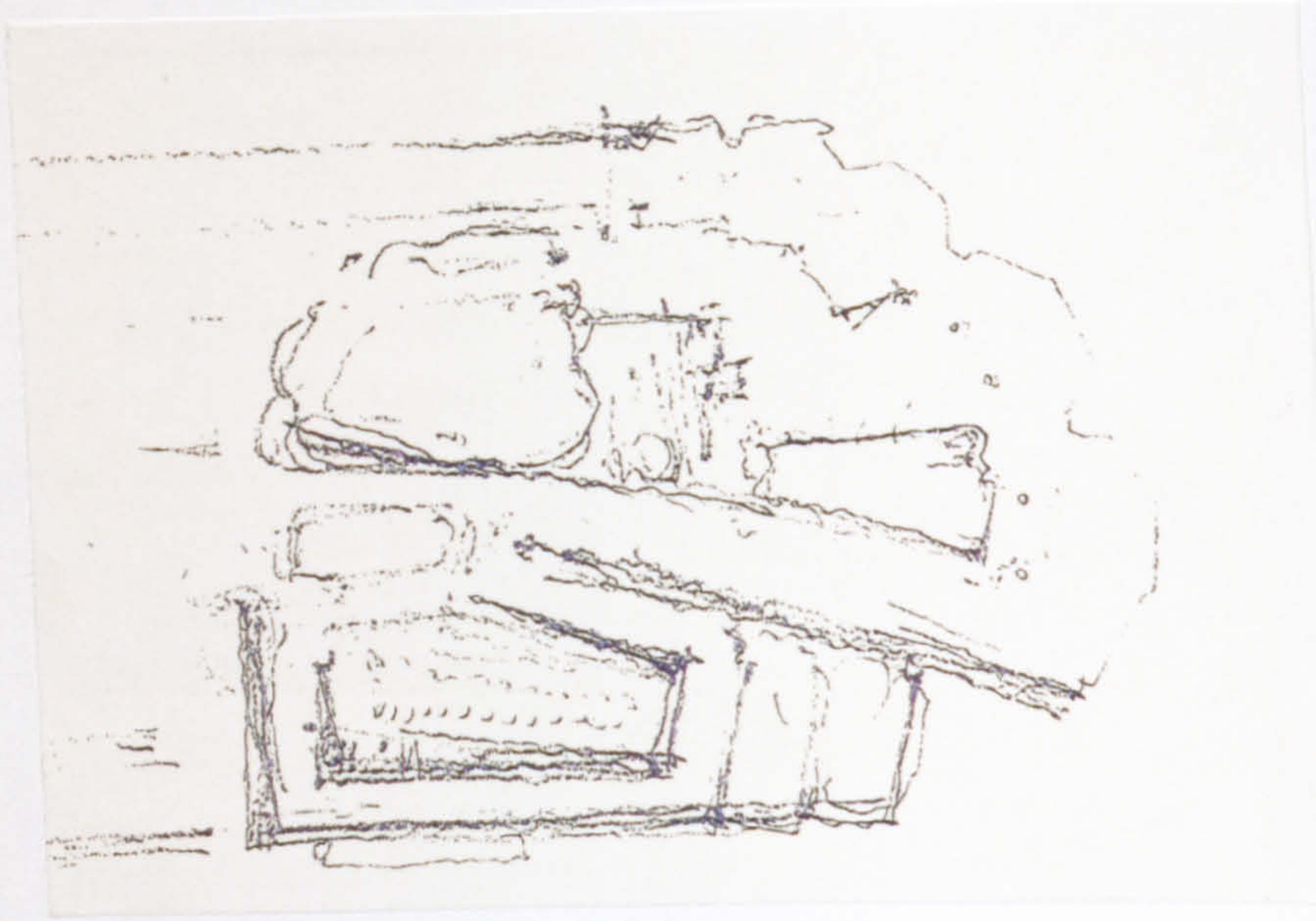

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Fig.14.40 Cloud over lake and forest

Fig.14.41 Sketch plan of *Wolfsburg Cultural Centre*; Aalto, circa, 1955-8

HARMONIA AND PSYCHOLOGICAL DISSONANCE

"[...] that which differs with itself is in agreement: harmony consists of opposing tension, like that of the bow and the lyre." (Heraclitus, frag: 51)

"[...] original harmonists are always taking us by shorter and shorter paths" (Newman, 1920)[40]

"It is necessary to bring them into harmony" (Aalto, 1955a)

This section seeks to explore the true nature of the *harmonia* which underpins the creative work of Sibelius and Aalto, and in so doing will explore the relation of the foregoing ideas of *harmonia* and reality of psychological trauma, weaving together evidence of their lives and works. To recall, the word 'harmony' derives from the Greek word *harmos* (joint) which in turn is rooted in *harmonzein* (fitting together), which came to refer to the development of the musical 'modes' which Sibelius was to adopt.[41]

The foregoing has demonstrated that a key conclusion of the discussion of *harmonia* is the understanding that it may encompass discord and chaos as well as order; i.e., that these are not mutually exclusive, but rather describe Heraclitus' "mutual adjustment". Therefore it is important that the contrived 'wholes' of works of art may reflect inner reality when it is discordant. Indeed, it has also been demonstrated above that the Ancient concepts of art included integrated notions of the technical and the intuitive which now form extreme polarities.

The Spirit of Freedom

Spitzer contends that as the Christian world digested Greek notions of *harmonia* with those generated by the new belief in the freedom from the law which the Spirit gave, the notion that one might "harmonise oneself" arose.[42] This was a process which imitated God in bringing "harmony" to the soul (expressed in the word *temperare,* associated with expressions of order and harmony) (Spitzer, 1963:82). Spitzer then traces the threads from Greek, through Latin to modern notions of psychological harmony (i.e., psychological well-ordering or balance), relating etymological roots of concord and harmony (1963:84). Another scholar affirms the notion that it was possible to know the "divine order of harmony more readily in ourselves than in the external world" (Lippman, 1964:11), and that it is possible to facilitate the transfer of concepts between fields through the concept of harmony: "The musician creates harmony in the pitch and duration of the tone and in gesture; man creates harmony in the conduct of his life; the statesman", or architect, "creates harmony in society" etc., (Lippman, 1964:41); ideas which suggest that harmony can become a criterion of consistency in reasoning.

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[40] Reprinted in Newman, (1958:115)

[41] To recall, a mode is a progression of intervals not to be confused with keys.

[42] Spitzer examines the root of *temerare* in *tempus*; the right time or measure (1963:82).

Relating Through Common Experience

There is no doubt that Sibelius and Aalto were both interested in *kosmos* and *harmonia* (i.e., Heraclitus' "*palintropos harmonia*" or back-turning: frag:51), yet there was a lack of congruence between these interests and their personal lives which defied the requisite classical cross-fertilisation between the inner (personal) and outer (social), as set out, for instance, in Plato's *Republic* (486). Heraclitus had indicated something of the need for this, writing that, "Those who speak", or create, "with understanding must rely on what is common to all" (frag:114).[43] This explains why, for instance, some art is effective because it speaks of common human conditions and experiences.

Yet, when Aristotle noted Heraclitus' criticism of Homer's wish that strife may disappear from among gods and men, he saw that Heraclitus believed that all unity is made of different and conflicting elements (Baldry, 1965:27); "and so within the unity of rational beings there must be division and variety" (Heraclitus, frag:53). Here Heraclitus also acknowledges the variety of personal experiences of life, but overall he suggests that it is the common which is more easily and effectively communicated. This may be seen to concur with the theory of neurotic art; i.e., the problem with artistic expression of undifferentiated personal (inner) reality.

Mutual Adjustment

This thesis contends that the human need for fragmented parts to strive together towards unity is repeatedly represented in Sibelius' and Aalto' most profound work. They even express a sense of cognitive understanding of this, although there is no evidence of the unity having been released into their lives. A primary feature of Socrates *psyche* was the possession of *logos*, reason and speech (to which Plato added appetite and spirit). Yet, revisiting Heraclitus, such a *logos* may be understood as that which facilitates *harmonia* in the "back-turning" process of reconciling that which is in opposition.[44]

Kant's notion requiring "harmony among mental capacities" for aesthetic response (whether it be making or in perceiving) (Cohen & Guyer, 1982:2), would only be applicable to much of Sibelius' and Aalto's work if harmony is understood in Heraclitus' terms (i.e., *harmonia* as the joining, and relating of parts [*logos*] in a unique, if precarious balance). As the two Finns strove and forged, their search for both aesthetic and psychological *harmonia* became intertwined; a Heraclitian "mutual adjustment" of different aspects of life.[45]

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[43] Cited in Baldry, (1965:26).

[44] To a degree Plato did recognise this in the *Republic's* call for unity and concord, while emphasising the divisions that separate men; thus exhibiting the traditional, if paradoxical Greek outlook.

[45] This desire was shared by others too. Aalto's friend, the co-founder of Dadaism, Hans Arp, shared the Finns desire to find a new *paradeigma*, "I became more and more removed from aesthetics. I wanted to find another order, another value for man in nature." (1968:391)

Indeed, it is interesting to note that the Latin verb *concertare*, from which concert derives, meant to fight with someone (again revisiting Heraclitus' agreement in disagreement and harmony in strife). Yet, *concertare* came to mean 'to come to terms with'; again the negotiation through 'mutual adjustment' towards agreement. This agreement is important, reflecting the outcome of *concertare* (to strive harmoniously together, by making music). Certainly, in their regularly cyclothymic personalities, Sibelius and Aalto can be shown to have striven in this manner to avoid being *desconcertadas* (in disharmonious mood). Like Dante and Goethe before them, Sibelius and Aalto related their personal condition of their modern humanity with the beliefs of antiquity to fulfil their need for *harmonia*.

The final two sections will look at the ways in which Aalto, then Sibelius experienced both harmony and discord in their lives and work.

MAKING *CONCERTARE* : THE COST OF UNITY FOR AALTO

> *"Nothing appears more intimately related in art than a value and its contrary."* (Langer, 1988:87)
>
> *"Only in conflict-free unity do these factors create a temporal continuity [...] This harmony cannot be achieved by other than artistic means"* (Aalto, 1955a)

A by-product of the explanation of the creation of *harmonia* through *sumphusis* in the last chapter, was the manner in which Aalto expanded the notion of functionalism by forging the technical aspects of the work into a shape that directly addressed the '*gap*' through concern for the whole nature of life. This will be augmented here, with more concentration given to the congruence of his concern for and need of "harmony".

Attempting to define Aalto's belief system Schildt wrote,

> "Life is always fragmented and tragic, but by striving with all one's might to overcome chaos, hubris, and other disharmony and to adjust to the laws of the cosmos, one may survive after all and share in divinity" (Schildt, GS2:228)

He believes that, from neo-classicism, Aalto retained "humanistic ideals and the interplay of nature and civilisation." (GS1:176). However, we have learnt that these were important to Aalto long before moving to Helsinki to study architecture, being deeply rooted in his oft-times tormented psyche from earliest childhood. As a Classicist, Schildt keenly (and repeatedly) draws his biography towards Hellenic explanations, many of which are valid, but for reasons, such as those explored above, to which he does not subscribe.

CONFIDING IN HARMONY: CREATING *KOSMOS*

> *"(Architecture's) purpose is to bring material world more into harmony with human life."* (Aalto, 1940)

This section will examine Aalto's declared motivation of a mission to harmonise the world around him through design. This will be approached through examination of the relationship between the different functions of living, and of the dissonance within himself.

Towards Creating a Harmonious Existence

Aalto wrote that an "emotional concept" is a sum of "physically measurable quantities", continuing to discuss how, for "a person weakened by sickness", there are "psychic irritations and physical sensitivity that lie close to the psyche", which he admits to have had "experience" of himself (1935). For Aalto the political, the artistic and the personal were intertwined;

> "The word 'culture' should not be misunderstood or misused. It is not an isolated phenomenon, separable from life. Even the smallest daily chore can be harmonised and invested with the harmony of culture" (1958).

An example of this is the *Wolfsburg Cultural Centre* (1958-62), wherein the fan shape plan of which takes on, "a psychological dimension that links it to the very core of his philosophy [...] an artistic synthesis of all disparate determinants in a living core." (GS3:192) (fig.14.41). Indeed, humanism and classical values of nature had been popular with educated Finns long before Sibelius and Aalto became protagonists in their culture (Klinge, 1992a:7-20, 119-137). According the Finnish philosopher G.H von Wright, awareness of *kosmos* and the natural order were thought to herald the coming of Hellenic greatness to Finland (1978),[46] and were thus intellectual currency in Aalto's youth.

Aalto sought to step in "among the people to help to create a harmonious existence" (1930a), continually linking this with the "well-being in everyday lives" (1930b; 1930c); what Schildt believes was a Messianic verve to elevate the lot of everyone around him to the meaningful, "civilised" life of the Renaissance people (GS1:252) (fig.14.42). Thus he strove to create forms which were in "harmony with the surroundings" (1922), seeking, "things that are in harmony with the human being and organically fitted to the little man in the street" (1957), achieving this through "simple lines that harmonise with the landscape" (1922). From 1922 onwards Aalto expressed his interest in seeking to create harmony in his work, and with the surroundings (e.g., interview with *Dagens Nyheter,* 28 October, 1936; interview with *Uusi Aura,* 1 January, 1928; 1941);

> "I believe that most people, but especially artists, principally grasp the emotional content of a work of art" (Aalto, 1922).

The emotional content of his work generated a multitude of formal manifestations, arising from the fact that he believed that "great ideas arise from the small details of life; they spiral out of the

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[46] Georg Henri von Wright was a good friend of Aalto and a leading international philosopher who succeeded Wittgenstein as Professor of Philosophy at Cambridge.



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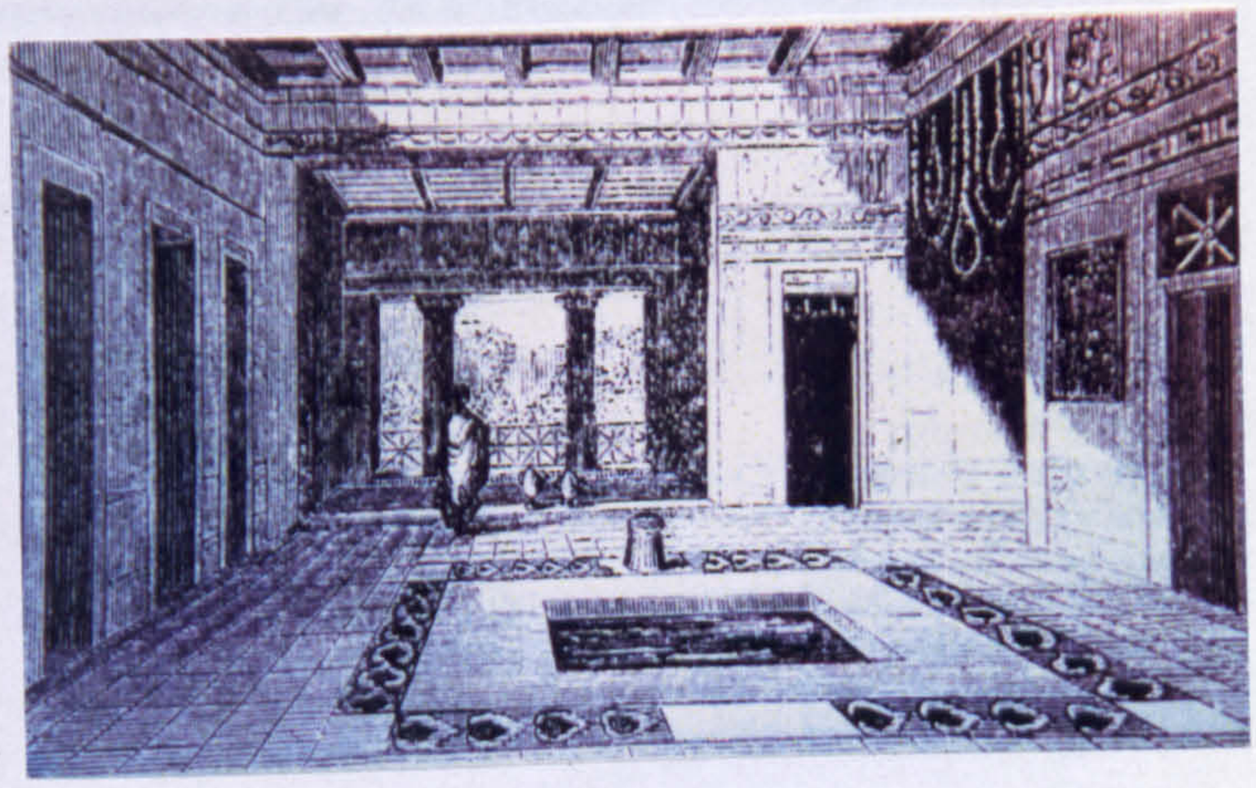

14.43

Fig.14.42 *The Well Goverened City* Siena; Ambrogia Lorenzetti, 1337-9

Fig.14.43 A Roman house. Illustration from Aalto's childhood tome, *A Book of Inventions*



14.44



14.45

Fig.14.44 External blinds, *Villa Mairea*; Aalto, 1936-9
Fig.14.45 View of Assisi

earth. Our senses mediate the raw material, which becomes thoughts" (1947a), and then are manifest in form. Thus the emotional and the ethical were closely linked in his work, as they will be shown to have been in Sibelius'.

Aalto experienced "a kind of universal substance" in his creative process which helped him "to bring the innumerable contradictory component problems into harmony" (1947). This resulted in a determination to grasp and reorder whole environments, and to create "harmony" therein. Indeed, Aalto had fantasised about a Finnish Renaissance, imbued with the "cultivated vitality" of the Italian Renaissance and of antiquity (fig.14.43), in which each person would be able to develop to their fullest, and in which society was strong and balanced (GS3:214). He described Italy as the "classical source of unity", discussing the need to bring to architecture,

> "a kind of universal substance with whose help the numerous quarrelling substances can be brought into harmony." (Aalto, 1947b)[47]

The joining of elements of form (through intricate *harmoi*) represented the relation and connections inherent in the balances of intra- and inter-personal relationships necessary in life, and thus in its physical housing.

In this Aalto was greatly influenced by the Constructivist artist, Moholy-Nagy. Moholy-Nagy understood that,

> "Complexity of an expression is usually beyond conscious grasp. The conscious part is a small component, which helps to synthesise the elements, apart from the act of intuitive co-ordination." (Moholy-Nagy, 1947:68).

He defines the intuitive as "speeded-up, subconscious logic [...] the ineffable [...] fundamentally non-verbal but it is not inarticulate to the visual and other senses." (1947:68). Knowledge of his own such internal "quarrelling" substances seems to have informed Aalto's pursuit of harmony through his intuition. Nevertheless the solution remained beyond his own emotional reach;

> "[...] the question of unification and its solution lie much deeper" (Aalto, 1947).

HARMONY AND ANARCHY

"His goal was [...] a harmonious synthesis of civilisation and nature merging in the human knowledge" (Schildt, GS1:210)

In Jacob Burckhardt's treatise on Renaissance civilisation ([1860] 1945), Aalto found both Ancient classical inspiration imbued with the scepticism of empiricism, and the humanism to which he was deeply attracted. Therein he found the unashamed modernisation of antiquity that he had also found reflected in Goethe. Indeed, in both Goethe and Burckhardt Aalto learnt of a model of balanced relationships between nature and society, yet a *kosmos* which did not suggest support for the status quo. Indeed, this revisits Aalto's sceptical attitude to

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[47] Bertand Russell (1965:195) furnishes a similar example in *How I paint*, stating that, "I need a period of unconscious incubation which could not be hurried and was if anything impeded by deliberate thought."

issues of democracy which led him, through his practical humanism, to hold what Schildt believes was an anarchist position; one which informed every area of his life (GS1:242-59).[48]

That Aalto sought a "a harmonious synthesis of civilisation and nature merging in the human knowledge" is not in question (GS1:210), demonstrated not least by the terraces and stepped buildings which integrate modern living with the natural world (fig.14.34 & 14.44). Schildt reports that this humanist support for the notion of αναρχια (*anarchia*, to be without a leader) meant, for Aalto, a belief in the free interaction of independent individuals, togetherness and adaptation of the environment (GS1:243),[49] such as the fragmented wholeness of Italian hill towns which Aalto experienced himself and read of in Burckhardt, Goethe and Strengell (fig.14.45).[50] While accepting Schildt's interpretation of the formal outworking of Aalto's anarchism, and the analytical reading which are the outworking of such a theory (e.g., Porphyrios, 1982), there may be deeper phenomena informing the strong belief in "individual integrity" and "compassion for others". Such interpretation should be coupled with the insights offered in chapter five of an architect with a rampant desire to be "Top dog", yet who ironically, also strove for a society in which people "suppress their egotism" (GS1:243).

From Anarchy to Complexity

The third part of this thesis has demonstrated that simplicity was not the primary characteristic of Greek culture. Inherent in the Greek notion of order and unity was a deep need to quell the complexity of human life and nature; oppositions which led to the downfall of the civilisation. For Greeks, as for everyone else, order and unity were not necessarily due to deep confidence and harmony, but rather the need to attain it. Indeed, Plato recognised the requisite frenzy of the creative spirit, the 'irrational' inherent in the creative. As Dodds explained, the necessity for rigid external (i.e., formal) order often demonstrates a deeper inability to handle inherent complexity (1951), therein fulfilling the role of a rooting and ordering (Pedal) episode, against which the intuition and dynamic (Wave) may roam.[51]

Indeed, Schildt explores rationality in relation to Aalto. He admits that a heightened fear of chaos may bring increasing demands for rational simplification, in order that the chaos may be dispelled (GS1:231). He continues, stating that confident people (those in harmony with life and

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[48]Huizinga, Burckhardt's successor, who shared the notions of the Finn Yrjö Hirn, regarding "culture as play", saw culture, through play, as being free from material utility, concluding that civilisation "does not come *from* play like a babe detaching itself from the womb; it arises *in* and *as* play and never leaves it." (1970:29). This obsession with decline indicated a nostalgic view of culture, failing to question the cost of the monuments and art treasures. Concomitantly democracy signifies the end of play and civilisation in Huizinger's terms (Steiner, 1970).

[49] Aalto's ability to sweet talk both the Nazi, Albert Speer and the Communist counsellors in Säynätsalo can be seen both as something positive, and dangerous. This is examined in appendix three.

[50] The anarchist political theorist, Robert Nozick, believes that, due to self ownership, the individual can never legitimately be forced to do anything in relation to others; what each does is only his own business (1974).

Strengell wrote *Staden som Konstverk* (The City as a Work of Art) in 1922, calling on the intuitive development of piazza's, street , building complexes, and wholeness. Schildt (1985b) describes this urbanity as an "historic accident", without law or government, but with and through spontaneity.

[51]Indeed, in relation to classical culture, Huizinger brings the phenomena of fantasy and order together, noting that, "[t]he profound affinity between play and order is perhaps the reason why play [...] seems to lie to such a large extent in the field of aesthetics." (1970:28-9).

themselves) can afford to be less tied to rationality, tying seemingly incompatible entities together, and with less wisdom argues that this applies to Aalto, understanding it to be rooted in confidence and inner harmony. On the contrary, this thesis suggests that it is a desperate search for symbolic reconciliation, which chapters five and six explicate (fig.14.46). This thesis attests that the latter conclusion imbues Aalto's work with a much greater significance than the former.

Certainly such anarchism linked Aalto's "penchant for complexity and his undaunted approach to disorder" (GS1:243). Schildt suggests that Aalto had a "confident temperament and deep-rooted feeling for the harmony of existence" (GS1:243). This notion of Aalto's "penchant for complexity" is vital and fully justified, yet, in light of the overwhelming evidence of what Alanen has diagnosed as Aalto's psychosis, the latter correlation with Aalto's "confident temperament" and deep-rooted sense of harmony, on which Schildt bases much of his analysis of Aalto, is misleading. However, it is no less vital, since, in a back-handed way, it strengthens the argument of this thesis.

The larger picture of Aalto is not one of a person always confident and living out deeply rooted harmony, but rather demonstrates the vitality of his basic human need for such harmony; i.e., the need for homeostasis or Jung's equilibration. The opposition of his external "confidence" and his inner chaos, may have demanded the acquisition of a belief system which could relate these two phenomena. Greek notions of unity and harmony, towards which Aalto could inflect his forms, may have facilitated such 'world-building'; "The need to create in order to live, to breathe, and to be" (Cobb, 1977).

To recall, Venturi believed that the "barely maintained balance between order and disorder" in Aalto's work is manifest in the formal and stylistic deviations (1976:66), from which certain tensions result (fig.14.47). This also evinces Aalto's scepticism, all of which indicates his organisational and formal anarchism.

FROM COMPLEXITY TO WHOLENESS

> *"What is needed is synthesis"* (Aalto, 1967)

Schildt believes that Aalto chose to integrate Goethe's "demand for a purposeful interaction with nature and the untiring endeavour to live up to the ideals of balance and health", with Darwinian belief in progress (GS1:200); identifying him as "anarchist Rationalist" (GS1:256). While accepting this conclusion, this thesis argues that it came about not simply through intellectual choice on the part of the young Finn, but rather that this was natural for him literally because it was vital for him. Indeed, only then was it congruent with the Greek relation to nature within the notion of *kosmos* (GS1:198), since natural order comprises order through process; i.e., that which Aalto's psyche sought in striving for the creation of "harmony" (fig.14.48).[52] Interestingly, in the course of describing

[52] His friend, Moholy-Nagy indicated how art, psychology and life are intertwined; the "crystallisation of the whole of his experience"(1947:14).

Aalto's early years, Schildt affirms that Greeks were actually not happy and harmonious (GS1:71), and here he mentions the ideas of the psychiatrist, Alanen,[53] concerning the "unassimilated sorrow" in Aalto's life, and his attempts to create a "lasting, objective world, above all a world of deep cosmic harmony". As stated above, Schildt does not accept this, thereby weakening the argument of his biography by preferring to regard Aalto as "radiant with joy, vitality and harmony", and thus failing to recognise the hidden, childhood deprivations as the determination behind the passion to create formal, environmental harmony in his work, let alone as a tool with which to seek to ameliorate his sorrow. Schildt describes him as, 'basically a man of reconciliation and balanced synthesis.' (GS3:297). Yet, as cited, this attests his *need* for synthesis rather than being evidence of it.

SUMMARY: DEFENDING HARMONY

> *"[...] what is at variance is in agreement with itself: a back-turning* (palintropos harmonia)" (Heraclitus, frag:51).

Due to his deep need for a model of a harmonious inner world, Aalto's portfolio is full of examples of environments which seek to reconcile opposites, which seek to forge harmony and which bring rationalism and standardisation to account. Nevertheless, Aalto was unsentimental, and shared little real emotion with anyone, priding himself on empirical research and scientific method; what might be understood as a well "defended" psyche. He fabricated mythical stories of a blissful childhood, and extended and twisted reality in pursuit of many ideal, yet unworkable solutions, seeking to reorder the complete disorder and cacophony which struck his childhood.

> **"At the root of this disharmony is the break with the individual's genuine psychological needs." (Aalto, 1941b)**

Aalto's inability to be alone in the presence of others, demonstrated in chapter five, may have been a tragic yet profound motivation for his masterful development of open, free-flowing space, for which he became renowned, from the Paris Pavilion entries (1936) and *Villa Mairea* (1938) onwards. Such spaces lacked fixed boundaries, yet facilitated circulation, and thus promised human interaction through spatial manipulation and inflections; for example, the piazza-like foyers in his many cultural centres (fig.14.49 & 14.50). Thus, it has been shown that Aalto repeatedly sought to imbue the Finnish environment with buildings which offered at least the ambience of two very different environments; the Potential Space of the forest (the womb from which the society had emerged, fig.14.51 & 14.52), and the richness, yet seeming anarchy, of urban Italy (onto which he projected the ideal of "harmony") (fig.14.53 & 14.54).

Aalto also countered his everyday fear of being alone and still (which was identified in chapter five and analysed against Winnicott's notions of the importance of the *Capacity to be Alone* -1958b) through the persona of the bullish 'Top dog'. In his early years Aalto had denied both the intuitive

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[53] To recall, Alanen is Aalto's son in law.



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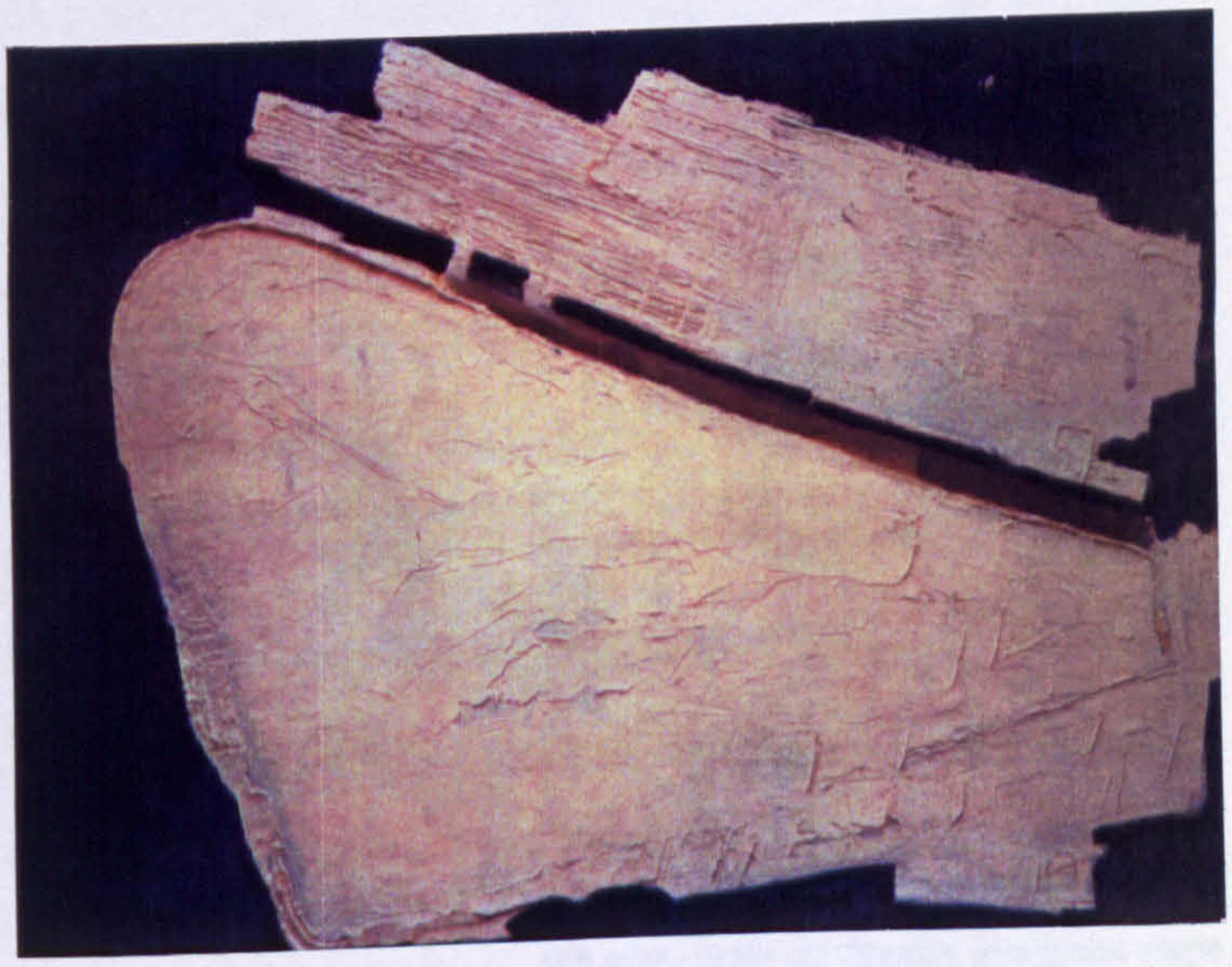

14.47

Fig.14.46 Painting; Aalto, 1949

Fig.14.47 Painting; Aalto, 1946



14.48



14.49



14.50

Fig.14.48 Moment of tranition. Gate from garden to forest, *Villa Mairea*; Aalto, 1936-9

Fig.14.49 Foyer of *Seinäjoki Theatre*; Aalto, 1968-9 (designed) - 1987 (completed)

Fig.14.50 Foyer, stairs and exhibition of Aalto's wood experiments, *Seinäjoki Theatre*; Aalto, 1968-9 (designed) - 1987 (completed)

and the non-rational. This may have marked part of the search for an order strong enough to safely bridge, or even close the '*gap*', and thus recover the ground he had lost to the trauma of childhood. He rejected the *Art Nouveau* rooted approach of his tutor, Lindgren, which later, however, he commandeered, uprooting and replanting it in his unique manner within the heart of the Functionalism. His interest in more intuitive phenomena came, rather ironically, from his flirtations with ex-Bauhaus teacher, Moholy-Nagy, and the new architecture of Gropius and Le Corbusier. Through his work the phenomenon which was so threatening, the everyday irrational, was slowly brought into careful contact with the ordered and the reliable. Aalto's psychological constitution was extremely familiar with experiences of flux and dynamism. It seems that he gradually recognised motion, change and adaptation (those phenomena of such interest to the pre-Socratic Ancients) as primary, however difficult it was for him to live with emotional flux himself. It is exactly this for which his buildings need be most admired.

SIBELIUS, SYMPHONIES AND SEIZURES

> *"[...] we have to accept our personal caves, our unconscious [...] from them comes everything we call art."* (Juhana Blomstedt, 1987:7)
>
> *"Why this sense of pain in life?"* (Sibelius, 15.4.1909; T2:114)

Foregoing evidence of Sibelius' fusion of formal unity offered an incidental, yet profoundly relevant explanation of the creation of *harmonia* through the creation of *sumphonos*. This demonstrated the manner in which Sibelius expanded the notion of the symphony by forging the technical into a shape that directly, if symbolically, addressed the '*gap*' through concern for the whole nature of life; what he called his "ethical line" (Sibelius, 20.5.1918; Ekman, 1938:154-5). Further exploration of reasons for Sibelius' choice to concentrate his musical development on the symphony will augment this, demonstrating the oscillations between Sibelius' confidence and composure, times when creativity flowed, and episodes of insecurity and psychological paralysis, the cramping of his creativity and his incapacity to compose or relate to others.

LACKING SOMETHING: SEEKING *SUMPHONOS*

> *"A symphony is not just a composition in the ordinary sense of the word; it is more of an inner confession at a given stage of one's life."* (Sibelius, 5.11.1910; T2:159)

In 1910, in *Music: Its Laws and Evolution*, a certain Jules Comarieu wrote that, in his opinion, "Music is made up of universals anterior to experience (*universalia ante rem*)." (1910:94). This statement is cited by way of antagonism, to draw out the depth of Sibelius determination to "allow the musical thoughts and their development in my psyche determine the form", after all, he wrote "I am not built to 'write' music; music springs from our experience." (1918; T3:ch.2). Sibelius confessed to Levas that form was borne out of "compulsion" ("*das Zwingende*") (1972:81-3); i.e., the "inner urge" which motivated his mission to forge symphonic unity. Secondly Comarieu's

article is an opinion against which Sibelius' late diary entries may be gauged: "Why this sense of pain in life?" (Sibelius, 15.4.1909; T2:114) (fig.14.55).

As his argument enters the arena of the symphonic, Sibelius' pupil, Bengt de Törne, cites the contradiction between Heraclitus' flux and what he reads as Parmenides "epic attitude" (i.e., that everything is unity) (1937:73, 80-1). Törne favours the latter, believing that the epic symphony is the simplest "unsurpassing serenity, transparency and homogeneity", and finding Sibelius' "epic outlook being dominated by his deep psychological perspective" (1937:87). In this Törne seems to contradict the facts because, as most Sibelius scholars agree, the musical form is (at its greatest and most innovative) some sort of process of growth, through change and flux, as indeed was his cyclothymic psychological perspective.

Leaning on the Symphony

Indeed, Sibelius' grandson, the artist Juhana Blomstedt, has written that,

> "The only way the artist can approach the burning limits of the truth is to lean on things, heavily, and push them to the limits of his focus in order to grow in his world." (Blomstedt, 1987:6).

That Sibelius lent heavily on natural, musical, and specifically symphonic form is apparent.[54] Indeed, he wrote, "I must admit that I have set my sights high and chosen something big" (Sibelius, 1.1916; T3:ch.6). It seems that for Sibelius the symphony was a metaphor for life.

Occasionally Sibelius thought it "[s]trange that I am always the source of all my suffering" (11.1916; T3:ch.7), even recognising that it was "the height of naïveté to think that symphonies matter" (15.2.1918; T3:ch.8). But in this he was touching one of his greatest fears; the futility of his attempts to create to win praise and acceptance. Sibelius' achievement of the ultimate symphonic unity in the *Seventh* offered him none of the "immense freedom and unity" which his devotee, Olin Downes, found therein (1924, Levas, 1972:xx); "All my being and striving so completely unfulfilled."(Sibelius, 11.1916; T3:ch.6). When it came down to it, praise really made no difference to his capacity for sustained happiness. Despite what some proclaim as the achievement of "universal greatness" (Mäkinen and Nummi, 1985:26), the symphonic problem remained at the heart of his life.

Identifying a Lack and Living it Up

Sibelius was never one to shy from connecting such remnants of life's coarse fabric with the silken swathes of being on top form and centre stage. He "loved life and yet how difficult it is to live it."(7.12.1921; T3:ch.13), admitting a cycle of "heavy drinking and afterwards much

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[54] Ringbom believes the symphony is the result of what "Sibelius sought in inward intercourse with virgin nature and in intense creative work", citing Sibelius' nature stimulated diary entries (1954:140); "A wonderful day, spring and life. The earth exhales a fragrance - mutes and *fortissimo*. An extraordinary light that reminds one of an August haze." Diary entry, 18 April, 1917. Ekman, (1938:244).

depression" (16.9.1916; T3:ch.6). As the dark thread of his drinking had become so "woven into life's pattern" (T3:ch.14) the fabric of his music was interwoven with the melancholic Dorian mode.

Nevertheless, Sibelius succeeded in living out a full, if compulsed, symbol of life in musical form. Despite the progress to integration, his music was imbued with dissonance, which, it has been argued, was dictated by the content, and was therefore not a mere cerebral exercise (Aldrich, T3:ch.13). Rather, the dissonance was a manifestation of inner compulsion which the strength of his "glorious ego" allowed him to connect through mechanisms such as the Pedal.

A reaction to a portrait, in 1892, led Sibelius to muse that part of his *Kullervo Symphony* (1892), "lacked something", which he discerned as "a sense of unity" (14.3.1892; T1:105). The painterly lack may have rung a memorial bell in his psychological '*gap*', and may have suggested symphonic unity as a bridge. In turn, for all the reasons examined in chapter thirteen, the symphony may, in turn, have led to the adoption of the organic model which promised growth to unity in "multeity"; not the epic unity of which Törne identified. Sibelius may thus have begun to discern the notion of fusion form. A letter from a few days later suggests that the strain of the struggle to forge the unity took its toll.

> "During the last few days I have been at my wits end over my work - have entertained suicidal thoughts and such like" (Sibelius, 23.3.1692; T1:105)

Years later he felt that "giving up composing would be suicide." (24.4.1921; T3:ch.13), although it was not. Aino later reported the marked increase in Sibelius' capacity to relax when he eventually burnt what she supposes was an elusive eighth symphony (T3:ch.21).[55]

Balancing Psyche with Symphony

As the congruence of the symphonic and psychological "battle for life" continued (13.2.1915; T3:ch.3), Sibelius felt that "[t]he important thing is to maintain one's balance, and keep one's spirit up in spite of the *Alleingefühl.*" (6.1.1910; T2:132).

Sibelius forged a "precarious equilibrium" between spiritual isolation and the traditional concept of civilisation; a dichotomy manifest in the *Seventh Symphony* and *Tapiola* (tape e.g.58). Following the formal unity of the *Seventh* Sibelius moved to address a search for unity in *Tapiola*, in which some find a "dissolution of the human personality in natural forces" (Mellers, 1948:182). Therefore, in his late musical form Sibelius addresses fundamental symbols of *Sterben und Werden.* If the unity of Sibelius' late great works is heard to create the swollen psychological '*gap*' into which listeners might fall, it may be argued that *Tapiola* is hardly a triumph, nor a Greek or Renaissance affirmation of faith in life, but rather "an

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[55] It is speculated that the *Eigth Symphony* was a multi-movement piece (Tawaststjerna, 1985a, 1985b; Kilpeläinen, 1995).

escape from the burden of personality" (Mellers, 1948:182), indeed being that which almost meets the definition of neurotic art. Yet in fact the formal solution he created is a masterly example of the growth and dissolution of musical form (tape e.g.59). However, after *Tapiola* Sibelius maintained his balance by refusing to continue to battle; "the dreadful demon in me threatens to put an end to me".(5.4.1924; T3:ch.16). Later, in 1943, during his publishing silence, Sibelius wrote;

> "The tragedy begins. My heaviness of spirit paralyses me. The reason? Alone, alone. I cannot let myself tell of my great sorrow". (12.9.43; T3:ch.22).

Again, as with Aalto, this demonstrates what Winnicott was to identify as the *Capacity to be Alone* and to communicate (1958b). The diary entry for the following day states,

> "Only very few understand what I have done and want to do in the world of the symphony. The majority have no idea of what it is about."(Sibelius, 13.9.43; T3;ch.22).

In other words, at this moment he felt that he had not succeeded in communicating. Johnson, however, identifies both a sense of elation and omnipotence in a comment Sibelius made to Adolf Paul, that his mission as an artist was to "give to everybody" (1960:143). Sometimes Sibelius felt he was "a very good composer but as a person - hm - that's another matter!" (10.1919; T3:ch.10). While such self analysis riddles his diary entries, Sibelius' fury over the 'psychoanalytical' discussion in *Finsk Tidskrift*, cited above, stimulated the following;

> "[The Freudian theorists] don't realise that a symphonist who aspires to strengthen the laws of musical material for eternity is a somewhat greater achievement than dying for king and country" (Sibelius, 8.6.1918; T3:ch.4).

Thus Sibelius sought to put distance between his creativity and Freudian criticism. Again, with insufficient psychical distance (Bulloughs, 1912) he mistakes his art for himself; not for the first time putting the value of his "genius" above the value of others.

Indeed, many who chose to work with Sibelius became extremely frustrated with his oscillations of elation and despair. In February 1915 his friend, Stenhammer, wrote a challenging letter, asking whether "it is not possible that this need", to create new works, "can itself be too powerful and indeed become tyrannical" (T3:ch.3). Sibelius had become completely obsessed with his increasingly Hellenic themes of unity and formal *harmonia*, and the need to forge *sumphonos*, to the exclusion of life and loving. His diary evinces the quick-fire relations of insecurity and creativity, almost as cause and effect;

> "Memories of old affronts and humiliations came back. Had powerful visions of the *Fifth Symphony*, the new one." (Sibelius, 18.4.1915; T3:ch.4).

Was Sibelius thus building a microcosm in which these agonies were, if not banished, then transformed by the fabric of a secure formal unity; i.e., world-building? In thus shoring himself up against moments when "Everything is falling apart around me and I am on my own, alone" (29.4.1915; T3:ch.4), he would be "labouring over the anvil", as when he was forging a cantata, *Young Hellenes*. "But", he knew, "all the threads lead to the *Fifth Symphony*" (8.7.1915; T3:ch.5);[56] i.e., towards the urge to form a symphonic whole.

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[56] The cantata was abandoned during the summer of 1915.

> *"I'm getting into the reworking* [literally retilling] *of the Fifth Symphony!! It hurts, but it hurts sweetly."* (Sibelius, diary entry, 2 February, 1916)[57]

In 1890 Sibelius wrote, "I am no philosopher and never will be; nor need I be. The only thing I must have is criticism, [...] searching self-criticism." (T1:86). Indeed, he confided to Levas that, "I too have my own religion", explaining that, "[t]he essence of man's being is his striving after God" (Levas, 1972:44).[58] Tawaststjerna reports Ilmari Krohn comment; "Let us hope to God that (Sibelius') inner struggle meets with victory." (T2:89).[59] This striving after God ("the divine *logos*") can be demonstrated to have been isomorphic with his striving after a connectedness to answer the *"Alleingefühl"* which he felt; which itself may have been the shape of the '*gap*'.

After composing *The Tempest* and *Tapiola* in 1926 Sibelius continued to scramble about for a creative solution, but never to his satisfaction. Tawaststjerna suggests Sibelius "was composing in something approaching a state of euphoria." (T3:ch.20). This is evinced in the vital tonal confrontation in the *Seventh* described above, through which the voicing of the "Hellenic rondo" (free from rhythmic and tonal uncertainty, and something of a Pedal) temporarily banishes the tonal mist. Yet, thereafter the asynchronism returns, becoming "almost hysterical" in Murtomäki's opinion (1993:258). Reality was dawning on Sibelius' creative euphoria. In other words, this creative cycle concurs with Ehrenzweig's notion that after such moments of ecstasy, sure that the new work will solve the inner divisions, reality dawns, and with it either hysterical trauma, or deep depression (1967:105). Thereafter the Sibelius household entered the most oppressive period of their lives (T3:ch.21). He was to publish no more.

Sibelius had "lived" in his creative work (5.9.1915),[60] often to the appalling exclusion of his family (Jalas, M.,1985). Indeed, his diaries give a strong impression that composer and composition had become completely entwined. His loneliness was experienced in terms of others failing him; as there being "[n]o understanding in the world for a symphonist's struggle." (9.6.1918; T3:ch.9).

Forging a "Way"

While defying his own dismissal of Sibelian originality, Johnson offers a fair description of the coupling of Sibelius' dogged striving on his own musical "way" and his ("hysterical") struggle for self-expression (1960:41); the "battle for life. i.e., to be able to write my new symphony"

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[57] Hepakoski's translation of the Finnish,T4:163. Layton's (T3.ch.6.) reads differently.

[58] In intimate tones Sibelius also said, "Christ must have been a wonderful man"(Levas, 1972:45), before confessing that he would never have dared to say that in front of his strictly Lutheran mother!

[59] Ilmari Krohn was the leading musicologist of Sibelius' day.

[60] Hepakoski translation of Sw.T4:135. Layton's translation differs slightly. T3:ch.5.

(13.2.1915; T3:ch.3) was a "battle" for his own being. This study has indicated that this process, or "way" of ensuring musical *sumphonos* and psychological "balance", was actually tightly woven to its antithesis, namely cyclothymic dissonance and chaos; "Life is like the ocean waves, sometimes one is on top - at others at the bottom. Ebb and flow. Full and empty." (24.8.1896; T1:184).

Sibelius' "way" may be said to have been "[g]uided by an unconscious process", which generated musical ideas, which were "mostly incomplete [...] fragments of something which is in the making" and from which form was forged (Parmet, 1957:79). Such processes challenge both Comarieu's notion of music being anterior to experience, and Törne's notion that Sibelius' work opposes flux, growth and change.

Wrestling with the god of "genius"

Before even writing the classical *Third,* Sibelius had desired to lay down his symphonic chalice;

> "I'm no longer writing a symphony, rather a symphonic fantasy for orchestra. This is my genre!! Here I can move freely without feeling the weight of tradition." (Sibelius, 1.1905; T2:37).

Yet he put the fantasy aside in musical, if not psychological terms, and returned to struggle with the full symphonic genre, as if attracted by the formal paradox of relating diverse elements into a unity, and, it can be argued, thus challenging tradition head on by refining the formal genre until it resembled the essence of its etymon, *sumphonia* (sounding together). Such *sumphusis*, or growing together of the very stuff of life, is illustrated by Sibelius' diary entries during the composition of the *Fifth Symphony*, which illustrate the process of "mutual adjustment" whereby his artistic and primary creativity were intertwined.[61]

On 26 January, 1916, Sibelius wrote;

> "I am wrestling with God. I'd like to give my new symphony another, more human form. Something closer to the earth, something more alive. The problem was that during the course of the work I have changed" (26.1.1916);[62]

later adding;

> "I'm getting into the reworking *[literally retilling]* of the Fifth Symphony!! It hurts, but it hurts sweetly." (2.2.1916; Sw.T4:163).

Soon after Sibelius writes;

> "Surely the 'grip' [holding it together] is under the sign of the 'classic'. But the motifs require it." (Sibelius, 28.5.1918; Sw.T4:290).

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[61] Indeed, Parmet believes that Sibelius' late symphonic material "cannot merely be accepted passively by the listener but demands active spiritual co-operation on his part" (1957:125); such mutual adjustment.

[62] Hepakoski's translation of Sw.T4:158-60. Layton's translation reads "Struggling with God". (T3:ch.6.)

Here Sibelius demonstrates the connection between his occupation with the unity of form and his interest in the Ancient mind set. However, he did wonder if his classical course would interest anyone, when the taste of the day was for "Wagnerian pathos" rather than the "symphonic" (3.6.1918; T3:ch.9). Perhaps because his personal need for images of such unified form outweighed even his need of acceptance, he pursued his Hellenic-inspired course towards the *Seventh*.

SUMPHONIE "BY MEANS OF THE *LOGOS*": CREATING HARMONY IN LIFE

> *"Am in complete chaos. What a life! Agony and elation"* (Sibelius, 1916. T3:ch.6)

Constant Lambert concurs that the symphony was central to Sibelius, believing that unlike his contemporaries, Sibelius understood his main problem to be the "inner urge" to forge the ideal symphonic form. Indeed, in this there had been "steady and logical progress" (1985:258) in the form of a depth of logic intrinsically tied to his psychological need for "balance".

Logic of Interdependency

Chapter thirteen indicated the indissoluble "striving for harmony with himself and with his surrounding world" (Kozhenova, 1995:99), reflected in the growth and development, the fusion and condensation of Sibelius' symphonic cycle. Indeed, when trauma, such as the horrors of war (i.e., death), threatened any remnants of psychic harmony, both Sibelius and Aalto were deeply shaken, yet both were bolstered (i.e., defended) in part by nature (their childhood refuge), but also by the need to strive harder to forge greater chaos into some semblance of harmony and unity. For instance, Sibelius' diary entries during the *Fifth* (1914-19) are saturated with mystical experiences of nature, such as when he found that "Nature is flourishing while people are worse than animals" (29.1.1918; T3:ch.8) (fig.14.51). After Aalto fled to Stockholm, he played the hero, but away from the front-line, producing "propaganda" articles and work inspired by nature and Karelian architecture in the safety of his modern Niemelä farm in Helsinki (see appendix three).

Part two suggests that nature (their childhood refuge) had been a model for what part three has demonstrated became the intellectual refuge, the symphonic, the musical "logic of interdependency" (Kozhenova, 1995:101); *oikos* and *logos* or Tarasti's eco-form (1992:178). Simultaneously, this musical *technika* became a psychological refuge, providing a model for the psyche's need of this integrative "logic". It was at the meeting of art and life that Sibelius found the "ethical spirit" in music (1918; T3:ch.9), and it was this, rather than pure "technique", which he admired most, and thus justified his symphonic mission; i.e., something which was a metaphor for the unity and equilibrium which he so desperately needed in his own life. This may explain the symphony's role as Potential Space in which Sibelius could forge the unity for which he was so desperate; an unindividuated sense of trying to create the *I-thou* idyll of infancy. Thus it may be said that his symphonies became a symbol of his need for integration; a perfect, if symbolic,

musical environment was created. Indeed, Ehrenzweig believed that symphonic form was a "supreme example of poemagogic need for fragmenting surface coherence" (1967:207).

LET US CALL IT GOD

> *"The healthy soul is 'symphonic,' i.e., harmonious"* (Spitzer, 1963:17)

The foregoing suggests that Sibelius had an urgent, vital philosophy regarding the form of symphony, and indeed that he had "struck a new path in my symphony! In fact, the path of the future".[63] Sibelius described how, "This wonderful logic - let us call it God - that governs a work of art is the forcing power" (Ekman, 1938:257), replacing logic with *logos* at times, and signifying the complex inter-relations which comprise his art. This was his vital philosophy. Such *logos*, he believed, knit together the form and the content (Levas, 1972:74), bringing together the composition "by means of the *Logos*, the divine in art. That is the only thing that has real significance; yet it is impossible to explain it through words." (Sibelius; Levas, 1972:80).[64] It is significant that words such as "striving", "compulsion", and "inner urge" pepper Sibelius' description of creating such *logos*.

Indeed, Sibelius described his symphonies to Carpelan as "confessions of faith" (20.5.1918; Sw.T4:290), and *Tapiola*, too, may be an honest manifestation of a stage of Sibelius' life, demonstrating tragedy within an uncompromising creative integrity. What has been demonstrated of Sibelius' agonised loneliness suggests his view of civilisation, unlike Aalto's, had developed into an unpeopled phenomenon, wherein the "wood sprites" take the place of the tortured souls of humanity (Cardus, 1948:156). The ecstasy and terror may have been woven from Sibelius' threads of unrecorded reality into Olympian serenity; but the cost being a detachment from self (Mellers, 1948:182).

SUMMARY: COMPOSING "FOR DEAR LIFE"

> *"[...] an ever-increasing emotional abstemiousness and ruthless rejection of everything that seems to be without vital importance."* (Parmet, 1957:63)

Despite Niemann's repudiation of the Nordic "short-breathed phrase structures" which, he believed, were not suited to "symphonic treatment" (1919), a criticism which was to be accompanied by Adorno's invective (1966) and Johnson's scepticism (1960), most scholars recognise Sibelius' creative achievement, understanding his life's work to be "forging a living link between past and future in the history of the symphony." (Parmet, 1957:xviii). Sibelius had edged back from Romantic enormity to explore more basic symphonic structure, tentatively questioning tonal permissiveness in the classical *Third* (1904-7) and psychological *Fourth* (1911). From the

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[63] Hans Richter to Sibelius. Repeated by the composer in his diary. November 1905. (T2:39)

[64] Elsewhere referring to "that wonderful artistic logic" (Levas, 1972:46).



14.51



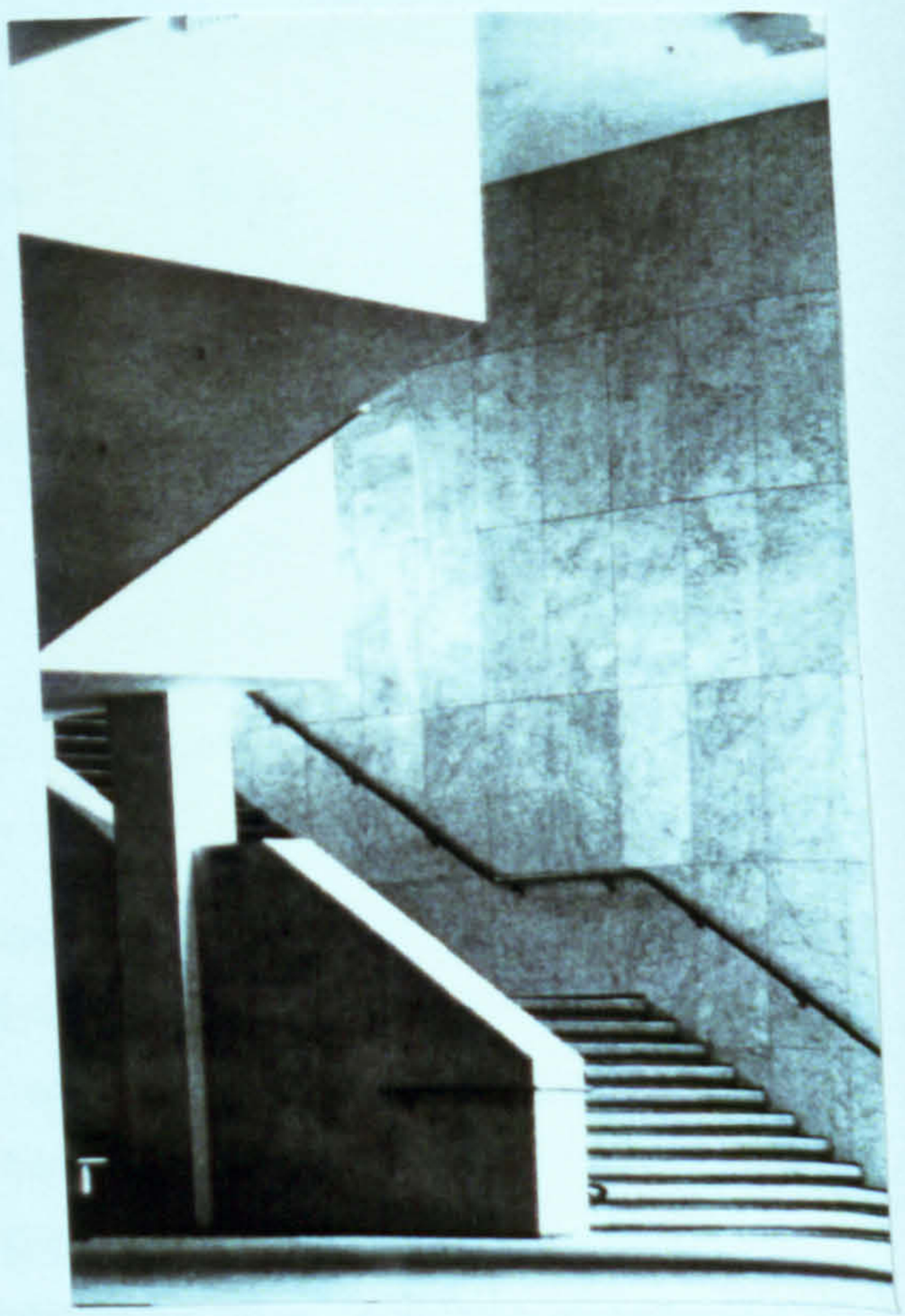
14.52

Fig.14.51 Winter light through trees

Fig.14.52 Clerestory light, *Vuoksenniska Church*; Aalto, 1956-9



14.53



14.54

Fig.14.53 Sketch of San Gimignano, Tuscany; Aalto, 1948

Fig.14.54 Stairs leading from foyer, *Finlandia Hall*; Aalto, 1962-71

structural bonds of form in the *Fifth* (1915, 1916, 1919), Sibelius journeyed inwards to question the essence of *harmonia*, in the *Sixth* (1923) not for its own ends, but, as Tilson - Thomas believes, to address its deeply philosophical relation to chaos.[65] Arguably the *Sixth* also questioned his own creative strength against his inherent psychic chaos, equipping him for the vital unification of symphonic form through the gradual growth and integration of fragments of sound (motifs) into a single movement in the *Seventh* (1924).

This thesis has suggested that, in addition, Sibelius sought such a link between his own past '*gap*' and future wholeness; "Just work for dear life at your new symphonies which will be the crowning glory of your life" (Sibelius, 23.2.1919; T3:ch.10). Tragically he did not achieve such wholeness in anything but a symbolic, musical "way".

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[65] M.Tilson-Thomas, *Journey to Silence*, BBC 2, 17.2.89. Tilson -Thomas' film explored the structural and modal progress in Sibelius' Sixth symphony.

CONCLUSION:

WORLD BUILDING IN THE *'GAP'*

"[...] it is the connection between the two concepts that achieves the balance we need" (Aalto, 1967c)

"I've suffered and learned much." (Sibelius, in Ringbom, 1954:98)

"There the waves rise up from the seething depths" (Puskin, *The Bronze Horseman*, 1982:252)

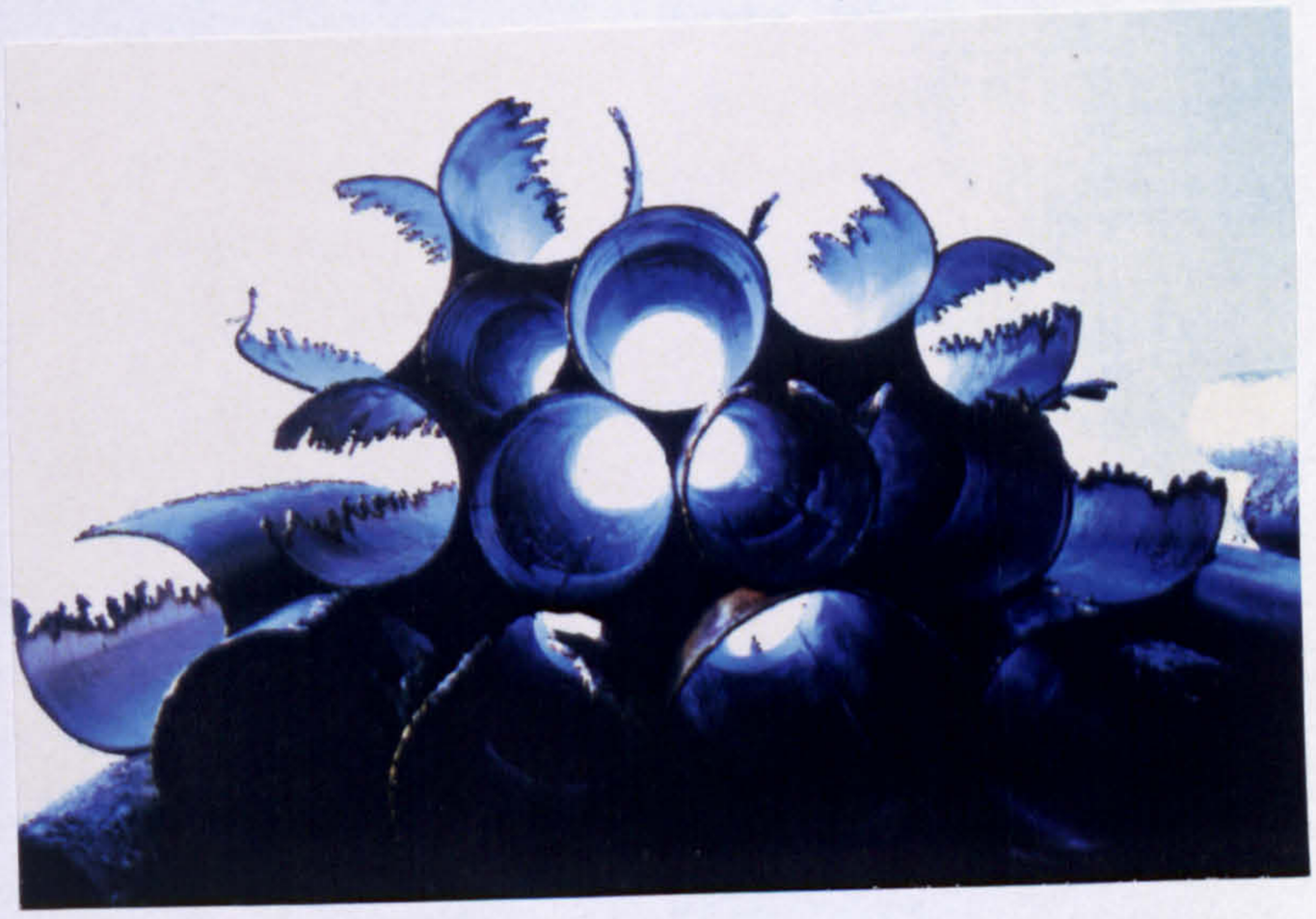
Without reference to any specific ideas or incidents, Schildt actually contrasts Sibelius' frequently expressed self doubt, with Aalto's assured confidence (which Schildt says was rooted in his "safe childhood world" - GS1:194). He continues with the belief that the composer's work "functions by making the public enter into the artist's psyche" (GS1:69). It is, however, possible that rather than seeking this, Sibelius offers the public an experience of vistas of their own psyche, a notion which revisits Edward Bullough's theory of "psychic distance" (1912), which later writers believe must be formed and ingrained in the composition of "good" art (Langer, 1993:222). Schildt's seemingly shallow comparison, designed to distance Aalto from Sibelius' psychology, was even made alongside Aalto's profound words at the 100th anniversary of Jyväskylä Lyceum, wherein he praises doubt (with which, it is clear, Sibelius was riddled); "The oft-despised philosophy of doubt is in fact an indivisible condition for anyone who wishes to contribute to culture." (1958a). Aalto, it seems, believed in the transformation of doubt into a positive phenomenon; potential amidst anarchic scepticism.

"On a higher plane doubt is changed into its opposite, love with critical awareness." (Aalto, 1958a)

Despite remaining almost psychotically terrified of death, and continuing to have paralysing depressions, Aalto demonstrated something of Aristophanes wisdom: "Love is simply the name for the desire and pursuit of the whole" (Plato, *The Symposium*, 1951:6).

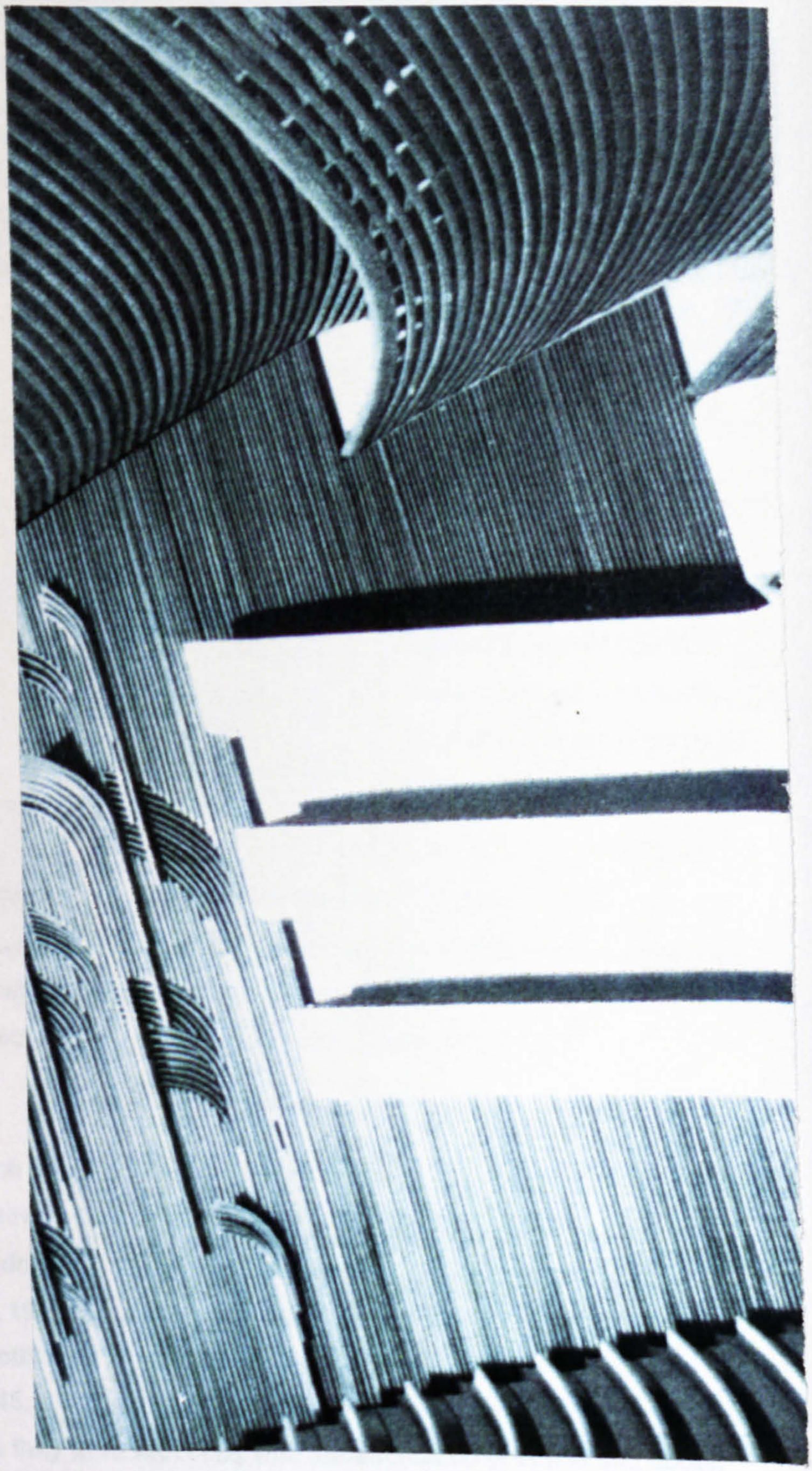
Confidence to Be

The lack of confidence, which chapter five demonstrated had penetrated deep into the being of Sibelius and Aalto, may have been rooted in a *'lack'* of penetrating love and acceptance. Without acceptance a child does not experience sustenance, nor their true (i.e., unconditional) status (Lake, 1986). The achievements resulting from patterns other than this cycle of life (and love) do nothing to sustain the creator, failing to penetrate deep cellar-like deprivations (Winnicott, 1945; Phillips, 1988). The determination to forge forms of *harmonia* and *sumphonos*, imbued as they were with such vital transformation of chaos and doubt, made life bearable, and built up the works into deliberate, vicarious 'others'; worlds in which Sibelius and Aalto successfully harbinger inner chaos, and through the process of the creation transforming it into precarious *harmonia*. The transformation is vital, preventing the work from being hysterical or psychotic art. Rather, their work is thus of great importance, since it brings the deep psychological distresses and chaos of their inner experience into



14.55

Fig.14.55 Detail from the Sibelius Monument



14.56

Fig.14.56 Model of auditorium of *Essen Opera House*; Aalto, 1959-61 (designed) - 1991

accessible and whole creative solutions in external artistic form. Contrary to Schildt's opinion, it could be argued that Sibelius lived with less everyday psychological denial than Aalto.

Thus, in the work of both Sibelius and Aalto, the *sumphusis* is understood to have comprised a tension resulting from the inner connection between episodes of content, be they motives, 'cells' or the yoking together of disparate elements such as the Pedal and the Wave. It is this achievement of resolution through the relating of such, often disparate, elements which this study discerns as the profound *logos*, signifying the torturous relation of internally discommunicated parts of themselves. Indeed, Sibelius evinced this when, in 1918, he indicated a connection between the prominence of the "sculptural" (i.e., Wave) in his work and "hammering the ethical line", on which he "must concentrate and hold out" (Sibelius, 20.5.1918; Ekman, 1938:154-5); i.e., that which offers some strength and foundation. He returned to this "ethical line" when he exposed his famous philosophy to Ekman; "the wonderful logic - let us call it God - that governs a work of art is the forcing power" (1938:256). Both Sibelius and Aalto experienced the need for the connection - the *logos* - between the multeity of fragments of themes, be they human functions calling for sensitive integration in a building, or pieces of experiential or memorial mosaic at the core of themselves, which, Sibelius felt were "dependent on powers stronger than oneself" (1938:256), or at least one's conscious self. This, the real content, demanded to be manifest in complete, unified artistic forms essential to which was a complex, and real *harmonia*.

As cited above, Spitzer argues that the Christian development of Greek ideas of world *harmonia* are informed by the notion of following the spirit rather than the letter of any 'law' (1963:51). This involved moving towards a capacity to draw together the disparate simultaneously, moving from "physical well-jointedness" (Augustine, *De Musica*, 6:10, after Heraclitus) towards *concordia* and eventually to the reconciliation of opposing forces. In Sibelius' and Aalto's works this conclusive position does not deny strife or tension between different parts which generated it, but rather demonstrates these tensions as inherent to the whole.

The pattern of creativity which Sibelius and Aalto portray in their work process, their art forms and the palimpsest of their written word, can come across as a religion. This is especially so in light of the Latin root of religion, *religio*, meaning 'reliance' or 'connection'. That Sibelius, like Heraclitus, repeatedly correlated the profound *logos* and "God" is also significant (Ekman, 1938:257). Indeed, at the turn of the century the great American psychologist William James, defined religion as the attempt to be in harmony with an "unseen order of things", using religion to mean "to connect" (1928). This accords with the use, herein, of *logos* in its meaning of relation. Indeed, if the reading of *logos* as 'relation' is substituted for *logos* as 'word', the opening of John's Gospel may legitimately, and with profound relevance

to the present context, be read, "In the beginning was the Relation (*Logos*). The Relation (*Logos*) was with God, and the Relation (*Logos*) was God."

Indeed, Tawaststjerna believes that the *logos* ("call it God"; Sibelius, Ekman, 1938:257) that Sibelius found to be so wonderful, demanded that he unite the intuitive and inspirational with the conscious and rational (T3:ch.6). It is exactly this synthesis which Aalto sought, too. In this way the "profound *logos*", which scholars have identified as Sibelius' "philosophy" (i.e., that for which and by which he worked), offers another angle on the striving for *harmonia* through relating things towards a new natural order or *kosmos*. To recall, Schildt's explanation of Aalto's belief system explained a notion of overcoming the fragmentation and tragedy of life "by striving with all one's might to overcome chaos, hubris, and other disharmony and to adjust to the laws of the cosmos, one may survive after all and share in divinity" (GS2:228). Thus, behind the veil of the material there is an "unseen order of things" (James, 1928), with which it is natural that humans seek harmony, and which prior to the seventeenth century, was apparent in the integration between science and religion, but which since has become fragmented (Peck, 1992:233-5). The creative synthesis which Aalto and Sibelius sought, between intuition and analysis and between inner feeling and external form, was actually their way of striving to reunite these phenomena. Aalto, for instance, knew that

> "social, human, economic and technical demands [...] unite to become psychological problems [...] and internal frictions." (Aalto, 1947).

Indeed, psychology, such as that explored herein, is concerned with remaking connections. In a similar manner this thesis has demonstrated the making of connections (i.e., *harmoi*, joints) in the works of Sibelius and Aalto. This is entwined with the difficult area of belief-systems because these systems are the very threads of the hidden order (Peck, 1992:237) and "of unrecorded reality" (Langer, 1993:281).

> "I do not think of a symphony only as music in this or that number of bars, but rather as an expression of a spiritual creed, a phase in one's inner life." (Sibelius, 1923; T3:ch.15)[66]

That the work of Sibelius and Aalto is an exposition of *religio* (connection) or *logos* (relation) is therefore not far-fetched. These men seem only to have been able to produce their art when they were not in their paralysing depressions, and indeed, this suggests that the capacity to establish and perpetuate such an "unseen order of things" was vital to them; a truly profound and dynamic capacity to create *kosmos*.

[66] Sibelius in an interview with Svenska Dagbladet, 25 February, 1923.

Chapter Fifteen



15.1

CONCLUSION:
Relating the Past

Fig.15.1 Sketch of the *Theatre at Delphi*, Aalto, 1953

Introduction

"Experience and not academic comments give a true idea of the form" (Parmet, 1957:92)

"You have lit a candle that will never be put out." (Vaughan Williams to Sibelius, T3:ch.22)

"We build bridges between things we cannot be sure of [...] Maybe the bridge itself is important." (Juhana Blomstedt, 1987:10)

The conclusion of the study is that there are significant parallels between the lives and works of Aalto and Sibelius; a central feature of which centres around the relation of the disconnected or disparate, both in their culture, in themselves, and in their creative output. This has been identified as a *logos,* found herein to be a profound relating mechanism which was central to their lives, both personally and culturally.

The thesis involved an examination of the experience from which the creativity of Sibelius and Aalto sprang; experience which Sibelius' biographer, Tawaststjerna, saw as the influences of life, the world around and the world of work (T3:ch.9). The 'world around' Sibelius and Aalto was explored in chapters two, three, four, seven, eight and nine; their 'life influences' in chapters five, six, eight, ten and fourteen; and their work in chapters three, four, nine, eleven, twelve, thirteen and fourteen.

This concluding chapter will restate the main findings of the foregoing chapters which combine to restate this conclusion.

PART ONE: INSEPARABLE CONCOMITANTS

"They have given us a lot, these people in want." (Haavikko, in Kaipainen, 1985a:18)

"[Sibelius'] individuality has absolutely nothing to do with the fact that he is born and bred in Finland, but comes from an innermost human quality" (P.R. anonymous critic, 1930, T3:ch.20)

"Contact with unsettled landscape, long distances and a harsh climate have certainly left their mark on Finnish national character and culture." (Klinge, 1993:92)

Part one comprised an examination of the semiosphere of both Finland and the characters of the protagonists, Sibelius and Aalto.

CHAPTER ONE

INTRODUCTION: RELATING PHENOMENA

After outlining the intention of the thesis, chapter one offered an etymology of the Greek word *logos*, including a definition as 'relation' which, thereafter, was central to the argument of the thesis.

CHAPTER TWO

HARSH NATURE'S POOR ABANDONED CHILD

Chapter two demonstrated the relation of socio-cultural '*lack*' (asceticism and simplicity) as characteristic of ethnological history (fig.15.2) and the emerging high culture of Finland, and the consequent keen absorption of, and identification with, classicism in Finnish culture.

Nationalism in a young country can be an important psychological stage in the process of collective confidence, identity and awareness. That Finnish art often shared characteristics of the socio-cultural '*lack*' was found not to be surprising, especially in the case of Sibelius and Aalto, where there was a potent psychological correlate; to be defined in chapter five as the '*gap*'.

CHAPTER THREE

NATURAL VARIABILITY OF THEME: GROWING FORM TO FILL THE '*LACK*'

Chapter three explicated the cultural '*lack*', finding a parallel between the inherent agglutinate theme and variation principle of Karelian folk culture (the rune fragments and the additive growth of folk architecture, fig.15.3) and Sibelius' and Aalto's own creative processes. However,



15.2

Fig.15.2 *A Poor Boy*; Helena Westermarcke, 1884



15.3



15.4

Fig.15.3 Birch forest, Kitee, Karelia

Fig.15.4 Bound posts of the sauna, *Villa Mairea*; Aalto, 1936-9

importantly, this did not seek to prove that their works were ethnological reconstructions, but rather demonstrated the manner in which both men modernised the culture of '*lack*', using additive growth and therefore creating work which has been labelled as 'organic' (discussed in chapter twelve).

CHAPTER FOUR

ELIMINATING ANYTHING SUPERFLUOUS: THE APHORISTIC LANGUAGES OF SIBELIUS AND AALTO

In chapter four the common coupling of Sibelius with his National Romantic peer, Saarinen, was challenged, and in its stead the commonalties of Sibelius' and Aalto's creativity was established, despite the different periods in which they lived and worked. The chapter further explored their modernisation of the '*lack*' (fig.15.4). This was undertaken through a demonstration of their similar position in relation to the most avant-garde modernists of their respective fields; Schoenberg and Le Corbusier. The chapter established both Sibelius and Aalto as creative 'Moderns', but contextualised their modernity in terms of Finland's cultural and natural environments.

CHAPTER FIVE

THREADS OF UNRECORDED REALITY

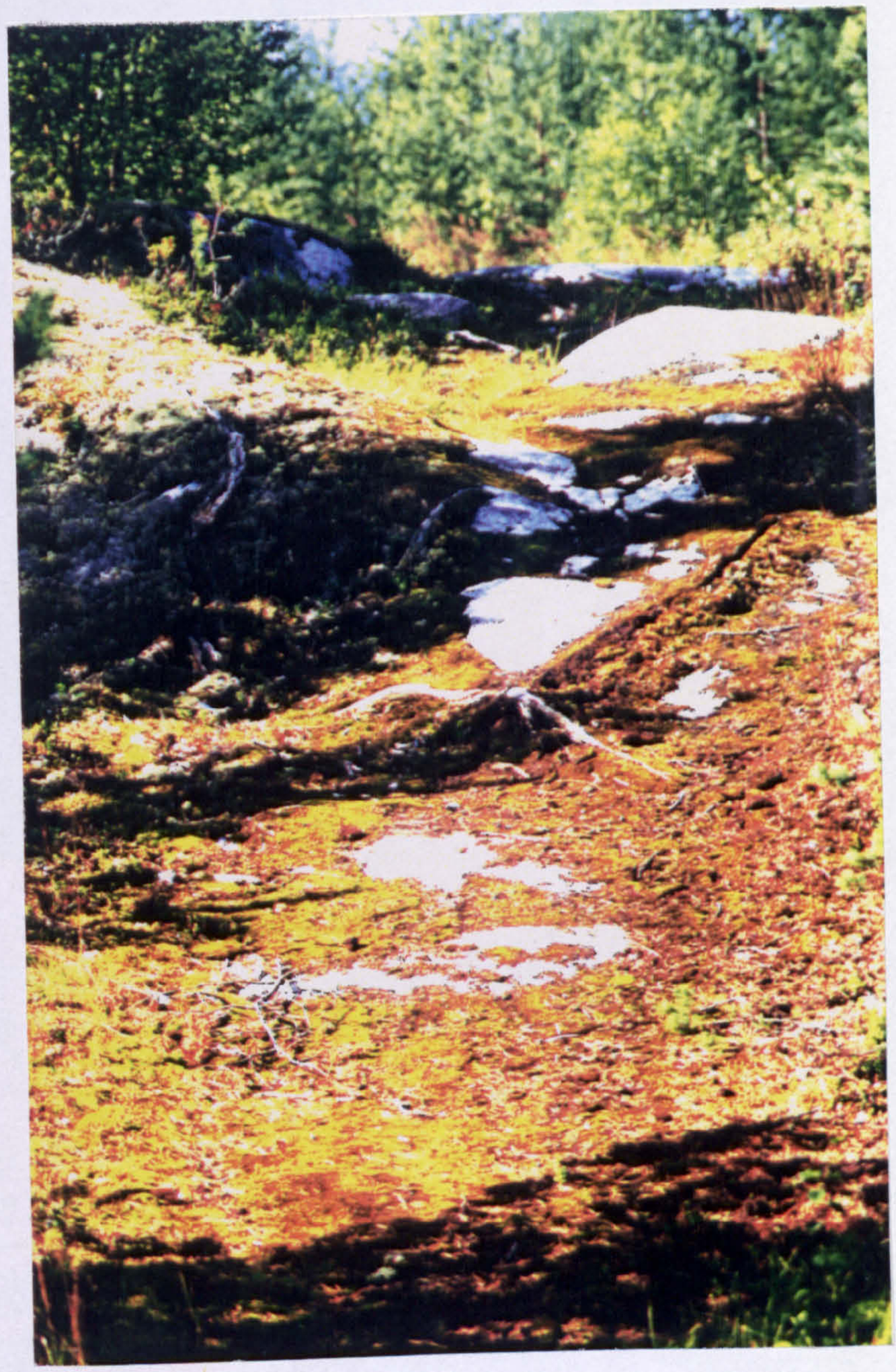
Chapter five explored Winnicott's notions of primary creativity (which he demonstrates to be inherent to humanity), and his notions of childhood deprivations and the concomitant '*gap*' which emerges at the centre of a person's being. The chapter then explored the reality of Sibelius' and Aalto's childhood trauma (the '*gap*'), demonstrating the depth of their common tragedy, and relating this deprivation to the dysfunction of their adulthood. This established their parallel psycho-pathologies.

CHAPTER SIX

FILLING THE '*GAP*': BUILDING A BRIDGE TO EXTERNAL REALITY

Chapter six demonstrated the relation between the '*gap*', the adult dysfunction and the need to create. In particular it studied the place of creativity as a phenomenon with which Sibelius and Aalto sought to fill the '*gap*'. Creativity was found to be a means of world-building (Cobb, 1993), a process of relating the traumatic past (the world view of the child) to the present. This exploration confirmed the idea that Sibelius and Aalto may have been engaged in a literally vital process of *re*-building their inner world. This was likened to Winnicott's notion of Transitional Phenomena (i.e., that used to relate inner and outer reality).

The thesis suggests that since there is similitude between the concept of deprivation inherent in the '*lack*' and the '*gap*', and that strong ethnic creativity was demonstrated to have grown from the '*lack*', it follows that Sibelius' and Aalto's creativity may share correspondences with Finnish identity because it is rooted in another deprivation (the '*gap*').



15.5

Fig.15.5 Forest path, near Jacobstad (Pietarsaari)



15.6

Fig.15.6 Forest at Saarisellkä region

PART TWO: FOREST REFUGE

"Today I have melodies like God [...] rejoiced and revelled and trembling as the soul sings [...] I saw sixteen swans [...] Their cries are of the woodwind type like cranes but without the tremolo. A low refrain resembling the cry of a small child, the mysticism of nature and the agony of life." (Sibelius, 21.4.1915; T3:ch.4)

"[...] human beings need to take in, reshape, and give out, in some altered form, their perception of the natural world, the cosmos." (Margaret Mead, 1976:12)

"The true function of art is to be a graph of our time, an intuitive search for the missing equilibrium among the emotional, intellectual, and social lives" (Moholy-Nagy, 1947:32)

Part two sought to synthesise the forgoing chapters through an examination of Sibelius' and Aalto's use of the Finnish forest as a Transitional Phenomenon.

CHAPTER SEVEN

THE NATURE OF THE FOREST

Chapter seven opened with a short discussion of current environmental aesthetics as applied to the need to seek a refuge in nature, and the significance of engagement with 'other' through experience of the forest. It then moved into a detailed study of both attitudes to, and the cultural context of, the environment which was so important to Sibelius' and Aalto's emotional and creative lives; the forest in Finland.

CHAPTER EIGHT

THE MYSTICISM OF NATURE AND THE AGONY OF LIFE: THE FOREST AS A TRANSITIONAL PHENOMENON

Chapter eight related the experience and significance of the forest to the need to relate inner and outer reality through Transitional Phenomena, established in chapters five and six. The chapter thus explored the forest as a Transitional Phenomenon through which a person's gaping psyche may experience relationship with a reality beyond itself.

CHAPTER NINE

WAVING FROM THE FOREST: AALTO, SIBELIUS AND FOREST WISDOM

Chapter nine opened with a demonstration of the character of the natural environments in which Sibelius and Aalto roamed in their childhoods (evinced in more depth in appendix eight), moving to explicate what is known of these childhood experiences and study of nature. It then recalled the deep psychological significance of nature for Sibelius and Aalto, and noted the immense bank of sensory and perceptual memories associated with this. The chapter indicated that the addition of youthful scientific knowledge and later adult intellectual speculation about nature to their

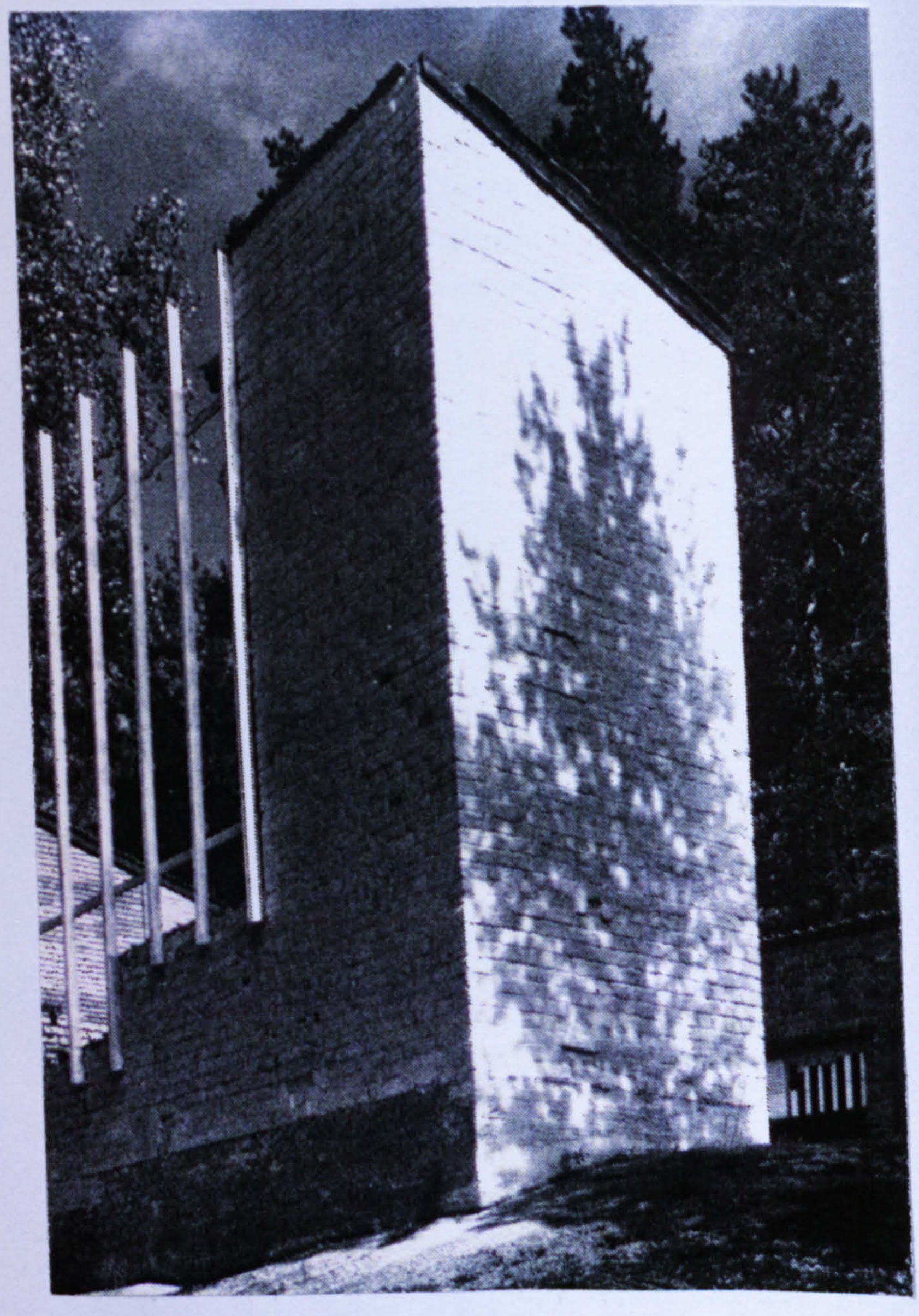
psychological need for engagement, can be argued to be the adoption of a 'model' of growth and creativity which could be used to address their profound inner need to reorder something of their interior life. The chapter then illustrated the translation of the phenomenon of the forest into their creative work.

It is not assumed that the '*gaps*' which Aalto and Sibelius suffered were unique, nor and that they were the only children to grow up with the need for refuge in nature. Rather, the thesis seeks to demonstrate that there are clear similarities in their experiences, their characters and the context in which they grew and lived. Part two seeks to explicate the notion that something of the symbolism which Aalto and Sibelius experienced in the forest, can be experienced as a commonalty between their work. However, it is apparent that both men failed to translate such formal insights into life, acting out their deprivations in dysfunctional relationships.



15.7

Fig.15.7 Birch forest



15.8

Fig.15.8 View of the *Experimental House*, Muuratsalo; Aalto, 1953

PART THREE: BUILDING *KOSMOI*

> *"The older I grow, the more classical I become [...] The more I see of life the more I am convinced that classicism is the way of the future."* (Sibelius; Törne, 1937:86)
>
> *"So many things in architecture are still at the analytical level. What is needed is synthesis. Nothing is more dangerous than to separate analysis and synthesis; they belong together inextricably."* (Aalto, 1967a)
>
> *"Chaos is a cryptic form of order"* (Stewart, 1995:123)[1]

Having established correlations between Sibelius and Aalto in parts one and two, part three of the thesis undertook to both compare their intellectual interests and to offer an analysis of their compositional form. This established how the foregoing significance of nature, and particularly the forest, became significant in the production of art.

CHAPTER TEN

NATURE AND CHANGE: THE ANTIQUE NEW AND LIVING

In Aalto's architecture the "schema for the taxis of classical architecture" is centred around a trace or palimpsest; i.e., "a thematic transparency, enabling different configurations." (Griffiths, 1995:209). The same may be said of Sibelius' classicism. In other words the chapter demonstrates that their work borrows something from the character of classical ideas (just as from folkloric rune structure and building complexes) without copying the actual styles of those artefacts.

From Ancient Greece Sibelius and Aalto adopted intellectual ideas which were preoccupied with experience, movement, growth and becoming. This is demonstrated to have been the thought system of the pre-Socratics (rather than of those preoccupied with Platonic thought); the attempts of the Ancient culture to forge unity and harmony amid the turmoil of human experience which are deeply significant in the context of this thesis. The chapter proceeded to demonstrate the Ancient notion of natural order (*kosmos*) dependent on the interaction of all things, in so doing indicating the complexity and subtlety of Ancient ideas (such as Heraclitus' notion of generation, *flux*, the back-turning nature of *harmonia*, and the precariousness of *kosmos*). In this the chapter elucidates ideas which challenge the comprehension of the classical world as having a well proportioned, logical and finely ordered culture.

The chapter demonstrated the rekindling of these notions by an intellectual mentor of Sibelius' and Aalto's, namely Goethe, who, like the Finns had found salvation in the modernisation of the

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[1] For example, Mitchell Feigenbaum discovered that a particular number is associated with the seemingly random dripping of a tap. (Stewart, 1995:122).

antique forms and laws; Aalto and Goethe in Palladio, and Sibelius in the polyphony of Palestrina (Palladio's contemporary) and the modernisation of the ideals of Greek music, such as modes. There is a line of thought between Ancient Greece and the concern for unity which characterised the Romantic aesthetic of organic wholeness through thinkers of the eighteenth and nineteenth centuries such as Goethe. It is apparent in fragmentary, even disordered art of that time which was felt to escape analysis because it sprang from the depths of the artist's unconscious mind (Colquhoun, 1994:28);[2] evincing a connection between the creation of art and what might be called the continuing creation of the human psyche. Here the chapter cited the influence such ideas had on thinkers (such as Bergson, Driesch and D'Arcy Thompson), and how this can be traced as having then influenced Sibelius and Aalto directly or indirectly.[3] The idea that their art sought to express can be said to be intrinsically natural; i.e., *kosmos* (natural order) which is a prerequisite for humans as for all other nature. The commandeering of the organism as an ideal phenomenon expressed a wider universe, reflected the classical idyll to which the two Finns turned for inspiration; it also prevented their art from being neurotic.

Through elucidation of their classical interests, the chapter introduced themes which characterise the work of both Finns; for example a certain precariousness of the moment of growth towards *kosmos* and *harmonia*; that temporary flux or even dialogue with *chaos*. Sibelius' and Aalto's 'organicism' was shown to be inseparable from the capacity of creativity to draw together disparate elements (of both ones' inner life and the elements within artistic creativity) and their interest in the notions of natural growth, harmony and unity, which, in turn, is rooted in and limited by such notions (i.e., the conclusion of chapter six).

Hugo Häring's notion of *Leistungsform* (form derived from content - Häring, 1932) was found to be applicable to the work of both Finns,[4] since, like Häring, they acknowledged that their work was literally 'in-formed' by the content.[5] Such 'organicism' was then compared with the ideas of musicologists Schenker, Réti and Zuckerkandl with reference to Sibelius' work.

Chapter ten embodies the thesis' challenge to the conception of Aalto's work as "irrational - Organic" (Giedion, 1950:77) and Sibelius' as being musically "deranged" (Adorno, 1980:461), by demonstrating the vital, literally life giving, role of their creativity as an extremely sensible, even

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[2] Colquhoun compares the paratactic freedom of classical and gothic design (1994:25). Both have order, but the gothic order was not Pythagorean, and its rationale was not Aristotelian. In *Physics* (199a:15-19) art and architecture are both seen as extensions of nature and imitations of nature at the same time.

[3] Goethe's *Urphänomen* and Bergson's *élan* are demonstrated to explore the essence of art as a seed, or a kernel of energy (or intent) behind natural phenomena, and to have been requisitioned to assist the understanding of the energy or intent behind art (i.e., as an expression of life).

[4] Aalto's organicism is shown to have differed from Häring's in at least one important area; the "synthesis" between the free form and the rectilinear.

[5] In May 1912, Sibelius had stated that there was no solution to the problem of form, other than allowing the motives to dictate its shape (8.5.1912; T2:218).

logical way to maintain their homeostasis. The chapter also offers the idea that their 'organicism' represents the outworking of the notion of *kosmos* (both nature's and their own) in the organic processes in their work (i.e., the "millions and millions of flexible combinations" - Aalto, 1935).

CHAPTER ELEVEN

SYMBOLS, MODELS AND IMAGES

In preparation for the analysis of their created forms, chapter eleven set out the distinction between Langer's notion of a model and an image as applied to nature as an inspiration to Sibelius and Aalto in their creative work. It was established that a model may be phenomenologically distinct from the object, yet may symbolise the object's structure or function. This was to be the methodological approach to the analysis in chapter twelve. An image, on the other hand, was found to be built on different principles from the phenomenal character of its object, but to be imbued with the object's phenomenal character. The structure of the image may also be different from the object, yet the semblance of the image challenges us like the phenomenon itself. This was to be the basis of the exploration in chapter thirteen.

This distinction was shown to assist in the explication of the correlation between Aalto's and Sibelius' work. In these terms the music is an image (i.e., offering semblances of phenomena) of the buildings. At no time has the thesis suggested that the music was a model for the architecture. However, part three suggested that, to a limited extent, nature's growth process may have been a model (a symbol of the structural procedures) for both the music and the architecture; an aspect of the compositional corollary between the work of Sibelius and Aalto. Indeed, Zuckerkandl describes such a process of growth as "a type of coherence, which is not logical yet not irrational either" (1974:298), but that which has a logic of its own which is "compatible with newness" (1974:299); i.e., creation and creativity.

CHAPTER TWELVE

MILLIONS OF FLEXIBLE COMBINATIONS

Chapter twelve demonstrated how the content of Sibelius' and Aalto's created forms follow, as Zuckerkandl puts it, "at once logically and unpredictably from what has gone before; together with what precedes and follows them they form a tightly knit whole. That there is a high degree of 'rationality', indeed, even 'logic', in this kind of musical development cannot be denied." (1974:272).

The chapter opened with an examination of the biological process of cell reproduction (augmented by appendix nine) which Aalto often cited. These were the "secret relations" "produced by nature" (Valéry, 1956:120), and therefore the substance of the examination of the profound relations (*logos*) in Sibelius' and Aalto's work.[6] The chapter presented the case for and against the notion that Sibelius and Aalto may have used a natural model to relate fragments of creative ideas into whole forms.

An analysis of nature's growth as a model in works by Sibelius and Aalto was then presented, demonstrating that in some areas of their work there may be said to be structural corollaries; e.g., their use of small compositional cells of material or space, or germs of music, and the flexible amalgamation of these kernels into whole created forms. This evinced Sibelius' "principle of unique building deriving from organic variation and process-like development" (Murtomäki, 1993:295), which may be directly comparable with such phenomena in Aalto's work.

CHAPTER THIRTEEN

CREATING *KOSMOS* IN THE GAP: ESSENCE AND TECHNIC AS CLOTH AND WEAVE

Having examined Sibelius' and Aalto's use of nature as a model for their compositional structure, chapter thirteen illustrated the search for unity within Sibelius' and Aalto's forms, questioning whether this might relate to the root of their striving to create through their use of nature as an image (i.e., offering semblances of phenomena); thus examining the underlying motivation behind their use of the model of nature's growth process.

Significant ontological relationships were found to exist between Langer's use of image and the Greek word τεχνη (*techne*, letting the essence appear), and between model and παραδειγμα (*paradeigma*, pattern or standard). Revisiting the Ancient concepts of *harmonia*, *kosmos*, and *paradeigma*, the chapter explored the etymology of technology and technique, and their role of bringing something to 'being'; i.e., that state of a finished artefact in which image and model are inseparable. Complex and ingenious jointing mechanisms were demonstrated to have been the technique through which whole forms were brought to appearance. Hence the correlation between the will to bring forth harmony and the process of compositional amalgamation; i.e., *harmos*, meaning joint. Emergence and technique were also found to be related; i.e., *tiktein*, etymologically related to *techne* means 'born'. Indeed, Homeric *episteme* and *sophia* were shown to infer skill (i.e., knowledge could not be separated from the knower's experience).[7] Before and

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[6] Paul Valéry wrote, "[...] thinking [...] of degree in the order and distribution of the parts and in the elements brought together to form a being [...] are invisibly bound up with one another by secret relations [...] meaning 'produced by nature'." (Valéry, 1956:120)

[7] The notion that "*Theoria* had, originally, to do with seeing and with the revelation of the divine", and that, in a "well made thing [...] *Kosmos* is discovered [...] through a *tekhne* that is a letting appear" was explored (McEwan, 1992:125).

during the classical period Socrates conceived *sophia* as being associated with skill, but this was no longer so for Plato. To examine what Sibelius and Aalto may have unconsciously demonstrated of their life experiences in their work, the thesis returned to the former emphasis on 'experience'. In so doing the study sought to discover how Sibelius' and Aalto's life pattern (i.e., their cultural context, personal history and interests),[8] led to their common development of specific artistic skills and goals (i.e., the creation of forms in which disparate parts were to 'grow' to be united by harmonic means); forms which may be said, in turn, to represent such experience.

This approach to formal unity was shown to involve a large degree of complexity (i.e., multeity), demonstrating Aalto's belief that "[unity in art] can be traced in the lattice [...] at the roots, in their nascent form, not at the surface." (1947b), and how Sibelius' "achieves the utmost variety within the utmost unity" (Burnett-James, 1983:110). This concern for unity confirmed the notion that both Finns sought to bridge the divide which had developed in the nineteenth century between the constructive (scientific) and the artistic (sentient) views of life, through the creation of form which was simultaneously technically skilful and creatively expressive; a divide that was inconceivable to the classical mind in which these phenomena were indivisible (Colquhoun, 1994). More over, in literally vital terms it was also a divide which was a real danger to individuals who relied (for their sanity) on a conception of wholeness to bridge their experiential (emotional and psychological) '*gap*'. In this they were found to have forged important syntheses. This urge to form also explains their repeated attraction to and adoption of patterns (*paradeigma*) of wholeness; e.g., nature's growth process, ancient Karelain creativity and revisiting the Ancient world view.[9]

The chapter then examined the inner relations of form (with particular concentration on joints - αρμοι, *harmoi*) and the wider exploration of compositional *harmonia*; through their common use of the Pedal and the Wave mechanisms. This led to an investigation of both the etymology and nature of the concept of 'symphony' (rooted in συμφωνος - *symphonos,* meaning harmonious), and its connection to the latter jointing mechanisms (*harmoi*) through which *harmonia* and *kosmos* are ensured; the <u>how</u> of their search for formal *harmonia*. Sibelius' path to symphonic unity and Aalto's equivalent creation of *harmonia* in unified building forms were then examined.

Both Sibelius and Aalto are thus demonstrated to have had synthesising minds. This may also be described as a classical mind set, what was at least "a weak form of classical

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[8] This refers to Gardeners notion of life pattern cited in chapter one. (1988).

[9] Chapter thirteen demonstrated this through examples such as Sibelius' determination to forge the symphony into its ultimate, logical form (unity) through the piecing together of mosaic of fragments which, he believed, a spiritual force ("call it God") had thrown down to him (Sibelius; Newmarch, 1939:56). Aalto was determined to challenge rationalism "which has not gone deep enough" (1940) and thus to combine "the technical, physical, and psychological phenomena", while responding to the creative intuition (1947). In this way he sought and found the ever "new content" for his work (1928).

doctrine" (Colquhoun, 1994:64), if not actually being recognised as a profound advancement of organic rationalism. It may be conceived as such because the root of such thinking has been shown to have been motivated by an intense common need (and concomitant search) for some conceptual phenomena that might offer either an image, or indeed a model, with which to create at least a symbolic bridge which might address their deeply divided selves; i.e., to bridge the '*gap*'. In this way the process of creativity synthesised (i.e., was the *logos* between) the logical, technical world and the realm of the psyche, of subjective feeling and of organic nature in and beyond themselves.

CHAPTER FOURTEEN

KOSMOS COURTING CHAOS?: THE ULTIMATE *SUMPHONOS*

Chapter fourteen integrates the foregoing chapters, demonstrating that as well as being motivated by intellectual interests discussed above, Sibelius' and Aalto's creations are informed by their perception of, and response to, the world around them, as modified by their motives, wishes, intentions and skills, all of which are a residue of earlier experiences (Segall, 1976:99), including, but not exclusively those of the '*gap*'.

As introduced in chapter thirteen, Sibelius' and Aalto's work demonstrates an exploration of the nature of harmony; the formal mechanisms of which are demonstrated as being imbued with a certain tension which is often translated into their work. The foregoing exploration of the notion that "it is through making that *kosmos* appears, or does not" (McEwan, 1993:43) thus led the thesis from the making (the how of their creations) to an exploration of the nature of their specific motivation to create such formal harmony (the why). This is a vital aspect of the thesis, since, as chapter five and six demonstrated, if *kosmos* did not appear (i.e., was not constructed in their creations), failure, acute depression, and some argue even psychosis resulted.

Thus, the chapter substantiated the notion that Sibelius and Aalto wove threads of their unrecorded reality into artistic *kosmoi*. In other words they created formal constructs in which the psycho-emotional order they needed was manifest; a process of "making known the unknown" (Wetzels, 1990:84) and of relating the past of their early deprivation (i.e., states of emotional disorder) to their adult present through a process of creative reordering. To this end both men adopted the creative-intellectual mechanism of requisitioning intellectual and compositional processes from the past (be it Karelia or Ancient Greece). Importantly this corroborates the thesis that the very need of an order which addressed their inner turmoil may have stimulated their particular interest in requisitioning both nature's compositional and growth processes; that which became a key characteristic of their work, and was inherently a process which was inherent to their psycho-biological human life.

It is this relation of the 'other' natural process beyond the self with the inner natural processes of human being that may be identified as part of the "profound *logos*" which Sibelius was heard to associate with the divine in art (Sibelius; Newmarch, 1939:56). McEwan ratifies this through her portrayal of a theory in which creativity and the *logos* are associated with "the revelation of the divine" (McEwan, 1992:125). This theory was shown to derive from the content (the lives and work of Sibelius and Aalto) and as such can be described as "*sophia*-as-skill" (McEwan, 1992:127);[10] i.e., that which comprises technique and which allows the vital artistic *kosmos* to appear, and which is inherently related to experience.[11]

The symbolism in Sibelius' and Aalto's art was shown to allow their experience and indeed their feelings to find their "logical expression" (Langer, 1993:218); a route which also prevents the creation of neurotic art. Langer describes this as "the process of relations not of qualities" (Langer, 1993:55). That "relations" were thus shown, in Langer's mind, to have been important, strengthens the thesis that such a relation (*logos*) was vital in both Sibelius' and Aalto's lives and work. Thus the chapter moved on to relate creativity and the divine in Sibelius' terms; "Struggling with God. I want to give my new symphony a different, more human form." (Sibelius, T3:ch.6). This attests to his trials of relating the creative path with his human experience. Aalto concurs, suggesting that architecture must be based on life experience, and that "[w]e cannot create new form where there is no new content" (1928); that content being the ongoing process of living.

This launched the chapter into an important explication of how the working of such a relation (*logos*) enabled Aalto's often hidden hypersensitivity to be put to valuable use in architecture, enabling him to discern the subtle, unarticulated psycho-social needs of 'little man'.[12] This was the process of striving to bring "apparently irreconcilable opposites" into *harmonia* in his work as he never succeeded in his personal life; his search for a "conflict-free unity" in which he achieved the moving integration of contradictory elements which were handled with "simplicity and serenity" (Venturi, 1976:66-67). Such unity is imbibed with a vibrancy of relations between parts which, for instance, stimulates users in a manner which encourages user participation and relationship, as demonstrated in *Baker House*. To recall, this demonstrated a tension inherent in the notion of *kosmos* (natural order) referred to above and intuitively understood in Ancient Greece. Thus Aalto was shown to come close to Sibelius' desire for a more "human form" through "forging an ethical line" (Sibelius, 20.5.1918; T3:290) through his adoption of "[...] a psychological dimension that links it to the

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[10] The use of *sophia* in the present context does not seek to attribute divine wisdom to Sibelius and Aalto, but rather to indicate a distinction between *philo-sophos* (lover of wisdom) as an occupation of musing about ideas, and the wisdom which is discovered through experience of making, and especially that which has the added vitality of being motivated by mental or physical survival.

[11] Sibelius wrote, "I plan to allow the musical thoughts and their development in my spirit determine the form of my music" (Sibelius, T2:187), and "[a]s usual, I am a slave to my themes and submit to their demands." (Sibelius; Ekman, 1938:254). Sibelius, who read Horace in Greek, might have taken on the Ancient's ideas about the relation of the consonance of form with contents (Spitzer, 1963:134).

[12] Storr indicates that if a work of art comprises more of the real person of the creator than is generally shown in public, hypersensitivity is not surprising (1991:107).

very core of his philosophy [...] an artistic synthesis of all disparate determinants in a living core." (GS3:192).

Sibelius, like Aalto, was dogged by "emotional insecurity and the fear that the world might laugh at him"; compelling him to seek protection "in shadows where he could pose as a musical enigma, a man of mystery" (Johnson, 1960:196). Yet others think that, rather than either depicting the shattered world of his time or hiding his insecurity, Sibelius actually expresses a "big dream" (McMullin, 1985:199-200; Murtomäki, 1993:297). This is not unlike Aalto's fantasy of a new humanist Renaissance through which his work was imbued with a visionary ambiance, but one which was also the mirror of a tragic world of disharmony and decay. Yet, having demonstrated something of their nightmares and terror of death, it is apparent that their work is not the repetition of such nightmares (i.e., not neurotic art), but rather manifests their endeavouring to prevent such deep trauma and alienation, by striving to find a creative (if not also psychological) sense of unity through the connection and relation of disparate compositional fragments. The thesis thus demonstrates creativity as a Transitional Phenomenon which facilitates Sibelius and Aalto in relating to the past. Indeed, Murtomäki concludes that Sibelius' music has the vital form of being conscious of reality (1993:297).



15.9



15.10

Fig.15.9 Sibelius; circa 1940

Fig.15.10 Aalto; circa 1972



15.11

Fig.15.11 Sunset in Lieksa, Karelia

CONCLUSION:

RELATING THE PAST: SIBELIUS, AALTO AND THE PROFOUND *LOGOS*

> *"Somehow, a creative product must give a sense of reconciliation, of having resolved in an aesthetic and harmonious way the discords and disharmonies present in the original situation [...]"* (Harrison Gough, 1964:8)
>
> *"Only high poetry can deal with any and all motifs and create harmony."* (Aalto, citing unnamed poet, 1955a)
>
> *"[...] you have reached into the deepest depths of the unconscious and the ineffable and brought forth something of a miracle"* (Vilhelm Stenhammer to Sibelius, 10.1902; T1:292)

This study has sought to explore whether there were parallels between the lives and works of Sibelius and Aalto. It has demonstrated that indeed, there are such correlations at the level of their similar life experiences (based on similar childhood deprivations or '*gaps*'), their choice of a similar creative model (closely connected to their primary, creative response to the '*gap*') in the form of their interest in nature's growth process as a modelling pattern, and at the level of non-discursive (i.e., phenomenal) correlations between their work.[13] Three phenomena are central to this latter correlation:- a '*lack*', a '*gap*' and an asceticism or formal economy; a notion of *Sterben und Werden* (death and becoming) with the concomitant inspiration from nature, growth and flux; and the latter within or inspite of *harmonia* and *kosmos*. The thesis has demonstrated that these were inspired, in part, by their Finnish context (e.g., the forest, Karelian culture and geo-climatic phenomena), by Ancient inspiration (e.g., both Ancient ideas and writers on the classical world, such as Goethe and Burckhardt), but also by their own deeply personal experiences; "the mysticism of nature and the agony of life" (Sibelius, 21.4.1915; T3:ch.4).

Filling the 'Gap': Deprivations and the Creation of Form

The conclusion of the thesis is that if excessive childhood deprivation may result in a particularly severe psychological '*gap*', a person's creativity may be preoccupied with symbolic order which might bridge, or at least address, such a '*gap*'. In the present case the '*gap*', from which some of their personality has been shown to derive, led Sibelius and Aalto to develop certain (common) intellectual and creative interests which addressed that '*gap*' either vicariously or directly. It has been shown that in such situations the "striking lack of fit" [...or gap] " between the personality and the wider domain (or between the inner reality of a divided self and an outer world), may serve as a "primary motivation" (Gardner, 1988:320). In other words the constant presence of the '*gap*' motivates behaviour (creative or destructive) which seeks either to bridge or to fill the '*gap*'. Thus, this thesis argues that the intellectual and artistic interests of Sibelius and Aalto grew into a form which partly filled their psycho-emotional '*gap*'.

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[13] If, as stated, one apprehends everything which impacts on one by imposing images which stress salient features, filing them in one's memory, their recollection depends upon an incomprehensible pattern of neural connections, neural relations between related phenomena which our mind believes to be perceptually congruent, in terms of our emotional, phenomenal or paradigmatic life. (Edelman, 1992; Humphrey, 1992)

The repetitious bringing of fragments into coherent, but by no mean simple form in their art, has evinced such a process of ameliorating the '*gap*'; demonstrated by Aalto's search for "harmony" and Sibelius' for the ultimate symphony. In other words, the thesis has demonstrated that by seeking to forge connections between different parts of their creative forms, and between these forms in the present and their shattered, gaping selves from the past, Sibelius and Aalto underwent a process of rebuilding their inner reality by creatively relating to (i.e., addressing) the past through the creation of new artistic forms. Agreeing with this notion of creativity as a means of relating the past, Valéry observed that "similar intellectual forms summarise and simplify one another; common notions involved in different propositions serve as links between these, and disappear, thus allowing us to join together the other things with which those notions were separately connected" (1956:105).[14] Indeed, further correlating the creation of forms with the process of relating, and indeed actually using *logos* as 'word' (i.e., a vehicle for relating), Valéry suggests that, "[...] for us Greeks all things are forms. We retain only their relations [...] we build, by means of the word" (i.e., *logos*) (1956:107).

Relating the Past

It has been shown that Sibelius himself recognised that his work was born out of "*das Zwingende*" (compulsion) (Sibelius; Levas, 1970:81); a drivenness resulting from the inner need to address the '*gap*', or put another way, the process of relating the past. The thesis has demonstrated that this past was both his trauma-ridden past and the history of his musical genre, be it Karelian rune fragments or the roots of the symphony. In this Sibelius has been shown to have struggled "with God" and with the '*gap*' in his striving to forge an intricate relation or "mutual adjustment" (i.e., making of harmony), both of the inner inspired musical content with the historically derived musical form of, say, the symphony, and of this whole creative process with his inner trauma.

Aalto was also shown to have struggled with "the deepest depths of his unconscious" through his blinding depression and associated hypochondria, and in his driven urge (or compulsion) to bring "harmony" to the life of "little man" through the creation of contexts in which often disparate, even opposed or alien elements of existence were brought into a creative synthesis. Relating the means and the end of his creativity Aalto wrote that, "The end is always within a wider sphere than the starting point, but that does not prevent the starting point and the end point from being next to each other." (1967c). This thesis maintains that the built environments that Aalto created were frequently making reference to

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[14]This comment was made through the character of Phaedrus.

his deep, personal experience of life, including the '*gap*', not in terms of a neurotic wallowing, but rather in terms of an often moving capacity to seek its creative closing, and the amelioration of great, unassimilated sorrow in his, and vicariously through symbols, in others' lives. By failing to recognise this insight, Schildt's biography is weakened. It fails to recognise the proximity of Aalto's terror, and to understand the significance of Aalto's power in controlling and overcoming the perpetual threat of psychosis; not to mention its cost. Thus, Aalto, like Sibelius, has been shown to have had to address the gaping psyche of his inner self through this search for relation of parts, "mutual adjustment" (i.e., *harmonia*), or synthesis.

Thus it has been shown that both men needed to experience both models and images of 'harmony'. It has also demonstrated that they found such harmony in the experience and knowledge of nature's interrelations and growth, Ancient wisdom about life and nature, Goethe's and Burckhardt's notions of modernising the classical, and contemporaneous notions of ways of addressing man the unknown (i.e., Moholy-Nagy, [1930] 1947; Carrel, 1935).

Reforming the Functional Pattern

The thesis also contends that such ideas and phenomena were used as Transitional Phenomena by the two men; i.e., that through which the breach between inner and outer reality was bridged. This further demonstrates that such models and images can have offered templates (or *paradeigmi*, patterns) which gave Sibelius and Aalto mechanisms for relating their past to their present, for bringing forward the '*gap*' from childhood (which has been buried alive in their psyche) into some contact with their adult reality, and there building something of that of which they were deprived. In this way both men learnt to ameliorate the power of the '*gap*' in their lives. To recall, without creativity (a way of relating to their past, and thus re-scripting it) Sibelius and Aalto were both shown to be incapable of functioning in the shared reality of the adult world.

The Finnish contexts in which Aalto and Sibelius lived, and in which there was a close correlation between nature and culture, were shown to be important despite (or possibly because) their mental equilibrium (even their sanity) may have been tied to the experience of a model of creativity vicariously in nature and directly in themselves; a model in which they could observe natural change and the growth of a natural order (*kosmos*). The thesis has demonstrated that both men imbued their work with something of this order. While recognising that it is impossible to say to what degree this was conscious, the thesis calls on Winnicott's insight that, given experience of "a good-enough environment", humans will naturally (psycho-biologically) tend to grow. In other words it may be said that, for example, experience of nature's growth process and interactive ecologies in the secure "womb" of the forest (i.e., an example of natural creation), may have triggered inner mechanisms of the process of creativity; a process of kick starting the inner,

personal growth or maintenance process. Thus the thesis demonstrated that, in this case, the creativity was vital, securing some sort of homeostasis. This was shown to have been to some degree effective in the emotional and psychological realm, but most obviously at the artistic level. It may therefore be said that it was limited in its effect on the whole person and the "integration" of the personality, to use Jung's terminology.

Identifying with the 'Gap'

Sibelius' grandson, the painter Juhana Blomstedt suggests that, "[r]eality, however, never lets itself be contained in a form. Form is not in harmony with life." (1987:11). This offers an answer to the question of why Sibelius and Aalto could bridge the '*gap*' symbolically in the way demonstrated in this thesis, but failed to bridge it effectively in the reality of their everyday lives. As much as their art forms may solve the dilemmas of life hypothetically, they did not find the capacity to face them in the cold light of sober reality. It might be said that the pure spring water they seemed to offer was, for them, an anaesthetising drug. Blomstedt continues,

> "The individual is bound to the experience that he has of himself, in his world. This however is not too painful if he does not ask too many questions. He has a skin. Artists' skin is unbearably thin; and he cannot avoid making questions. So his only possibility is to give form to his distress." (Blomstedt, 1987:11)

Yet it has been demonstrated that this form need not produce neurotic art. On the contrary, it has been suggested that a work of art may offer both the artist and the viewer the chance to identify themselves with the process of integration or reconciliation (Gough, 1964:7). The more universal the tensions which led to a work, and the less personal its import, the wider and the greater the appeal the work has; and, indeed, the more potential for reconciliation in Gough's terms. In this process the artist relates "his personal deprivations to the discontents implicit in being human" (Storr, 1991:291); therefore imbuing the work with greater "psychical distance" (Bulloughs, 1912). This may explain the ongoing efficacy of Sibelius' and Aalto's work.

"Inseparable concomitants" [15]

To conclude, this thesis has argued that the mechanisms which facilitated Sibelius and Aalto to transform their debilitating tension into creative form may be described as a profound '*logos*'; a way of relating parts of their Being which were divided, or prevented from healthy integration and growth by early deprivation. Strengthened by their intelligence and channelled through their creativity, their ego seems to have been able to access 'split off' parts of the personality. Put another way, their intelligence was able to persuade their conscious self to relate, through creativity, to the '*gap*', and thus vicariously to the trauma which remained therein. The ongoing inner reality of the pain of the '*gap*' motivated them to seek images, and even models of *harmonia*

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[15] D'Arcy Thompson, (1959.6).

and *kosmos* with which to ameliorate the trauma of the past. These images then became inculcated into the creative field, assisting them to relate the past; a process of relating the past to the present shared outer reality. In this way Sibelius and Aalto consciously generated a new mental structure which, without healing the '*gap*', was superimposed upon it; i.e., Cobb's "world-building" (1993). By introducing a new reality (equivalent to Sibelius' desire for the ideal symphony, and Aalto's for "harmonious living") the other, painful inner reality was, in some measure overcome; a process which required a strong ego, or inner Adult.

In this way the thesis has demonstrated that the *kosmos* (natural order) which appeared through the making of Sibelius' and Aalto's art facilitated their homeostasis (mental balance). Since something of that order is "rediscovered with each new tracing of the figure" (McEwan, 1993:42) it is feasible to suggest that through their creativity Sibelius and Aalto continued their inner creation, and that experience of creativity (natural or artistic) and of others' creations is a way to re-configure lives haunted by a childhood deprivation or '*gap*', offering the chance to bridge such psychological '*gaps*', at least symbolically.

Thus, this thesis has proposed that in ways defined above, the lives and works of Sibelius and Aalto are isomorphic,[16] sharing similitudes of experience of life and compositional structure, within a similar cultural scene. In other words there are inseparable concomitants which weave a pattern of similitudes between the lives and works of the two Finns.

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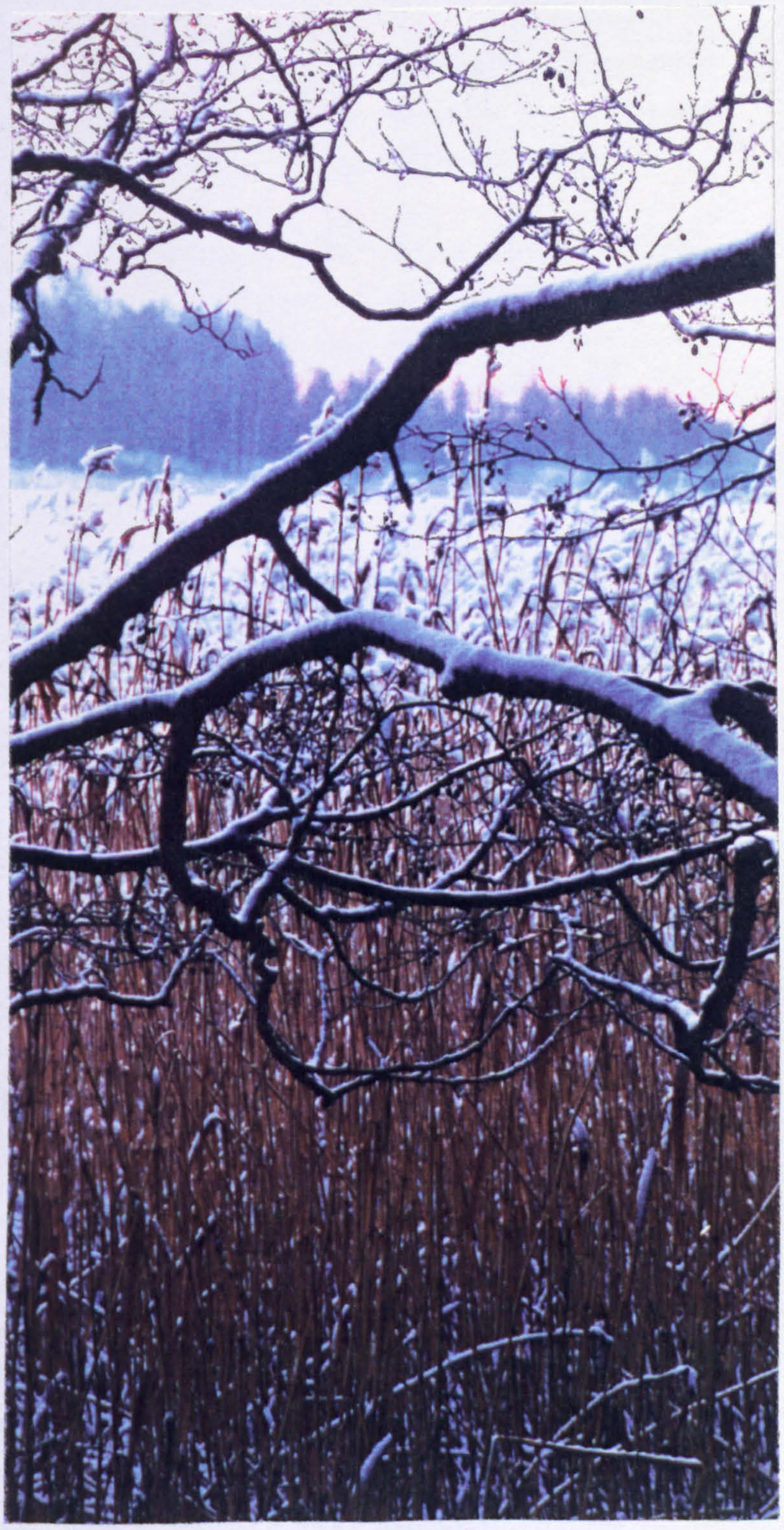
[16] Isomorphy derives from the Greek ισος (*isos* , equal) and μορπε (*morphe*, form).

Appendices



A.0

Fig.A.0 Winter view of Helsinki Bay

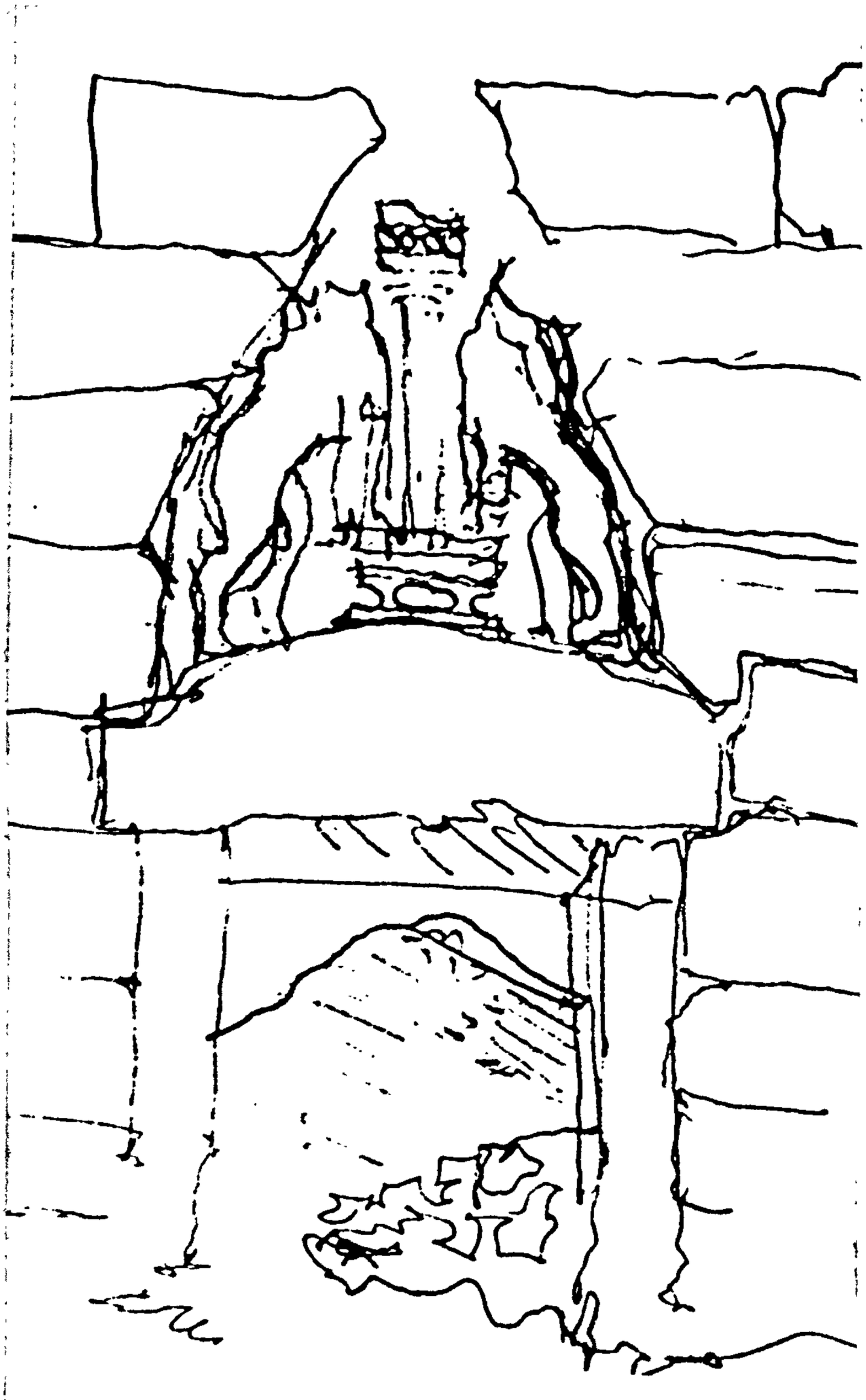


Fig.A.1.1 Sketch of Lions Gate, Mycenae; Aalto, 1953

Appendix One

MOVING ORDER:

Greek Approaches to Form

This appendix augments the references to the nature of the Greek concept of order made in chapter one. It suggests that the common understanding such order is a misconception, and that the this Greek concept was more complex and subtle than Winckelmann suggests.

In their architecture the Classical Greeks were not celebrating a structural system, a notion which was completely foreign to them (McEwan, 1992:110). There are two views of the generation of Greek forms; being either "emphatic forms" in which "both stasis and concreteness" are associated with "the aspiration towards perfection and harmony" (Voutilainen, 1981:37) (fig.A1.2), or alternatively, rather than being poised and set in stone to concrete a cultural stasis, it has been suggested that "[e]verything in Hellas was on the move" (McEwan, 1992:101) (fig.A1.3). The latter notion describes a fleeting moment of something's being; a process of tying down the mobility which was everywhere (McEwan, 1992:101).[1] This is an earlier notion in which the Greeks imbued stone with the experience of the flux of life, whereas the former is associated with the need to make the phenomenal world concrete. Indeed, Socrates later sought to tie it down, to arrest Daedelus' moving statues,[2] by claiming an ancestral tie between architecture and philosophy (Plato, *Euthypro;* 11c-e).

Aalto's friend and inspiration, Gustaf Strengell (1878-1937), wrote of the Doric column as having "turned the static function of bearing into an expression which can be experienced even physically [...] we immediately get the feeling that it supports, and when this supporting is both sure and free, it awakens in us a feeling of harmony." (1928).[3] Here Strengell infers a dynamic, experiential quality which he believed "suited the internal balance of the classical mind"; a balance which, like the Greek world view, was inherently precarious. Indeed, Strengell saw this as the Greek reflecting his own image in his environment. If experience was accepted as being in flux, the very same may be accepted as having infiltrated these built forms. However, it is from this passage that Voutilainen reads the static concreteness of Greek form and finds harmony manifest therein (1981:38); evincing the Greek philosophy of art through finite imitation or *mimesis*. Strengell, on the other hand, seems to be highlighting not the stasis of life, but rather the "expression" and the precarious "experience" of "internal balance" not the than static idealisation of its predictability. In their metaphorical thrusting, their apparent flexing beneath the weight of the beams, Greek columns were to some extent a

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[1] The Greek word *rhythmos*, meaning the whole nature of movement, can be understood to comprise that which the Greeks sought to fix. See also McEwan, (1992:114).

[2] Daedelus is said to be the father of architecture.

[3] This passage is also reprinted in Voutilainen, (1981:37).

"channel for the action" (fig.A1.3). To a degree the action in Greek form was trapped, tamed or held in manifestation of the real friction between elements; joints (ηαρμος, *harmos*) in which harmony was literally formed. The nature of harmony has been discussed in part three.

Indeed, in making *kosmos* (κοσμος, natural order) the pre-classical Greeks were making visible processes of being, weaving the nature of their *topos* (τοπος, place), and thereby the visible city, into being. In citing the description of the making of tension in the detailing of Greek buildings, McEwan indicates the relation of fixity and movement (i.e., not arrested movement, but "movement that is not yet" - 1992:116); what might be expected to be straight was actually curved.[4]

The Classical Orders derive from the notion of making order, and the Greek notion of *kosmos*. It is also rooted in the idea of the supremacy of the law of equilibrium (ισονομια, *isonomia*). McEwan states that "[c]raft brought people out of isolation and barbarianism", and topos such as the temples identified the "indissociability" of craft, making and community, and the replacement of such *topos* as sacred groves (1992:119); which will be shown to be a character of Aalto's work too. This study will offer the thesis that *kosmos* appeared through (*techne* (τεχνη, letting the essence appear) in the lives as well as the works of Sibelius and Aalto, as it did in pre-Socratic Greece where *harmonia* appeared through, how and what people made. Socratic Classicism, on the other hand, found *kosmos* to be at the level of cosmic order, not at the level of artefact mediated by skill (Plato, *Gorgias*, 708e).[5]

Both Aalto's work and the environmental products of Renaissance philosophy illustrate the depth of the phenomena of balance and harmony, witnessing that deep inner balance may not equate with external manifestations of the same. In the Renaissance elements of the building were treated as separate, "perfect in their form" in exaggerated stasis. As Spitzer explains harmony became more to do with a notion of equilibrium and perfect stasis than the sometimes complex mechanism of relating (1963), a notion which was 'corrected' in the Baroque era, when parts were again devoid of independence, becoming subservient to the whole once more. Aalto's early designs can be easily identified as following the neo-Classical style (fig.A1.4), albeit inherited from the diverse sources of student lectures on Greek antiquity and the Renaissance, and the vernacular Finnish cottage tradition (fig.A1.5), the more wealthy of which had adopted Hellenic motifs in the late 18th century Gustavian style (fig.A1.6). Demitri Porphyrios espouses a belief that the "constructional logic of vernacular", with its rudimentary building of shelter and its use of scarce materials produces "constructional *a prioris* which are universal." (1982a:196). These he cites as load-bearing, enclosure and demarcation, which lead in turn to constructional corollaries such as gable, engaged pilaster, window, door, and

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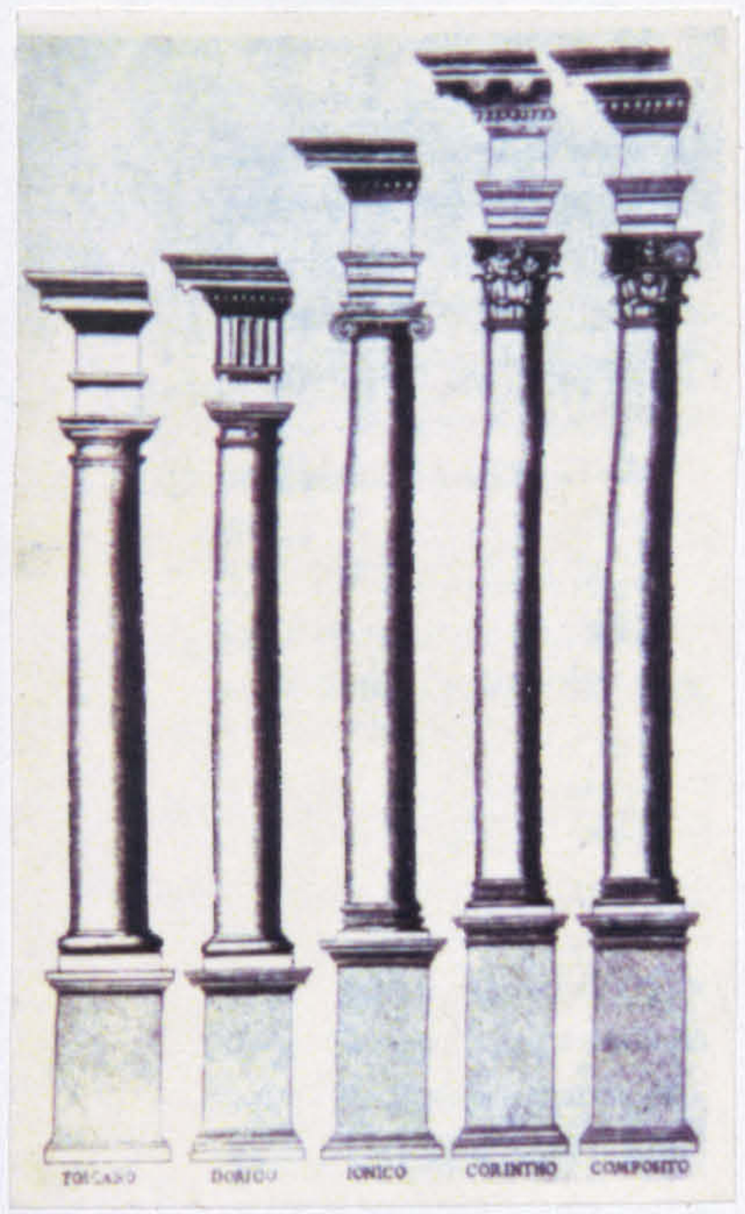
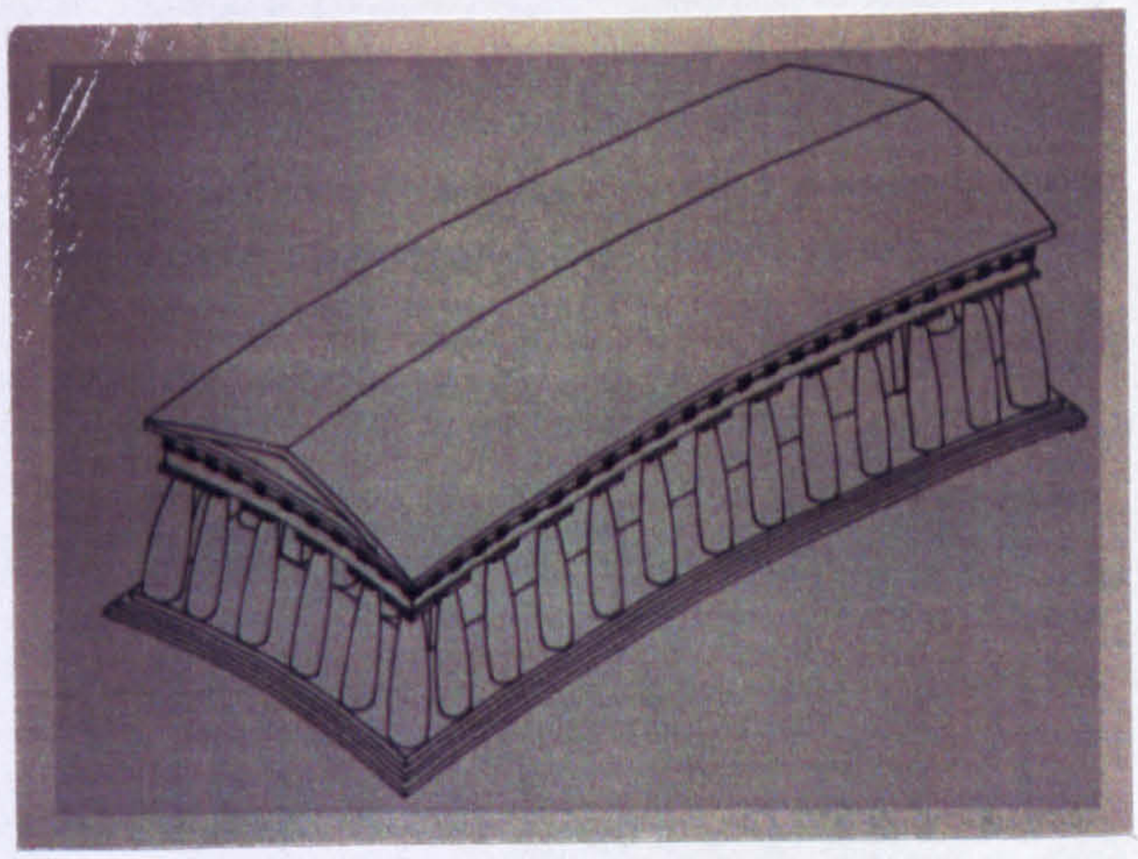
[4] Vitruvius wrote, "what is real seems false" and needs correcting in order to seem true, in the preface to Book VII. His ideas of 'optical correction' were probably formulated from Euclid (*Optics* was written in 300 B.C), who post-dates the Parthenon (447-432 B.C.).

[5] See also McEwan, (993:129).



A.1.2



A.1.3

Fig.A.1.2 Vignola's version of the 5 Orders; circa 1563

Fig.A.1.3 Doric temple showing exaggerated refinements



A.1.4

Fig.A.1.4 *Dwelling House*, Jyväskylä; Aalto, 1923

colonnade. Porphyrios explains that as architecture lifts itself above these contingent starting points, it creates a "fictitious figurative system" around them through "imitation", or *mimesis*. He believes that Classical architecture aims to imitate both its *techne* and nature.[6]

McEwan explores architectural beginnings which predate the Daedelus myth, searching back into Anaximander's B1 citation regarding the beginnings of creation and life. The pattern (or *paradeigma*), which Greeks discovered through making or crafting became universalised as a denotation of the *kosmos* (1993:42). Through 'making', *kosmos* appeared or did not appear, depending on the artefact (1993:43). Porphyrios makes nature the pattern (παραδειφμα, *paradeigma*) which the specimen Greek builders copied or used as a standard (1982a). Thus in his terms nature is manifest in the column, and by being manifest *kosmos* (i.e., order) results; nature having been transmuted into fabricated form. McEwan corroborates this, describing how the making of the dance and the place in which the dance happens were one in Homer's *Iliad*,[7] and likewise, in Porphyrios' terms nature (the signified) and column (the signifier) in which nature is made manifest, become one.

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[6] Interestingly McEwan translate the Greek, techné (often written as *tekhne*), as a letting appear, relating it to *tektein*, to build, and *tiktein*, to give birth (1993:55); see also chapter thirteen. Presumably Porphyrios use of *téchne* refers to technology, its structural function, (1982b:200) rather than its classical root of bringing to being.

[7] McEwan explores how before Daedalus built the dance floor for Ariadne in the Iliad, there was no thought of seperation of activity and place. "Dancing was dancing, and the measure of dancing floor was the measure of the dance itself." (1993.62-3).



A.1.5



A.1.6

Fig.A.1.5 Part of Niemelä Farm, Seurasaari Folk Museum

Fig.A.1.6 Gustavian house, Tamminiemi



Fig.A.2.1 *Defending the Sampo*; Akseli Gallen-Kallela, 1896

Appendix Two

THE KALEVALA:

PRECIS

The two phenomena of which Lönnrot's epic is composed (the fragments of poems which comprise the *Kalevala* and the Classical string with which it is bound) must be prised apart in order that the Kalevalaic roots may be examined. The removal of the nationalistic agenda brings to light the folk heritage within the songs, which can be seen to provide both cultural and philosophical foundations for some of the most impressive mature work of both Aalto and Sibelius. The latter tradition will be referred to as Kalevalaic, pertaining to the culture of those who sang the poems through the ages, mostly but not exclusively in Karelia.

The epic poem *Kalevala* portrays the making, and subsequent survival of a people, their adventures into the realms of nature around them, their discoveries and creations, their trade and work patterns, and their ceremonies. It portrays the love of a people for the place in which they live. The *Kalevala* ends with a celebration of life in the wild, of the forest, the sea, the sky, the lakes and even the long winters. The length of the dark winter perhaps explains the numerous, lengthy descriptions of their domestic life, and details of the dwellings.

The principal heroes are poetic archetypes: Väinämöinen, a great wise leader and rune-singer; Ilmarinen, a skilled smith; Lemminkäinen a reckless adventurer; Joukahainen a Sami wizard; Kullervo a tragic avenger; Aino, courted by Väinämöinen; the Virgin of the Air, who gives birth to Väinämöinen; and Lemminkäinen's mother. Väinämöinen and Ilmarinen are characters who represent the search for skill and knowledge, other more violent characters represent the pattern of evil destroying itself.

The order of the *Kalevala* was apparently suggested to Lönnrot by some great rune singers (Kirkinen & Sihvo, 1985:13). The epic begins with a 'Singer's forward', moving to the creation of the earth by the Virgin of the Air, who swims in a storm, as "Mother of the Water", catching an egg dropped by a duck;

> "But a wonderous change came o'er them,
> From the cracked egg's upper fragment,
> Rose the lofty arch of heaven [...]
> Whatso in the egg was mottled,
> Now became the stars in Heaven"
> (Kalevala, Rune 1, 23:34-36, 41-2)

The egg breaks, forming the firmament, the crust of the earth, and the heavens above. She then gives birth to Väinämöinen. The *Old Kalevala*, the first version published by Lönnrot, had begun with Väinämöinen as the creator of the world. Tales of a great sower, of the

growth of the great oak, of the singing duel, and an episode of betrothal lead to an incident in which Väinämöinen cuts his knee, and stems the flow of blood with an incantation about the origin of iron, before Ilmarinen forges the Sampo, a magic device which was to bring good fortune.[1] The Lemminkäinen cycle (Rune VI-VIII) narrates the hero's journey to Pohjola (the North) and his death on the river Tuonela, the realm of the dead. Väinämöinen then seeks knowledge to build a boat, and to learn of death from Tuonela. The daughter of Pohjola is then won by Ilmarinen, and a traditional wedding is described in full.

The Kullervo episode includes an amorous encounter which, it transpires, was between siblings. As a result both lovers die. Ilmarinen, whose wife Kullervo had seduced, forges himself a lifeless bride out of gold. This episode grew four-fold in the new version, later becoming the source of inspiration for many great musical works.[2] The climax is the capture and shattering of the Sampo by the people of Pohjola. Then follows Väinämöinen's design, making, and playing of a Kantele (a Finnish folk harp).

At the end of the *Old Kalevala* seeds are sown, a giant Oak is grown, singing duels are staged, and bear hunting described. The last cycle of the later *Kalevala* describes terrible diseases, their cure by incantations and medicines, the origins of fire, and the transition between the old culture and the dawning of Christianity. Maiden Marjatta becomes pregnant from eating a berry, gives birth to a wise son, whom Väinämöinen immediately condemns to death. The wit and taunting cheek of the two week old infant enchants the old wizard, who turns tail, announcing the boy "The King of Karelia".

The epic is largely concerned with communities living in peace. A precis of the action fails to illumine the varied life and preoccupations of the ancient people, which appear in the detail of the poetry.

HISTORY

The *Kalevala* was first published in 1835, with the subtitle, *Vanhoja Karjalan runoja Suomen kansan muinaisista ajoists,* (Old Poems of Karelia from the Ancient Times of the Finnish People). It came at a time when Finns were searching for a history and, therein a source of nationalism around which they could rally in their desire for nationhood. From the time of its publication the *Kalevala* has inspired many artistic and scientific works, many continuing its theme of exploring the roots of the Finnish race. Later, when Finnish culture was securely established, some Finns returned to the *Kalevala* in a deeper way, having thrown off

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[1] The Sampo has variously been thought to be a money-making machine, trading routes to Byzantium, and gold. It remains a mystery quite what the Sampo represented to the early Finns.

[2] Alexis Kivi's first play was about Kullervo, and Sibelius' *Kullervo Symphony*, begun in 1891, feeds on the heightened tragedy of the Kalevalaic episode.

Rousseauean idealism, prepared to explore the existential questions raised by the epic, and their relationship with the forces of nature.

KALEVALAIC EMERGENCE

As early as 1551 Bishop Mikael Agricola (c.1510-57) had recorded that Väinämöinen and Ilmarinen (later to be the heroes of the amalgamated poem, the *Kalevala)* were among pagan gods of the rural Finns. A document from Lake Ladoga, dating from 1618, also makes mention of "Vanha Väinämöinen" (Old Väinämöinen).[3] Soon after, in *Mythologia Fennica* (On Finnish Mythology), C.Ganander acknowledged the same figures in folk culture in the late eighteenth century. Researchers, led by Prof. K. Krohn, first thought that the poems originated in the West of the country, and justified the theory of the Finnish race being rooted in the West, rather than the East. However, later research, led by M. Haavio and M. Kuusi, discovered connections between the folk poems and ancient Eastern traditions, brought west from India and Siberia through the trade routes from Byzantium.

The folk poems, to which these citations refer, were closely related to magical incantations, inspiring fear in some Church officials, who at that time were putting old witches to death, and with them the oral folk traditions they had carried.

Karelia had retained much of its vernacular folk traditions and beliefs because the pattern and nature of conversions to Orthodoxy there were gentler; Novgorod was less determined to root a new culture in the people than the Roman Crusaders, and subsequently the Lutherans, in Western Finland. However, the ambience of the new religion did infiltrate the ethnic poetry, bringing in new themes through ballads and legends. The older *Kalevala* began to lose its status in the west of Finland as a culture of Christianity began to take root; hence the folk collectors of the 1890's turning East to Karelia..

However, disregard for the indigenous culture was not total since, in the sixteenth century, the Swedish Government recommended the collection of some folk material (Kirkinen & Sihvo, 1985:8). Late in the eighteenth century the father of Finnish history, H.G.Porthan, published *De Poesi Fennica* (On Finnish Poetry), further identifying the central characters of Finnish folk poetry.[4] Porthan is credited with helping birth National Romanticism in Finland, by emphasising the importance of language in political affairs.

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[3] Agricola mentions the gods in the introduction to his Psalter, 1551.

[4] H.G.Porthan was librarian and professor of the old University in Åbo (Turku). He was the first to begin scientific research on Finland's geography, language and history. He also researched folk poetry.

COLLECTING FOLK CULTURE

Before the rise of nineteenth century nationalism Karelians had been regarded by the ruling Swedish aristocracy as enemies colluding with the powerful Novgorod, the occupiers of Karelia. However, interest in folk poetry and culture grew. In 1818 and 1821, K.A.Gottland published two small booklets under the title *Pieni runoja Suomen pojille ratoksi* (Small poems for the Amusement of Finnish Boys), in which folk tales were told. It was Gottland who first propounded the idea of collating the folk poems of Finland into an epic. R.von Becker collected poems from northern Finland and Savo, publishing an article about Väinämöinen in 1820. Zacharias Topelius (the elder) collected poems in Ostrobothnia, inviting itinerant peddlers to his home, where he would record their words. He published these in five books, *Suomen kansen vanhoja runoja,* (Old Poems of the Finnish People).

Lönnrot's Mission

Lönnrot, who might be considered to be to Finnish folk culture what Pausanius was to Greece culture and topography, made many long poem-collecting excursions into Karelia, beginning in 1828. On his first journey he met Juhana Kainulainen, a master rune singer, and wrote down poems and incantations as they were sung to him. He prepared these for publication in 1829-31, at which time the Finnish Literary Society was being established in Helsinki, with the blessing of the Csar, to promote a national civilisation in the classical-romantic spirit, and to which he was made the first secretary.[5] However, the Society's appointment of peasants and working class people in the 1840's met with Imperial Government disapproval; democracy was not on their reformist agenda.

Subsequent visits to Karelia revealed the wide dispersal of the same themes, characters and tales. Lönnrot began to draw these together into larger units, with the idea of forming an epic, the 5000 line *Proto-Kalevala*. Following this he collected more than 13000 lines in one trip, condensing them into the 32 poem, 12078 line, *Kalevala* of 1835.

Lönnrot undertook a sixth journey in April 1835, this time to White Sea Karelia. Further expeditions in 1836-8 brought to light even more new poems, some of which he published as the *Kanteletar* (The Spirit of the Kantele) in 1840. This new work stimulated more interest in folk poems. Daniel Eurpaeus surpassed even Lönnrot's collection, with 55000 lines, 32000 from one woman, Larin Paraske, alone. From 1845 Lönnrot began to expand the *Kalevala*, changing the order of some episodes, and adding new ones taken from his collection. The new *Kalevala* was published in 1849. Upon the later publication of an extended version, the first *Kalevala* became known as the *Old Kalevala*.

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[5] A certain K.N.Keckmen was made the first Professor of Finnish at the University in 1828. Posts in modern languages were rare anywhere at this time, and Keckman became dedicated to scholarly study of the Finnish language. Promotion of Finnish was recognised as a powerful political tool.

The epic includes poems from different periods of Finnish history, the changes being recorded in the integration of different themes, absorbed into the same poetic structure. Less than 3% of the epic was said to be written as linkage lines by Lönnrot himself. Lönnrot believed the themes which emerged consistently through the songs he had heard in different areas, whatever the small differences of detail in the telling, drew a picture of the competition for power and wealth between two tribal communities, people of Finland, represented by Kalevala, and those of a dark, foreign power, Pohjola.

Indeed, in the epic collection shamanic poems explain the origin of natural phenomena and species, mythical poems explain the world and creation, ceremonial poems describe weddings and funerals, and poems of the Middle Kalevala Period are said to describe the Viking raids and Crusades through the skills and feats of Väinämöinen.

Romantic Forest Sojourns

For this reason the *Kalevala* soon became a national epic, describing the life and beliefs of early Finns; a source which drew the attention of artists, composers, architects and writers, becoming the inspiration for expressions of National Romantic pride in Finland, and stimulating writers like Longfellow to collect Native American stories into the epic *Haiawatha*. The *Kalevala* was soon likened, by Runeberg in the first instance, to the great Homeric epics. Indeed, early illustrations of it depict the central protagonists as Hellenic characters in a Greek setting, far from the rusticity of Karelia.

When the *Kalevala* was published 80% of the population were Finnish speaking, although the official language remained Swedish. In both the *Kalevala* (1935,1949) and the *Kanteletar* (1840), which had the content and melodies of more recent folk songs, Lönnrot sought to bring dialectal language closer to standard Finnish, making the epic comprehensible to the whole country, and drawing disparate tribes of Finns into a fold of the people for whom the *Kalevala* and folk culture are common currency. Thus the *Kalevala* became the first literary point of reference in the Finnish language to join the dominant Swedish-language literature and culture in Finland.

NATURE IN THE KALEVALA

The relationship with nature seems to be isomorphic, with nature appealing, and responding to human intervention, and the people of the *Kalevala* worshipping and working with nature. The Kalevalaic world is small in size and cultural diversity. Inroads into Pohjola, and indeed the broadening of life to include a new, Christian, religion towards its close, threatens the isomorphic idyll, yet fails to bring manifest imbalance to the ancient system.

THE TREES OF THE KALEVALA

The sacred nature of the Birch (*Betula*, *koivu*) signified its 'universal' presence. It is the only forest-forming deciduous tree in Finland, found also in Oak-dominated noble deciduous forests of the Southwest, in infertile soils where Pine (*Pinus sylvestris /silvaticus*, *mänty*) dominates, and more fertile areas in which Spruce (*Picea abies*, *kuusi*) grows well. Birch responds quickly to the nutrients available in burnt over soil, as well as thriving in quite boggy areas with Alder (*Alnus*, *leppä*) and Willow (*Salix*, *paju*), thus being suited, for instance, to the vast distance of lake perimeters. In the *Kalevala* Birch wood is used for many utilitarian purposes, such as rafters, furniture, brooms, baskets and shoes made from the bark, *tuohi*.

In the *Kalevala* the linearity and strength of the Oak (*Quercus robur*, *tammi*) provided Väinämöinen with the materials for building boats, enjoying very detailed explanations of the testing of materials and process of construction. In his book, *Epic Space* (1992), Anthony Antoniades expounds the theory that the boat building section of the *Kalevala* may be the oldest, predating the related Viking boat construction.

If Lönnrot did not tamper with the folk poems to a great extent, they and the cultural ideal which held currency when he wrote, share a desire to express the hermetic safety of the isomorphism. Kivi's later work seemed to threaten this view, questioning whether the rural Finns really felt the ease and confidence in the security of their socio-economic lot, which the Kalevala suggests. The realism of Kivi's work does not deny the sensitive relation between the people of Finland and nature, but depicts it as a hard, and without the gloss of poetic Romanticism.

The Kalevala both represents a great deal of Finland's cultural history, and can be seen to be central to the development of a modern Finnish culture, critical to which, this thesis demonstrates, were the creative personalities of Sibelius and then Aalto.



A.2.2

Fig.A.2.2 *Joukahainen's Revenge*; Akseli Gallen-Kallela, 1897



A.3.1

Fig.A.3.1 Aalto in uniform; circa 1939

Appendix Three

STRIFE, ADAPTATION, AND INSPIRATION:
Aalto and Karelian Propaganda

> *"Plant trees. Exactly against this tree*
> *may Fascism decisively strike its head."*
> (Paavo Haavikko, from *In Praise of the Tyrant*, no.10, 1973)

This appendix explores the background to Aalto's article *Architecture of Karelia* in 1941, to which reference is made in chapter seven.

The incident which preceded Gustav Strengell's suicide, in 1937, in which he referred to Aalto's home in Munkkiniemi as a modern Niemelä Farm had moved Aalto deeply (Schildt, 1986:130). This predates Aalto's article about Karelian architecture, which appeared in *Uusi Suomi* during the Continuation War, on 2 November, 1941. At this time, when war raged, and Karelia was caught in the crossfire of the Finnish, their German allies, and the Russian troops, Aalto was working for what amounts to the propaganda office of the Finnish government. Having recovered from what Alanen describes as psychosis at the outbreak of war (Schildt, 1989:16), Aalto used all his contacts and powers of persuasion not to be sent to the front (Schildt, 1989:16-21), and instead, to the disbelief of his Finnish friends, he sought to be sent to the United States by the Government Information Centre.

In the Alvar Aalto Archive there are numerous letters and memoranda in Aalto's hand regarding the plight of Finland during the war years. For example, a letter to an unnamed friend; "We all agree that the intellectual world, now in the beginning of the war should concentrate on "propaganda" [..] Immediately after the brute invasion of the USSR-army into Finland, the entire civilised world realised the real purpose of this action" (Letter from Aalto in Helsinki, dated 10/1/1940). A year later the Finns were allied with the Germans in a campaign to invade Russia, in the hope of making a greater Finland.[1]

Aalto was moved by Strengell's comments, and their proximity to his subsequent suicide. It seems to have touched his own terrifying depression and fear of death and dying. In the context both of the danger of the ensuing war, and his self-appointed role as agent of national propaganda, Aalto then published an article on *The Architecture of Karelia*, when war he dreaded raged over that very region and culture; being the culture connected with *Niemelä Farm* to which Strengell had likened Aalto's home. This is interesting in the context of Aalto's early reticence to refer to the emotive, mystical, or mythical. His visitation of Finland's Karelian heritage, and even the *Kalevala,* would have signified to his readers all the associations explored in appendix two; what is more the article was written at a time of great psychological

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[1] Lintinen describes the front lines in the Civil War, of 1918, being drawn between the nationalist, agrarian Finland, and the industrial Finland (1978b:14). In his book on Sibelius Johnson paints a balanced picture of the war, describing how "both were guilty of extreme cruelties." (1960:151). Most history books, however, deny the harsh treatment of the Finnish Socialists at the hands of the Finnish White Guard after the war. Both Sibelius and Aalto were Whites, both supporting the Jaegers (White Guards) who trained in Germany as a resistance force, for whom Sibelius wrote a march in 1917. He also wrote a march (in 1930) for the often brutal Right wing *Lapua* movement, which sought to establish a fascist dictatorship in Finland.

upset during the Winter War.[2] The turning to the backwoods culture of Karelia may be seen as a search for a refuge. Yet it must be remembered that Aalto never withdrew stylistically to the backwoods, nor, indeed, did he ever completely deny or abandon this culture and start from zero. Indeed, Quantrill suggests he sought to go-between stylistic traditions with his "cross-cultural connections" (1983:3), searching out what best suited the condition of *little man* in the context on a specific brief rather than producing either rationalist or ethnological specimens.

Schildt reports that in the late autumn of 1941 Aalto wrote to the head of the Government Information Centre, for which he worked, suggesting the establishment of a special Karelian department to disseminate "accurate information" about, "not only racial and linguistic but above all cultural affinity" between Karelia and the rest of Finland (1991:66). This evinces a clear desire to prove that Karelia was not influenced by the east, which was clearly absurd, but was Finnish in the Western sense, dissociated from Russia. Indeed Quantrill cites an early essay by Schildt in which he reports Aalto's comments in the 1941 article regarding both the purity (i.e., the lack of influences) of Karelian culture (1983:2). This begins to sound quite fascistic. Perhaps at this stage, in 1978, Schildt was not yet aware of Aalto's work in the propaganda office, to which he refers in his later biography (1991).

However, in the latter biography Schildt reports Aalto's loathing for Hitler, yet his attitude to propaganda, expressed in this letter, smacks of a naiveté, edging towards the very approach of the Nazis to issues of ethnicity (1991:66). He also reports a visit of Finnish architects to Berlin in 1943, headed by Aalto, at the request of the Germans; probably Albert Speer (1991:70). Aalto is reported, by one of the travellers, Esko Suhonen (interviewed 18 February 1976, by Kirmo Mikkola), as taking the trip as a joke, paying a great deal of attention "to the female sex during this trip" (fig.A3.2). Aalto made a typically drunken speech, refering to having picked by a volume by Hitler in New York,"[...] I opened up the book at random, and my eyes fell on a sentence that immediately pleased me. It said that architecture is the king of the arts and music the queen. That was enough for me; I felt that I did not need to read further [...]". On this subject Suhonen reports that Aalto acted "barely within the limits of the acceptable" throughout the trip. He was playing at being 'Top dog' alongside the Nazi officers.

Aalto was not a Nazi, indeed he intervened to save a Jewish ex-associate, Nils Koppel, from the concentration camps. Rather it seems that it is his inability to behave in an appropriate manner or to make any stand which is to be questioned. While describing his contacts with German authorities as "reluctant", Schildt goes on to describe how Aalto invited Ernst Neufert,

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[2] Klinge indicates Karelia was used as a fulcrum for levering the argument towards the east (1992a:71); the east representing the mystical orthodox 'intangibility' (Quantrill, 1983:244), and as Quantrill puts it, with some exaggeration, the "Finno-Ugrian tribalism" (1983:3).



A.3.2



A.3.3

Fig.A.3.2 Aalto during visit to architects in Nazi Germany

Fig.A.3.3 Planning post war reconstruction with Aino



A.3.4

Fig.A.3.4 Slides of Aalto's showing peasant Karelians

an influential German architect, to speak in Finland, and indeed some of Aalto's articles were sent to Germany for publication (1991:67). This suggests that, to some extent, Aalto was prepared to use the status quo for his benefit; regardless of its politics. The collaboration of Finland and Germany is complex, and is beyond the scope of this work, suffice it to have examined a detail of the position Aalto chose to take (A3.3).

In 1935 Aalto himself had written about the "absurd birch-bark culture of 1905 which believed that everything clumsy and bleak was especially Finnish".[3] He clearly resented something of the eclectic modernisation of this building tradition, as discussed in chapter three. Schildt explains that Aalto's wish to establish the Karelian department in the propaganda office was rooted in his "old enthusiasm" for the expeditions to the back-woods of Karelia of the turn of the century, and the resultant architecture of Saarinen, Sonck and Lindgren (1991:66). The suggestion that Aalto was at least interested, if not enamoured by ethnological examples of Finnish building is important. Yet later Schildt seems confused about this issue, stating that the enthusiasm for Karelianism "Flared up" in 1941, "but subsided quickly" (1991:74). Indeed, Quantrill warns against Schildt's attempt, albeit felicitous, "to present Aalto in too simple terms [...] For Aalto was one of the most complex figures ever to work in the sphere of the creative arts." (1983:2).

In a letter to Otto Völckers in Munich, in 1942, in which he enclosed photos of Karelian dwellings, Aalto confided that, "The houses in the old Karelian area are especially close to my heart" (fig.A3.4). This suggests that he continued to feel inspired by the region, politically, and aesthetically during the whole of the Continuation War, 1941-44, though this letter may have been motivated by the propaganda of the Karelia office. The fact is that whether due to an "old enthusiasm" or a new propagandist zeal, Aalto was submerged in ethnic Finnish building in the early forties, but this immersion post-dates the Strengell *Niemelä* incident and the creation of his own house (1936) and *Villa Mairea* (1939); in both of which can be felt to have been infiltrated by the forest and forest culture, without being ethnological specimens.

Therefore there is no question but that he was enthusiastic about the native building tradition (fig. A3.4). Indeed, it may be suggested that the potent interaction of (a) the refuge which nature had provided in childhood, (b) his fear of death, and (c) the threat the war posed (in terms of its capacity to annihilate the forest, the cultural and even the familial refuges), contributed to both the topophilia (love of place) and the emotive profundity of his work.

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[3] Aalto in untitled, undated article in the Aalto Archive.

EUGENICS AND MAN THE UNKNOWN

After the introduction of Moholy-Nagy, Aalto was taken by the ideas of Alexis Carrel in *Man the Unknown* (1935). Carrel was an advocate of ideas close to those of Eugenics. The word eugenics was coined in 1883 by Sir Francis Galton in *Inquiries into Human Faculty and its Development*, which calls on the Greek word *eugenes*, meaning good in stock, to promote a science of improving stock. Carl Bajema describes eugenics as a science of the direction and rate of genetic change in humans (1976:3). He believes that the proximity of the social movement of eugenics (which included the policies of the Nazis in Germany) creates a misunderstanding of what natural selection and the science of eugenics is. Bajema uses Galton to redefine eugenics to the exclusion of the Nazi policy.

Carrel was a Nobel scientist who had succeeded in keeping mammalian ovaries alive and growing outside the body, to the approval of the eugenitists Brewer and Muller, who saw the potential for fertilisation of genetically "superior" human eggs (Kevles, 1985:189).[4] By the turn of the century Galton's ideas were popular in Europe and the States, being taken up by those from all moral and religious backgrounds, who otherwise shared little in common, though largely of the middle and upper classes. This amounted to social purity. This social Darwinism was challenged by the likes of Alfred Russel Wallace who preferred to think that environmental improvement rather than elimination of "inferiors" would produce social advance (Kevles, 1985:70). Kevles states that racism was a feature of British and American eugenics (1985:74), leading to support for sterilisation (1985:115), which was taken to extremes in Hitler's Eugenic Sterilisation Law of 1933. The merging of the Nazi sterilisation and anti-Semitic policies became a natural progression of the application of eugenic social policy. The subsequent anti-eugenic reaction from the world "obscured" the fact that some leading thinkers had been pro-eugenics. This might explain the tardiness of British and American reaction to the Nazi social policy, and subsequent "false biology" (1985:129).

The manner in which Aalto took up Carrel's ideas may demonstrate a searching for "the unknown" in life, and the offering of such by a rational scientist. But it is also a precursor to Aalto's work in the propaganda office in which he sought to prove the purity of the Karelian race for political reasons.

The appendix has demonstrated the complexity of Aalto's interest in Karelian culture, and particularly the relationship between the promotion of this interest and his own psychological vulnerability.

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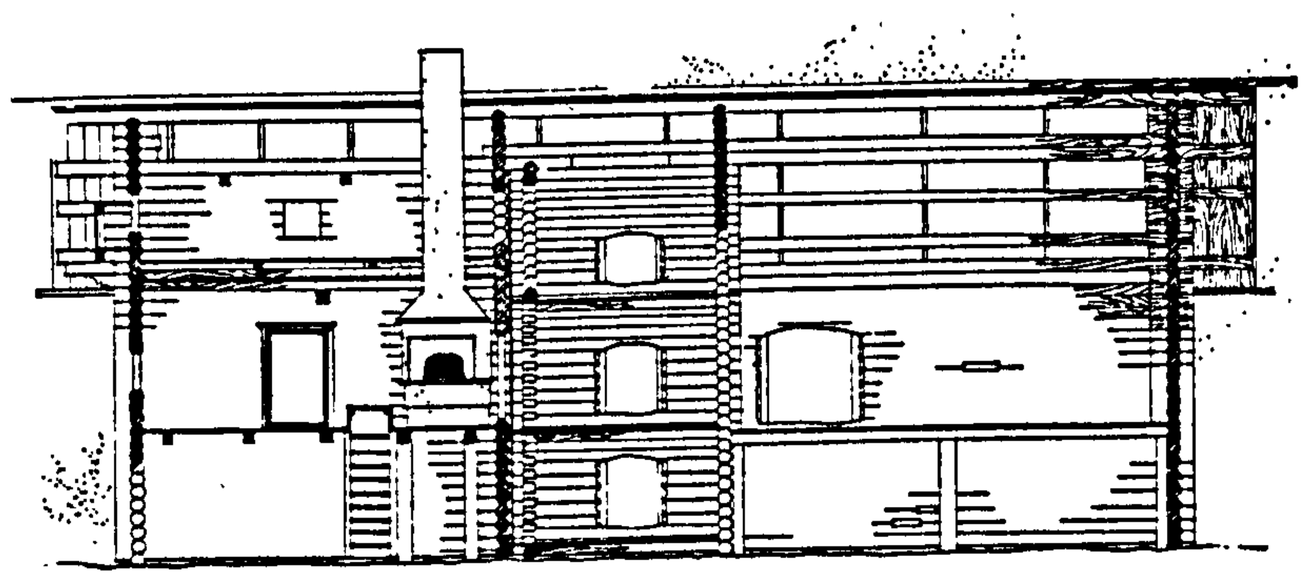
[4] Carrel worked in the Rockefeller Institute. John.D. Rockefeller was a patron of the American Eugenics Society (Kevles, 1985.60).



A.3.5

Fig.A.3.5 Section through typical Karelian house, drawn by Aalto for Wickberg's book on Finnish Architecture



A.4.1

Fig.A.4.1 Schoenberg before 1911, with dedication to Kandinsky

Appendix Four

NEW SOUNDS:

Schoenberg, Dissonance and Atonality

CHALLENGING HARMONY

"Schoenberg was no avant-garde experimenter; his venture into atonality he saw as an inevitable consequence of what had gone before." (Griffiths, 1986:26)

"People have such a fixed conception of modernity, of a fashionable modernity, which completely forgets personality and only grants validity to stylistic technique, that I have little chance with my earlier works." (Schoenberg to Kandinsky, 23.9.1913; Hahl-Koch, 1984:60)

"The breach of atonality came as a necessary step in Schoenberg's increasingly penetrating revelation of interior emotion, for the exposure of the deepest strings of personality required musical means of an utterly personal kind, not those learned from tradition" (Griffiths, 1986:28)

For those unfamiliar with the ideas and work of Schoenberg, this appendix gives a brief introduction.

The emancipation of dissonance announced the release from the basic harmonic conception of the cadence (the musical movement towards a release of tension). More than 'making nonsense' of preceding styles, Schoenberg's expansion of dissonance was part of the break with tonality.[1] Schoenberg was more thorough in his execution of atonality than Debussy and Skryabin, believing that, "the individual parts proceed regardless of whether or not their meeting results in codified harmonies." (Rosen, 1976:43).[2] Dissonance was melodic (horizontal) as well as harmonic (vertical). Freedom from triadic centres required a free-moving polyphonic texture.

Thus the musical revolution had begun. Schoenberg the moved towards Serialism, where one note can move to any other freely, without any prior relation to a tonal centre, meaning that there was no need for motifs to unite different areas of the piece.[3] Schoenberg wanted to be free of this system, yet his rhythm and phrasing continued to recall the late Romantic style (Griffths, 1986) (fig.A4.2).

---

[1] Tonality is a system with a central perfect triad, all other triads being arranged around it in hierarchical order. The distance between others and the central triad is a relation of dissonance. A tonal work begins and resolves on the central triad. Pretonal western music was not based on triads, but modes, a central note on which the piece began and ended. Dissonance was conceived exclusively in terms of intervals. Dissonant intervals were joined by the notion of dissonant phrases and sections when music became triadic. These processes are known as modulation. Modulation is dissonance on a large scale, and is expression at the level of the total structure of a piece, and was a central tool of the proponents of the New music. (Scholes, 1978; Salzman, 1974).

[2] Schoenberg, unsourced quotation. Debussy, Skryabin and Schoenberg all believed it to be irrelevant to return to the central key, to the formal clarity of tonal harmony,

[3] The concept of themes and motivic construction was bound up with a symmetrical system of harmony based on a central triad.

Schoenberg also sought to question the form of music, since, for form to exist a thing had to be repeated; it had to retain its identity throughout. In tonal music repetition was a necessity, in atonal it was arbitrary (Rosen, 1976:64).[4] The decentralised system which was chromatically saturated, was concurrent with development in other arts. After the First World War, through his strict methodical Serialism, Schoenberg sought to resurrect an old classicism and invent a new one.[5] With it he systematised the weak form of chromatic saturation.

Schoenberg's *neue Musik* was understood by colleagues (such as Busoni, Mahler and Strauss), but it hit the audiences hard, arousing feelings to which they were unaccustomed, encouraging projection in which unfamiliar emotions are projected into the music, which then feels threatening because of these emotions (fig.A4.3).[6] Those of the public who desired a comforting harmonic context, were thus challenged by the notion that such dissonance was an effective expressive tool.

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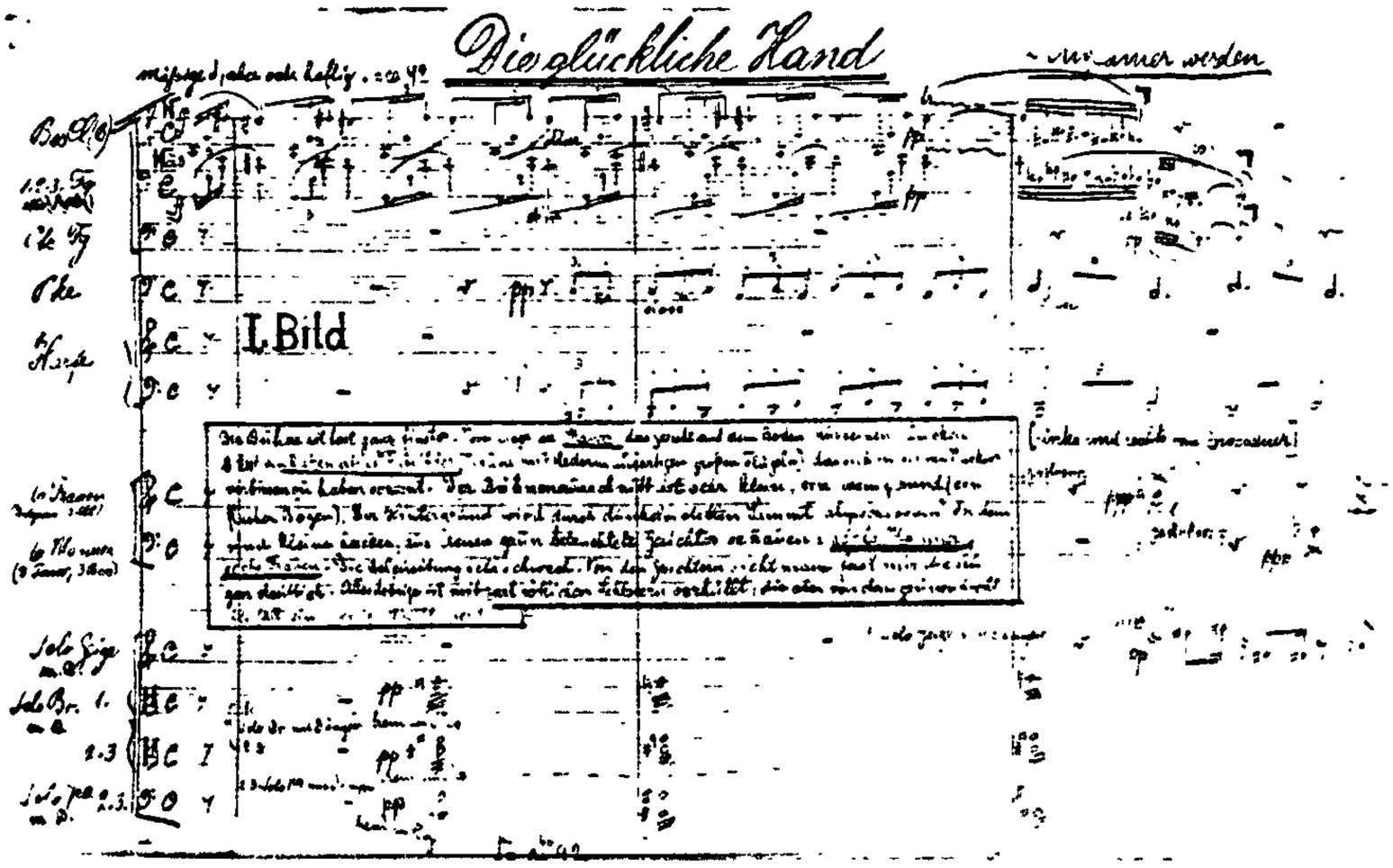
[4] Since absolute consonance is the final demarcation of form (Rosen, 1976:64), dissonance called for small forms, from which an interest in the twelve tones of the chromatic scale developed.

[5] The series is an order of pitch classes. e.g. the equivalence of all octaves.

[6] The hostility and suppression of much of the *neue Musik* was in fact not due to its overthrow of tonality, but the concomitant threat of a sound storm in the listener's unconscious. One listener found Schoenberg's *Verklärte Nacht* (1899), "sounded as if someone had smeared the score of *Tristan* while it was wet". (Rosen, 1976:11).



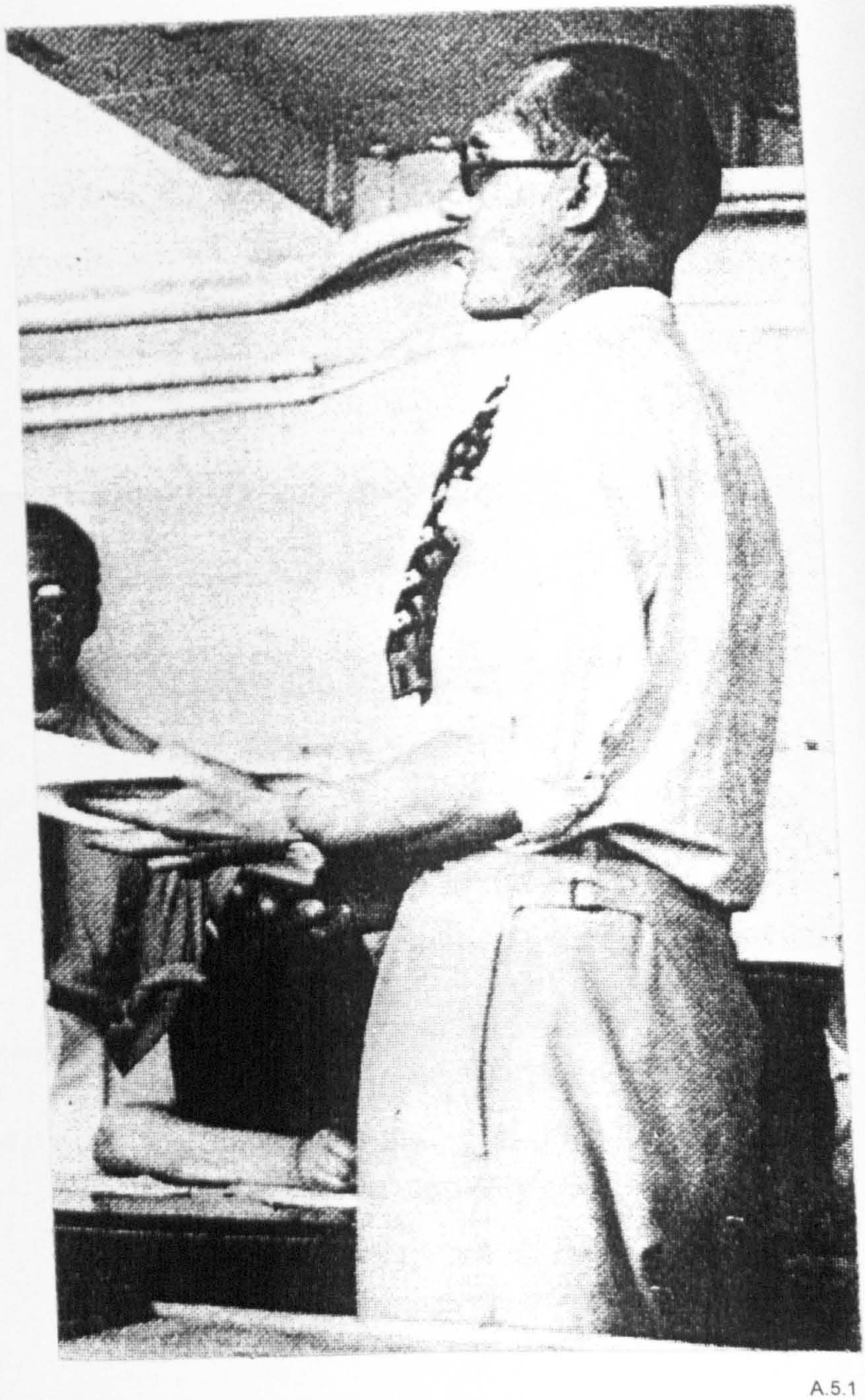
A.4.2



A.4.3

Fig.A.4.2 Score for *Die glüchliche Hand* with textual additions, 1913

Fig.A.4.3 Sketch for costume for staging of *Die glüchliche Hand*, 1913



A.5.1

Fig.A.5.1 Le Corbusier during presentation to CIAM aboard the Patris II, en route for the Athens Congress, 1933

Appendix Five

NEW SPACES:

Le Corbusier, Purity and the Death of the Past

CHALLENGING HARMONY

> *"Where order reigns, well-being begins"* (Le Corbusier, [1926] 1982:52)
>
> *"[...] the inhuman dandy-purism of the big cities, has led irrevocably to a fashionable architecture, which is a dead end."* (Aalto, 1958b)

For those unfamiliar with Le Corbusier's thinking, this appendix gives a brief introduction to some of his ideas.

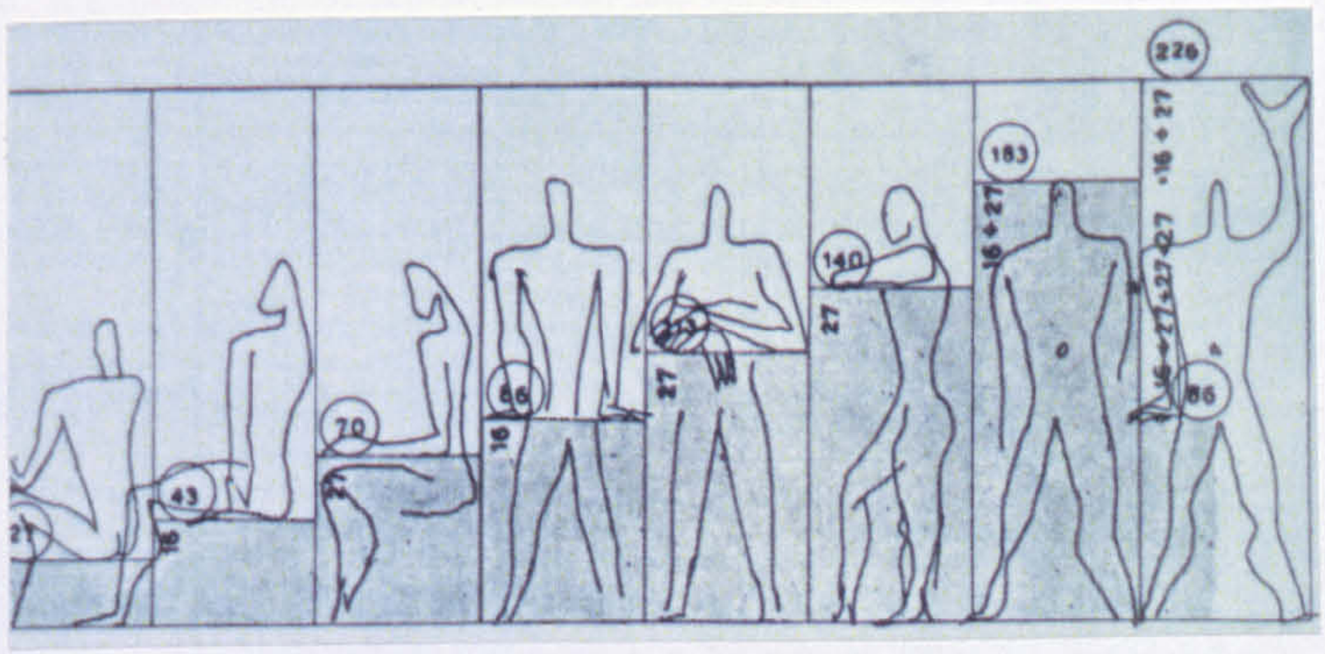
Concurring with Viollet-le-Duc, Le Corbusier believed that a new synthesis would be based on understanding of changing social needs and structural systems. He proceeded to develop '*Le cinq points d'une architecture nouvelle*' (1926); piloti, free plan, free facade, strip windows and roof garden, and standard house types, which were manifest at one scale in the *tabula rasa* nature of *La Ville Radieuse* (1916), and at another in the 'Dom-ino' concrete housing system and the 'Modulor' proportional system from which he derived planar, sectional and elevational composition. The development of the 'Modulor', in the 1940's, represented a move away from abstract Cartesian geometry of the 1920's, if not its logic (fig.A5.2). The 'Modulor' was based on the Fibonacci series, a mathematical progression found in natural processes; and familiar as the Golden Section (a Hellenic source which Le Corbusier felt was vital - Benton, 1987:241).

Le Corbusier and the Purists of *L'Esprit Nouveau* had sought the *laws* of art by observation and experiment, but soon attacked empiricism as infinitely impure, having fixed their universal laws once and for all. Frampton believes that Le Corbusier sought to resolve the dichotomy between the engineer's aesthetic and architecture to inform utility with universal myth (Frampton, 1980:160). In this he can, like Aalto, be said to have been both rationalist and poet, struggling with what Jencks interprets as a tragic persona (1985:143). Jencks finds Le Corbusier's contradictions to be manifold, evincing that he could not maintain a Purist position.[1] His contradictions allowed him to challenge the dogmatic lines taken by Functionalists such as Scharoun and even Gropius in CIAM, yet he felt able to adopt the Cartesian rhetoric of reason and *a priori* values to facilitate his own arguments, as demonstrated in *Ville Radieuse* (1964). Jencks believes that his belief in "man's essential loneliness" (Jencks, 1985:162) was a liability when it came to urban planning

[1] Jencks suggests that Le Corbusier was incapable to moving from the observation of 'is' to the regulation of 'ought to be' (1985:145).

(fig.A5.3). This can be contrasted to Aalto's sensitive concern for the psycho-social improvement of the environments of 'little man' (fig.A5.4).

Le Corbusier was an acquaintance of Aalto's, one of the 'Top dogs' with whom the Finn sought to mingle, yet some of whose ideas he challenged with all the might of his built form (fig.A5.1). As Zevi explains; "Not that Aalto is a romantic; he is very different from that, but he applies the spirit of rationality to the problems of psychology and life no less than to the essential problems of structure and plan." (1950:60).



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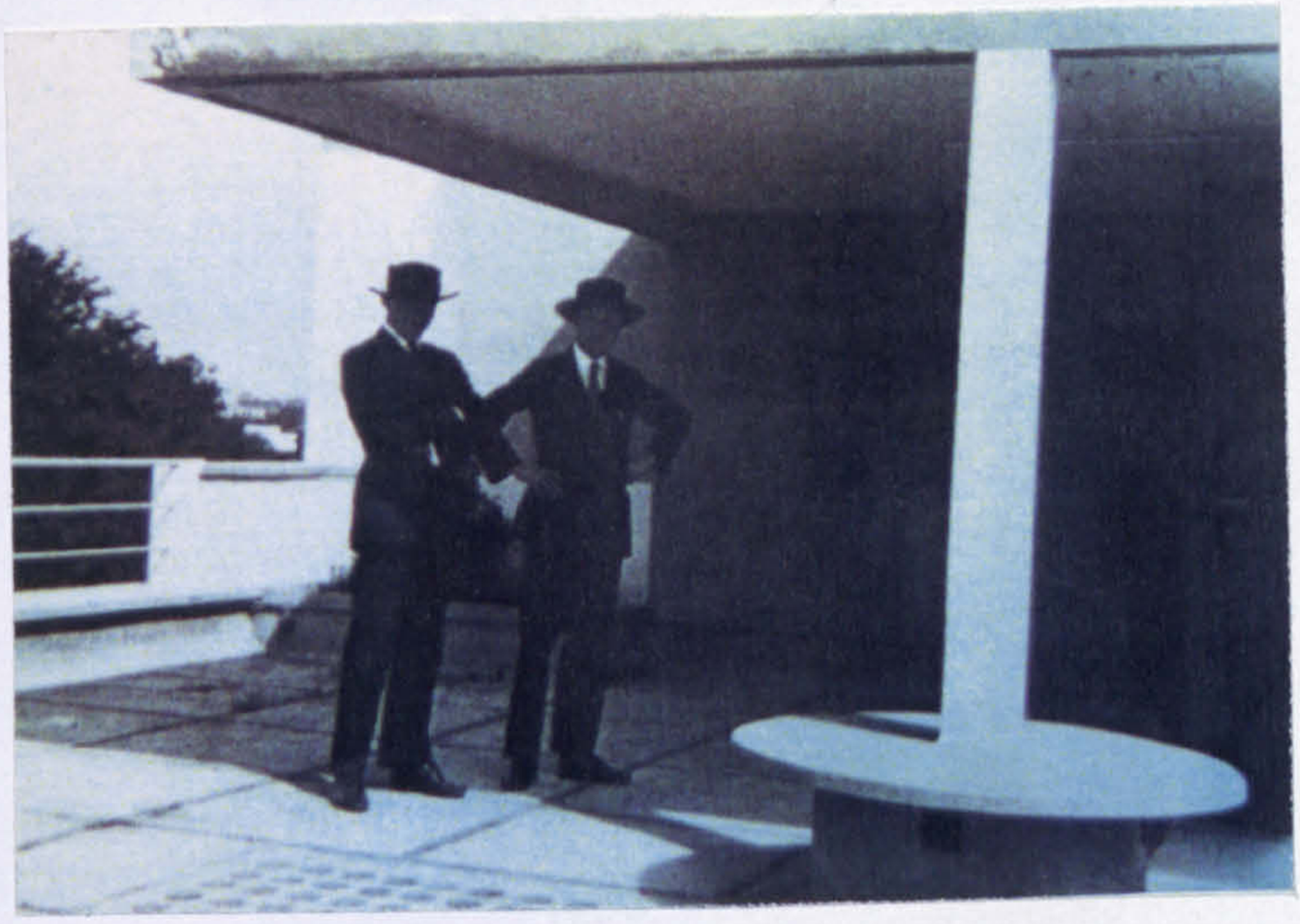


A.5.3

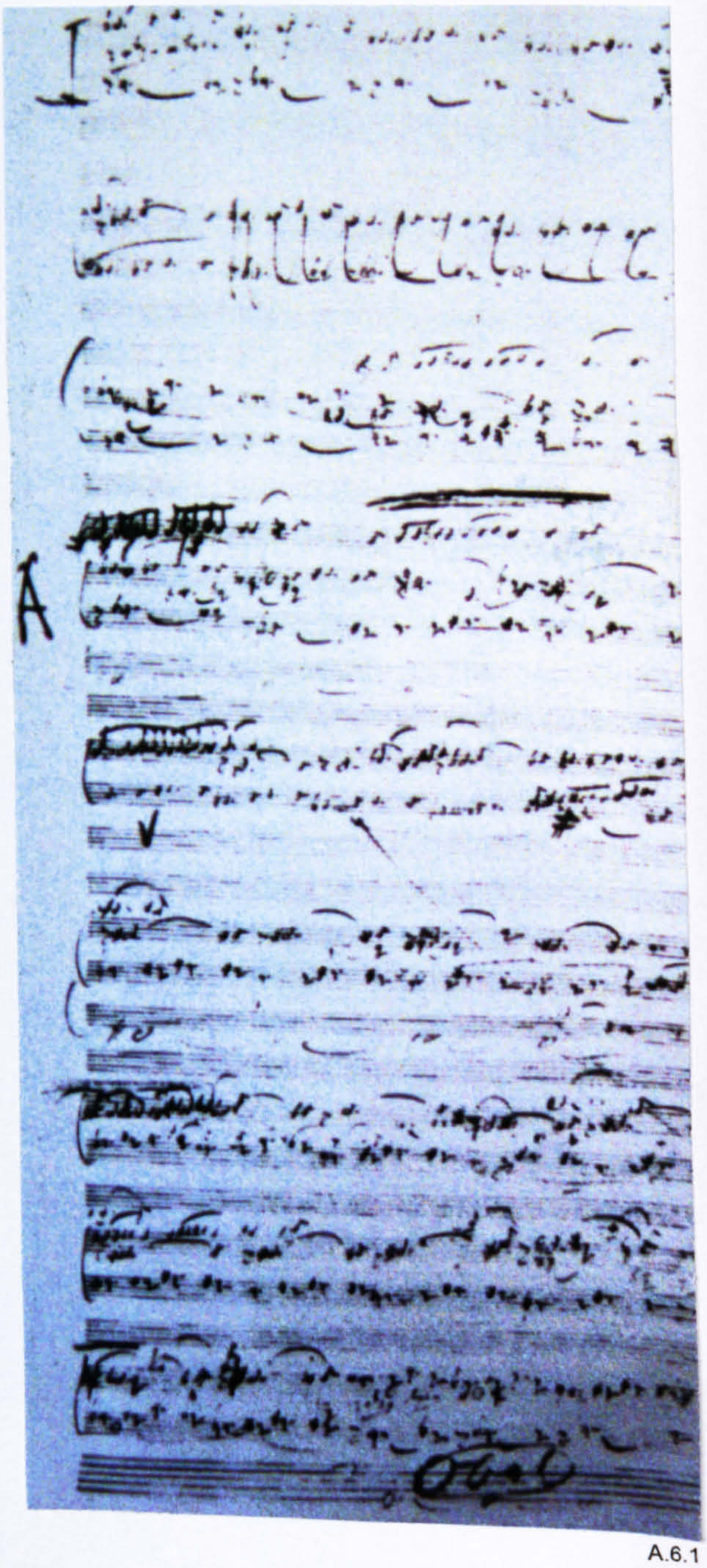


A.5.4

FIg.A.5.2 *The Modulor Man*; Le Corbusier, 1945

Fig.A.5.3 Aalto during visit to Paris to see Le Corbusier's architecture, 1928

Fig.A.5.4 *Unité d'habitation*, Marseilles; Le Corbusier, 1946-52



A.6.1

Fig.A.6.1 Sketch of score for *Fourth Symphony*; Sibelius, 1910

Appendix Six

A MODERN PERSPECTIVE : CÉZANNE, SIBELIUS AND AALTO

This appendix seeks to note the parallel drawn between Cézanne and both Sibelius and Aalto by scholars, and the relevance of this to the current thesis.

In *Music Ho!* Constant Lambert compared the austere worlds of Sibelius and Cézanne, and the affinity of the orchestration and the landscapes colour, both being essential to the form of the whole ([1934] 1985:197, 262). For example, in the *Fourth Symphony* (1911) Sibelius has moved away from 'indulgent' romanticism, creating three dimensional work, "like a good piece of sculpture" (Lambert, 1985:261), or the colour in a Cézanne painting (1985:262). The first volume of Göran Schildt's biography of Aalto cites the stimulation he received from Cézanne's art (1984) (fig.A6.2 & A6.3). Here he seeks to demonstrate the painterly affiliations between the two. Schildt explores how Aalto borrows Cézanne's "expressive equilibrium between different forms" (1985:114): intuitive form planning without a set of external rules.

The psychologist Anton Ehrenzweig also refers to Cézanne, citing his syncretistic handling of free form which was so vehemently rejected by his contemporaries,[1] despite its logical extension of earlier experiments by Impressionists with free colour (1967:117). However, Ehrenzweig finds that Cézanne's work disrupted conscious sensibilities, as did much of Sibelius' most uncompromising work; "speaking to us in a language whose meaning we cannot grasp",[2] as one critic put it (Klematti, 1911; T2:170). Chapter four indicates that Sibelius' was not the same determined attack on sensibility and creation of a new language as Schoenberg's, nor the equivalent near schizophrenic splitting of the pictorial space of Picasso. Yet such contorted fragmentation and splintering in Cézanne, and for that matter in Sibelius or Aalto, is not masked. Ehrenzweig suggests that the 'otherness' of the work (the dedifferentiation in which the inside/outside areas are united) leaves the viewer or listener with a work which may seem to engulf and trap. Because the process of (depressive) re-introjection is not completed, he continues, the work remains in the (manic) experience of oceanic oneness. Such oneness dissolves space and time (i.e., modes of reason) and thus the boundaries between self and non-self are challenged. Winnicott, it will be recalled, also believed such boundaries are vital in the creative ego, in order that inner reality can be visited through a return to outer reality; that which is an unbridgable '*gap*' for psychotics.

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[1] Ehrenzweig (1967:117) believes that the choice and appearance of Cézanne's bulging apples are realistic elements of non focused, peripheral vision. Fuller draws attention to Cézanne's place at the inception of modernism, recognising the spatial organisation as potentially enriching our relationships to the world (Fuller, 1980:173).

[2] Heikki Klematti, in *Säveletar*, reviewing the first performance of Sibelius' *Fourth Symphony*, 3 April, 1911. (T2:170)

One critic has suggested that Cézanne's art is "full of patterns yet without a prior governing pattern" (Schapiro, 1952:60). Another scholar believes his pictorial order is never whimsical, but rather a matter of expressive invention; a synthesis of Renaissance formalism and Impressionist colour in which the picture is in "a state of becoming" (Richardson, 1971:36-39). This mirrors the synthesis of the classical and the organic in Sibelius and Aalto, which, as in their cases, is not neo-classicism.[3] Cézanne's pictures comprise a whole series of relationships, through which the picture is becoming, and in which he gambles with composure and disorder, as equally do Sibelius and Aalto, moving from the priorities of an external governing system which was external to their imaginations, to a process inherent in them as living beings; i.e., the process of growth and creativity. The composition of the myriad of relationships results in a 'whole', the composition of which seems to be under constant modification. This can be seen in the growth process inherent in *Tapiola* (1926) and in *Baker House* (1946-9). Yet none of these three artists were seeking to divide the authority of tradition from the modern spirit, rather seeking to make formal properties of composition primary through the function, or *élan vital* of each element, encouraging the real, rather than the artificial coherence of parts.

This appendix demonstrates that there has been scholarly interest in the relationship between the formal experiments in Cézanne's art and those in the work of Sibelius and Aalto. It also notes the relationship between this and theories of creativity offered by psychologists such as Ehrenzweig.

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[3] Wrede refers also refers to Cézanne in his discussion of Scandinavian Classicism, and particularly Asplund and Aalto. (1985:176-177).



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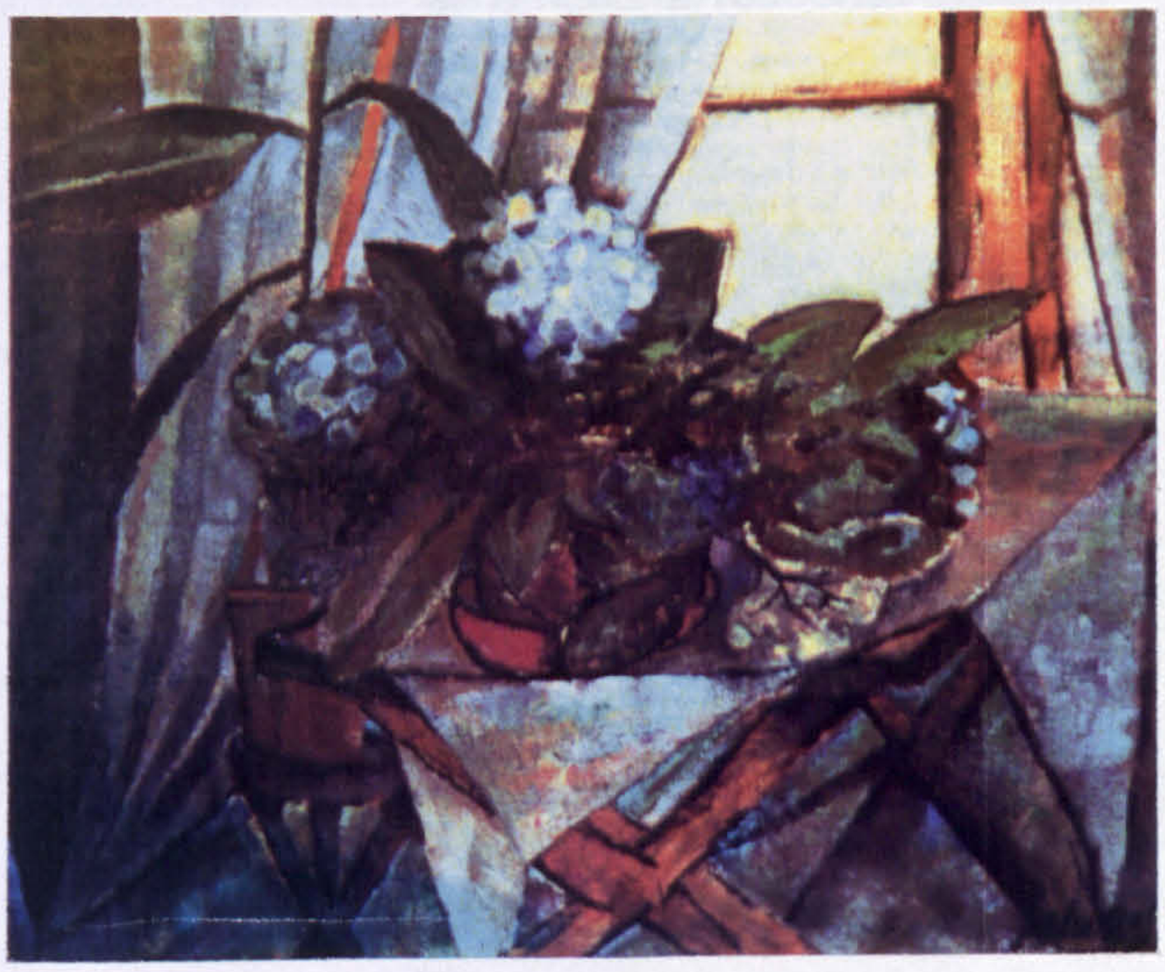

A.6.3

Fig.A.6.2 *Still life with Cherries and Peaches* ; Cézanne, 1874-1866

Fig.A.6.3 *Still life*; Aalto, 1918

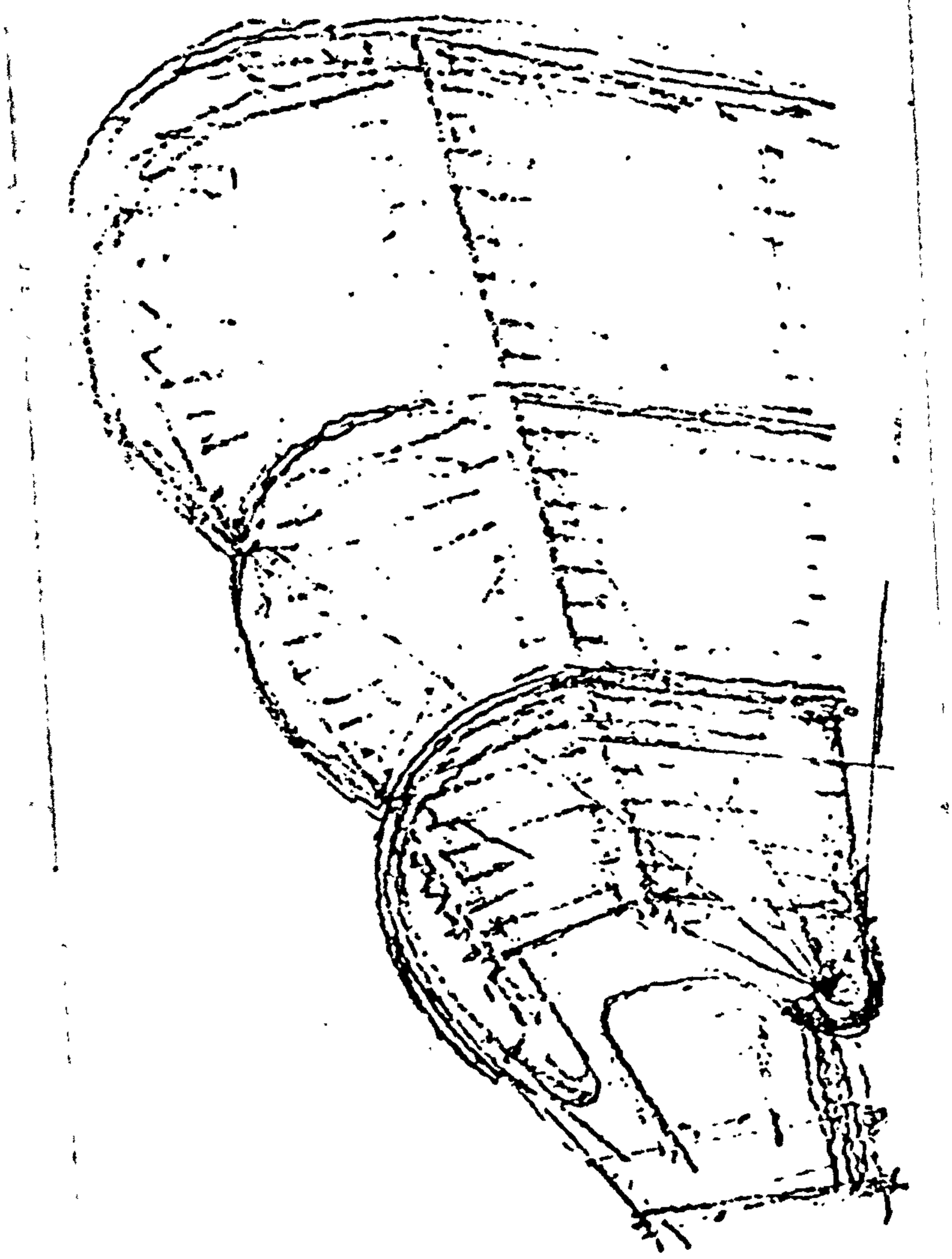

Fig A.7.1 Sketch plan of *Vuoksenniska Church*, Imatra; Aalto, 1955-9

Appendix Seven

RELATING TO SIGNIFICANT FORM

This appendix augments the references in the thesis to notions of "Significant form" in aesthetics and psychology, relating the notion to the ideas of the scholars used in the text; such as Berleant, Langer, Ehrenzweig and Winnicott.

Opposing Marxist theories of art early in the century Roger Fry and Clive Bell believed that 'Art' is an autonomous entity which has nothing to do with other human emotions or experiences beyond that of the art, with no reference, for instance, to social, political, or psychological considerations. Bell's "complete theory of art" seems therefore inherently flawed (1914). A prerequisite of art, according to Bell, is 'Significant Form' which can produce an emotion unique to art; "lines and colours combined in a particular way, certain forms and relations of form" (1914:21-22) (fig.A7.2). That which does not move our aesthetic emotion, he believed, does not have Significant Form, and can therefore not be art. The "certain forms and relations of form" which so moved Bell may have triggered the deep emotional response because they were congruent with memories or longings stored in his subconscious (fig.A.7.3).

Losing the self in an experience, be it aesthetic or natural beauty, may involve a limited regression which brings the self into congruence with early emotional need for 'being part of', even being at one with that oceanic feeling of oneness (Ehrenzweig, 1967). This is close to Berleant's notion of "engagement" (1993). Experience of union with art or landscape can dissolve the ego, yet any explanation of this experience reinforces the (outer) reality of separation (Berleant, 1993). Art must be imbued with this separation; Bullough's 'psychical distance' (1912). Peter Fuller equates Bell's aesthetic emotion with the experience of mergence (1980:199), identifying experience of art with that of 'other', i.e., society beyond the self; what Bell sought in 'being at one with'.[1]

As chapter six indicates, Anton Ehrenzweig believed that submergence into both creativity and finished art requires conscious needs for security, logic, order, and sequence to be somewhat relinquished. This need not suggest that there will not be order inherent in the experience itself, since unconscious scanning (low-level scrutiny) can reveal "formal discipline"; what Ehrenzweig calls the hidden order of art (1967).[2] However, Suzanne.K. Langer argues that quality in art is not just the outworking of

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[1] Berenson, on the other hand sought this in separating out (1949).

[2] The need to accommodate the facts of art, which Marion Milner highlighted (1950), exposes the fact that there is order superior to the narrowly focused conscious processes, agreeing with Ehrenzweig's "blurring of conscious focusing" (1967:46).

psychological pain through creativity, but is rather the "perfection of form" ([1942] 1993:207-8).[3] Later, she suggests that "form is first" and representational function accrues to it (1953:68-70).[4] This suggests that an artist's use of form is primary, arising directly from the unconscious and thus beyond the reach of the ego, after which perceptions of representation, or in architectural design of function, follow.

Fry speculates that, "it may be that art really calls up, as it were, the residual traces left on the spirit by the different emotions of life, without however recalling the actual experience, so that we get an echo of the emotion without the limitation and particular direction which it had in experience."(1924:19-20). He also believed that "aesthetic emotion is emotion about form" (1924:7). It follows that it is also emotion about formal structuring, about relationships of forms, and about the make up of the Potential Space in which each person finds the capacity to relate the parts of themselves. In other words emotion about formal relationships is "Significant" because it calls upon our experience of other relationships which move us.[5] Part three of the thesis shows that in the work of Sibelius and Aalto there is concentration upon the mechanisms in which often disparate and divergent forms relate. What is more, in this respect both seek to make symbolic reconciliation of their divided internal phenomena, ways of relating (form) to bridge the '*gap*'.

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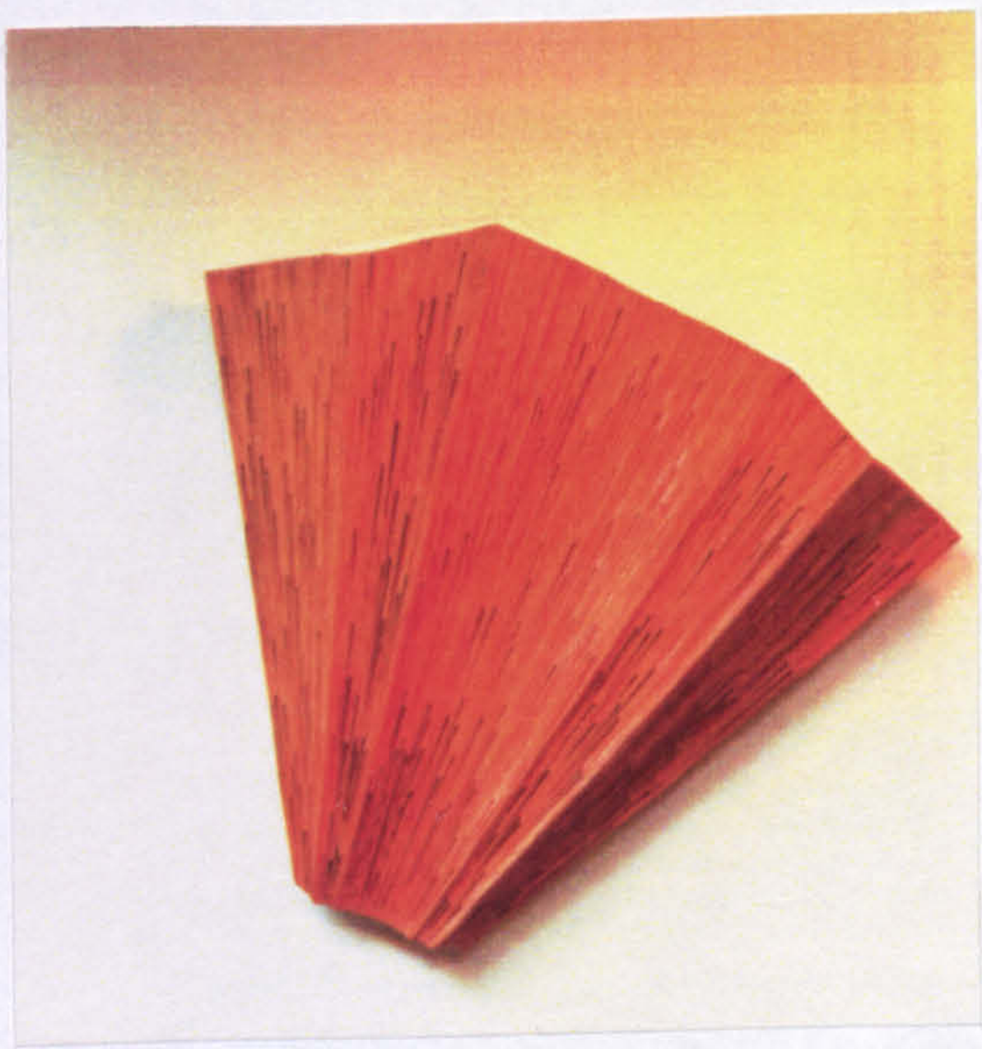
[3] Langer does not explain her use of 'perfection', though it might be understood to mean the recognition and resolution of these forms from within.

[4] Langer draws this conclusion from a study of the symbolic origins of the circular mandala form.

[5] Fuller suggests that "like, say, childhood, the aesthetic is a historically specific structuring of certain elements of human experience and potentiality which pertain to that underlying condition of our biological being, and which can be occluded or displayed, but never entirely extinguished, by ideology." (1980:193).



A.7.2



A.7.3

Fig.A.7.2 Painting; Aalto, 1945

Fig.A.7.3 Wood experiment; Aalto, 1930-47



Fig.A.8.1 Map of rivers and waterways in Finland

Appendix Eight

NATURE'S WAY:

Comparison of the natural environments which Sibelius and Aalto knew

INTRODUCTION

This appendix examines the nature of Finnish forests which Sibelius and Aalto experienced, demonstrating that although there was both a chronological difference and regional variations, the forests in which they spent their formative years were similar.

CLIMATE

Finland is located between 59°30' and 70°5' north, and so is influenced by both cool temperate and polar climatic zones. Like all north west European countries, its climate is ameliorated by the Gulf Stream, a warm ocean current originating in the tropical west Atlantic, and so is milder than areas of Siberia, Alaska or Greenland lying at similar latitudes. In winter, cool, clear polar air tends to dominate, producing mean February temperatures of -14°C in the north and -4°C in the south west (fig.A8.2), while in summer mild subtropical air masses push north, giving mild damp weather with mean July temperatures of +17°C in the south and +12°C in the north (fig.A8.3). The influence of the vast European-Asian land mass to the east produces further variation, as it brings periods of hot dry weather in the summer and periods of intense cold in the winter. The thermal growing season (the number of days each year when daily mean temperatures exceed +5°C) ranges from 180 in the south to 100 in the north (Rikkinen, 1992:7-9).

SOILS

Soils in Finland are mainly unsorted tills, formed from rock eroded, transported and deposited by glacial action over the Quaternary period (the last 2 million years), and consisting of material of all sizes from boulders to clay particles. Clays, sands and gravels transported and deposited by fluvial action are also common. The most common soil type is the podsol, in which most nutrients have been washed down out of the reach of plant roots by soil water, to produce a grey nutrient-poor topsoil (Rikkinen, 1992:17-19). The action of ice during the Quaternary period has scraped many basins out of the bedrock. In these have formed the many thousands of lakes for which Finland is famous, and also extensive areas of bog, in which saturated layers of partially decomposed vegetation form deposits of peat. These are

formed partly by the infilling of lakes with vegetation, but mainly by the paludification[1] of forests (Neuvonen et al, 1989:109-110). Further extensive areas of bog form in the north of the country, where a combination of low temperatures and precipitation inhibit the decomposition of plant material (Neuvonen et al 1989:122) (fig.A8.4).

VEGETATION

The vast majority of Finland is in the Boreal vegetation zone, a zone of northern coniferous forests that extends through Eurasia and North America to form a belt over 1000km wide in places. Only the treeless mountain tops of Lapland, which are in the Arctic vegetation zone, and the far south west corner, which is in the Central European deciduous forest zone, are in different biogeographical regions (Rikkinen, 1992:39). Finland's Boreal zone is dominated by Scots pine (*Pinus sylvestris*) and Norway spruce (*Picea abies*) forests and peat bogs, which covered 30% of the country before extensive drainage schemes were created to promote forestry. In the southern Boreal zone deciduous species such as oak *Quercus robur*, birches *Betula* spp. and alders *Alnus* spp. make a significant contribution to the forest canopy, while in the north, Arctic species such as dwarf birch (*Betula nana*) become abundant. The ground vegetation of Boreal forests is dominated by mosses, lichens, ferns and dwarf shrubs such as bilberry (*Vaccinium myrtillus*), cowberry (*Vaccinium vitis-idaea*) and heather (*Calluna vulgaris*) (Heikinheimo & Saari, 1922: 4-10; Rikkinen, 1992:39-43).

As well as climate and soils, human activity has also influenced the composition of the vegetation in Finnish forests. Swidden culture, a form of slash and burn agriculture in which crops such as rye were grown for a few seasons in soil fertilised by the ash of the burnt forest, was the dominant form of agriculture of the people who settled central and northern Finland during the 'Savo expansion' that began in the sixteenth century (Linkola, 1987:112-113). The transition to settled agriculture occurred gradually, but was hastened by the development of a shortage of types of forest suitable for this form of cultivation in the second quarter of the nineteenth century (Linkola, 1987:114-115). The forest that developed on the cleared land after cultivation was abandoned was dominated first by birch and pine; spruce was slower to become established again, so areas that were burnt relatively frequently developed forests with a higher proportion of birch, pine and grey alder, and a lower proportion of spruce than they would have contained in their natural state (Linkola, 1987:116; Heikinheimo & Saari, 1922: 9). By the close of the slash and burn era in the late nineteenth century, almost all of the southern part of Finland, and some of the north, had been cleared by burning and so consisted of forest which had subsequently regenerated, rather than original undisturbed forest (Linkola, 1987:116-117).

[1] Paludification is the gradual conversion of terrestrial vegetation to bog as a result of changing water levels. This happened at the fastest rate in Finland during a climatic period that lasted from 7000 - 3000 years ago, but also occurs after forest fires when decreased evapotranspiration from trees increases the input of water to lowlying ground (Neuvonen et al 1989, 109-110).

HISTORY

There is in fact little primordial forest left in Finland. The inhospitable and infertile country encouraged a shifting cultivation which altered the form of the forest landscape. This slash and burn swidden-culture, which began before the Middle Ages, spread as Finns sought to clear the rocky land in the forest for cultivating rye, incidentally improved the fertility of the soil with the nutrient-bearing ash. The burning of Finland's greatest natural resource was extensive. Only south-east, central and northern Saamimaa (Lapland), islands in the Gulf of Bothnia and many areas along the coast escaped this practise. Savonia and Karelia, in eastern Finland are particularly associated with swidden-culture. Before the Swedish rulers distributed land to private peasant households, anyone could move onto land, and work it. There is still a common right to walk on, and pick indigenous produce on any land, except that close to a dwelling.

The burning of forests intensified with the demand for tar at the beginning of the sixteenth century. This was due to the age of the sea vessels at the time of the great sea wars and the colonisation of the "undiscovered" world. The Swedish Crown realised the international need for tar to seal the vast vessels, and organised the production and distribution of tar and pitch, soon making Finland the largest producer. The height of this industry was reached in the 1860's.

As a result of this industry huge areas of virgin forest in north Central Finland were thus razed. It was only much later, at the end of the Nineteenth Century, during Sibelius' youth, that the need for tar, and the associated forest burning dropped away, and in Western Finland swidden culture ceased. However, it continued until 1920 in East Häme, and after the second world war in East Savo.

In the 1830's a crisis emerged in eastern Finland as land became impoverished. The large scale distribution of land meant that little was "free" to claim. The Russian Crown was anxious to eradicate the wasteful practise of slash and burn in favour of mixed agricultural settlements. By the 1890's only poor peasants continued the swidden culture tradition, others having settled to field cultivation. The growth of the wood-processing industry through the second half of the Nineteenth Century also helped to halt the burning.

In the 1990's there are still some areas of Finland which are in the early stages of succession after swidden culture. These areas are characterised by open patches of grazing land, speckled alder, and areas in which birch is the dominant tree species.

There is no extant survey of the forest species dating from the period between 1865 and 1905, during which Sibelius and Aalto were growing. The earliest available species survey shows

that the areas of Hämeenlinna and Jyväskylä shared common tree species. It is feasible, according to Matti Leikola, Professor of Forestry at Helsinki University, to extrapolate this congruence of tree species back to the childhoods of Sibelius in Hämeenlinna and Aalto in Jyväskylä.

THE FORESTS OF LOVISA AND HÄMMENLINNA

Hämeenlinna is situated in the Häme Province, within the Central and Lake Regions of Finland (fig.A8.5). Sibelius was born in Hämmenlinna in 1865. He spent a great deal of time in the forests and lakes of this area. Both he and Aalto spent a great deal of their summer vacations at Lovisa[2] (fig.A8.6) where their respective aunts lived during their childhoods; Sibelius aunt Evelina Sibelius until her death in 1893; Aalto's aunt Helmi Hackstedt from 1911.

Both Lovisa and Hämmenlinna are located in the south western clay region of the southern boreal zone. The Third Forest Inventory of 1951-53 shows these areas to be productive, with a timber producing capacity exceeding 5.1 cu. metres per hectare per year (Ilvessalo, 1960: map 30). At the time of the survey, the forests in both areas were composed of 51-60% spruce, with 21-40% pine and 0-20% birch (Ilvessalo, 1960:maps 17-19). The ground cover was composed of a range of communities, particularly diverse grass-herb types, bilberry dominated and cowberry dominated types (Ilvessalo, 1960: maps 5-7; Rikkinen, 1992: 40-43).

The dominant age class of trees in both areas originated from 1870-1890, with less than 2.5% of the trees originating from before 1830 (Ilvessalo, 1960:maps 21-25). This illustrates how actively timber production had been pursued in these areas since the mid nineteenth century. Indeed, swidden cultivation was still practised in eastern Finland in Sibelius' youth (Leikola, M. 1993a, pers.com.), however not in the Häme Province, in the Lake Region, where he grew up. The cultural landscape was changing quickly and few virgin forests remained in Central Finland by the turn of the century (Linkola, 1987:116).

THE FORESTS OF ALAJÄRVI

Aalto was born in Kuortane, in the district of Alajärvi in 1898 where his father was a district surveyor. From 1910, after the family had moved to Jyväskylä, J.H.Aalto established the family in an old country estate called *Rottola*, close to Alajärvi, for summer holidays. It will be recalled that his father, as district surveyor for the whole region between Alajärvi and Jyväskylä, undertook long expeditions into the depths of the forest. The Southern Ostrobothnia region which includes Kuortane, in which Aalto lived for his first five years, is

[2] The Finnish spelling is Loviisa. Most coastal areas are predominantly Swedish speaking. Often place names have emerged in both Swedish and Finnish.



A.8.2



A.8.3

Fig.A.8.2 Sunset in Kitee, Karelia

Fig.A.8.3 Forest near Jacobstad (Pietarsaari)



A.8.4



A.8.5

Fig.A.8.4 View of Kauhaneva-pojankangas

Fig.A.8.5 View of Kalalahti at Sääksmäki where Sibelius strolled with his violin

flatter, less forested and with fewer lakes than the Häme district. However, from an early age Aalto's father took him on treks into forests a long distance south of Kuortane.

Alajärvi has a slightly more severe environment than Central or Southern Finland, located in the Ostrobothnia region of the mid-boreal zone, the core area of the coniferous forests (Rikkinen, 1992:42). Pine and spruce each dominate 41-50% of the productive forest, the remainder being mainly birch (Ilvessalo, 1960:maps 17-19). This is the most northerly location of the four areas, and the harsher climate is reflected in the ground vegetation, with grass-herb communities becoming extremely rare. Bilberry and cowberry dominated communities are abundant, and northern heather-lichen communities start to become significant components of the ground flora (Ilvessalo, 1960: maps 5-7). Timber productivity is slightly lower than in the other areas, at 3.1-4.0 cu. metres per hectare per year (Ilvessalo, 1960: map 30), reflecting the shorter growing season. As in the other areas, less than 2.5% of the productive forest originated from before 1830, and the dominant age class originated from 1870-1890 at the time of the 1951-53 inventory (Ilvessalo, 1960: maps 21-25) reflecting a history of extensive timber production since the mid nineteenth century.

THE FORESTS OF JYVÄSKYLÄ

Aalto moved from Kuortane to Jyväskylä in 1903. From here he explored great tracts of forest with his father; surveying trips which often lasted many days (fig.A8.7). Aalto returned to this region, building his summer cottage at Muuratsalo, near Jyväskylä, in the early 1950's.

Jyväskylä is in the Central Region of Finland, at the head of Lake Päijänne. This is the lakes region of the southern boreal zone. It is 80 miles north of Hämmenlinna. Forests are broadly similar to the southern clay zone (of Hämmenlinna and Lovisa), though with slightly less spruce and correspondingly more pine and birch (Ilvessalo, 1960: maps 17-19). The more northerly location than Lovisa or Hämmenlinna is reflected in a slight decrease in grass-herb communities and increase in dwarf shrub types (Rikkinen, 1992: 41; Ilvessalo, 1960:maps 5-7). The age composition of the forests in this area is similar to those above, reflecting a similar history of exploitation and the timber producing capacity also exceeds 5.1 cu. metres per hectare per year (Ilvessalo, 1960:maps 21-25, 30). The forest in Jyväskylä region has a greater proportion (31-40%) of pine than around Hämeenlinna (21-30%), less spruce (41-50% against 51-60%), and more silver birch (21-30% against 11-20%), yet spruce dominate in both areas.

CONCLUSION

While elements of the transition to a more severe climate are discernible in the forests of these four areas, the forests are on the whole similar. The transition is most apparent in the changing composition of the ground flora, with grass-herb communities becoming less frequent and heather-lichen communities more frequent in the northward progression; i.e., towards Alajärvi. Indeed, the most discernible difference would have been between Alajärvi and the more southerly areas, because the region is generally flatter with more heathland species than the other areas, being on the edge of the Ostrobothnian plain. However, bilberry and cowberry type communities dominate throughout. Pine and spruce are the dominant canopy trees in all areas, with pine becoming slightly more frequent and spruce slightly less frequent to the north.

The timber producing capacity of forests on productive land in all four areas is good to excellent, and the age structure of the forests documented by the 1951-53 Third Forest Inventory reveals that much timber production has been carried out in all four areas since 1830.

This appendix has sought to establish the extent to which the forest areas around Hämeenlinna between 1865 and 1885 and those of Jyväskylä between 1903 and 1920 were similar. Examination of the earliest available forest surveys (Ilvessalo, 1960) indicates that the geography and ecology had much in common. Indeed, a 1951 survey idicates that both regions had 61%+ of forest from 40-80 years old, taking them back to Sibelius' youth. A further 11-20% of the forest was from 81-120 years old, yet less than 2.5% originated from 1830's. It is reasonable to assume, therefore, that the forest environments of these areas in the late nineteenth and early twentieth centuries would have been largely similar, and therefore that Aalto and Sibelius would have spent time musing and studying similar natural environments.



A.8.6



A.8.7

Fig.A.8.6 Baltic coast
Fig.A.8.7 Lake and forest



Fig.A.9.1 Pine and rock

Appendix Nine

NATURE'S GROWTH PROCESS

The Root of the Organic

This appendix augments the discussion of the use of a model of nature's growth process in chapter twelve.

THE CELL

"Cell: the basic unit of plant or animal. It is an individual, usually microscopic mass of living matter" (Curtis, 1992:8)

The development of the compound microscope enabled biologists working in the early part of the nineteenth century, such as Mathias Schleiden and Theodor Schwann, to conclude that cells are the basic structural units of plants and animals. The cell theory, developed by Schwann in 1839, stated that cells are the basic structural units of animals and plants, each of which contributes to the life of the organism, and it is by their division that growth takes place (Curtis, 1992). For some time, there was an emphasis on the importance of individual cells, the structure and function of which were thought to mirror that of the organism. However, more recently biologists have become aware of how cells sharing the same basic form are specialised in order to fulfil specific functions. Interest has since grown in how these different types of cell interact in the development and functioning of organisms (Simpkins & Williams, 1982).

Animal cells consist of a mass of living matter or protoplasm, contained within a very thin skin, the plasma membrane. The cell nucleus contains the chromosomes, thread-like bodies made up of long helixes of deoxyribonucleic acid, each one a complex of thousands of genes which give rise to and control particular characteristics and functions of the organism. Surrounding the nucleus is a viscous fluid, the cytoplasm, in which are a number of other organelles (parts of the cell with particular and specialised functions). Examples of organelles are the mitochondria, where cell respiration occurs, Golgi bodies, which manufacture secretory products such as mucus, and endoplasmic reticulum, which produce and store protein molecules. While all cells have similar organelles, the relative abundance of different types of organelle varies with a cell's function. Thus endoplasmic reticulum are particularly abundant in enzyme-manufacturing cells such as those of the pancreas, Golgi bodies in the mucus-secreting cells of the respiratory tract, and mitochondria in cells which are metabolically very active, such as muscle cells.

Plant cells are similar to animal cells, but also have a cell wall surrounding the membrane, a non-living layer composed of cellulose and, in woody plants, lignin, to provide structure. Plant cells also have a cavity filled with a solution of sugars and salts, the vacuole. The negative water potential of this fluid is responsible for drawing water into the cells, thereby creating a pressure potential which causes soil water to enter the plants roots. The green cells of photosynthetic plants also contain organelles called chloroplasts, which house the light-absorbing pigment chlorophyll.

CELL DIVISION

"Cell Theory: an idea [...] which states that all living organisms are made up of individual cells and that it is in these cells and by their division that processes such as growth and reproduction take place" (Curtis, 1992:8)

MITOSIS

In order for an organism to grow, or to sustain its tissues by replacing cells which have died, new cells are formed by existing cells dividing into two, a process called mitosis. This process starts with the membrane surrounding the nucleus disintegrating. Each chromosome consists of two identical strands called chromatids, and in the next phase of mitosis the chromatids are drawn to opposite ends of the cell. A nuclear membrane then forms around each of the two groups of chromatids and the process of division is then completed by the division of the cytoplasm and formation of a new cell membrane. In the nuclei of the two new cells each chromatid then forms an identical copy of itself and so becomes a chromosome again. The process of mitosis therefore produces identical copies, with the nuclei of the two resulting cells containing exactly the same chromosomes, and therefore genes, as the original cell.

MEIOSIS

Some organisms such as fungi and corals use mitotic cell division to produce new individuals, a process called asexual reproduction, resulting in individuals which are genetically identical to those from which they originated. However, most organisms reproduce by a process of fusing a gamete (or sex cell) from each of two individuals (fig.A9.2). Gametes are formed by a more complex process of cell division than mitosis, called meiosis. In meiosis a gamete-forming cell divides into four rather than two, and each of the resultant gametes has half the normal number of chromosomes. This is essential so that the gamete can fuse with a gamete from another individual of the same species to form an embryo which has the normal number of chromosomes for that species, rather than twice as many.

Meiosis consists of two successive divisions. The early phases of meiosis are far more complex than those of mitosis, with chromosomes linking up with homologous partners (other chromosomes which have the same arrangement of genes controlling identical characteristics in the organism) and exchanging some of their genes. One chromosome of each homologous pair then moves to each end of the cell, a new nuclear membrane forms around them and the cell splits into two. A second division then occurs in each of the two new cells, in which the chromatids separate and move to opposite ends of the cell, nuclear membranes form around them and the cell again splits. The result is thus four cells from the original one, each of which contains half the usual number of chromosomes for that species.

THE SIGNIFICANCE OF MEIOSIS

Meiosis produces gametes, cells whose only function is to fuse with another meiotically produced cell from another individual of the same species to form a new individual, the process of fertilisation. A number of events take place in the formation of gametes and their subsequent union which mean that every individual brought about by sexual reproduction has a unique combination of genes.

The first process is called crossing over, the exchange of genes that occurs between homologous chromosomes in the first phase of meiosis, which ensures that gametes with new genomes (combinations of genes) are constantly being formed. Secondly, when the chromosomes from homologous pairs move to opposite ends of the cell, and thus into different gametes, immediately after crossing over, they do so independently from all the other pairs of homologous chromosomes around them. Because of this random assortment, a vast permutation of genes is possible in the gametes. Thirdly, the new individual receives a random selection of genes from not one, but two parents, thus further increasing the novelty of its particular collection of genes.

NATURAL SELECTION

The genetic variation created by sexual reproduction finds expression in phenotypical differences between individuals of the same species. Because organisms inhabit environments in which the resources they require are in limited supply, some of these variations in form and structure will give the individuals which carry them a slightly higher survival rate than those individuals which do not have them. Genes which confer such an advantage will therefore be passed on to the next generation in greater proportions than genes which do not, as more individuals with the beneficial genes will survive to sexual maturity. Over many generations the characteristics of particular species are able to slowly change, due to this interaction between the characteristics of individuals of that species and the characteristics of the environment of those individuals. This process which, over very long periods of time, leads to the formation of new species, is called natural selection,

and is the basis of evolution. Natural selection was one of Charles Darwin's most important deductions, which he expounded in his book 'The Origin of Species by Means of Natural Selection', published in 1859. The genetic basis of natural selection, the processes of meiotic cell division, was first explained by the Austrian monk and biologist Gregor Mendel in the 1860s.

There are two factors which particularly stimulate the process of natural selection. The first factor is that the environment in which organisms live is constantly changing, due, for example, to variations in the climate and in the abundance of other species, be they predators, sources of food or pathogens.[1] The second factor is to do with the avoidance of competition between species.[2]

This appendix has demonstrated basic cell theory, indicating the features of cell division and growth which is analogous to parts of the composition technique of Sibelius' and Aalto's, and had shown how meiotic cell division produces endless variations on a basic theme; a process which enables the phenomenon of natural selection to occur.

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[1] If species are to continue to flourish, they too must change, so that they can continue to exploit their changing environment in as efficient a way as possible.

[2] Ecologists working in the first half of the twentieth century have proposed what has come to be known as the competitive exclusion principle; that complete competitors cannot coexist, in other words that two species living at the same place and in the same time cannot have an identical niche; a niche being the sum of the physical and biological requirements of a species. Competition for resources between individuals of different species does occur, it reduces the efficiency with which individuals exploit their environment, their survival rate, and the chance of them passing on their genes to the next generation.



A.9.2



A.9.3

Fig.A.9.2 Ringlet butterfly on pine

Fig.A.9.3 Sunset through willow tree



A.10.1

Fig.A.10.1 Sketch designs; Aalto

Appendix Ten

THE FEMININE IN THE WORK OF SIBELIUS AND AALTO

"[...] bringing forth of being" (Heidegger, 1971:59)

"a woman-like beauty and perfection of contour and particularly of detail" (Šlapeta, 1980:135)

This appendix sets out some of the issues surrounding the notions of femininity and masculinity in creative form, with particular reference to the work of Sibelius and Aalto.

Reunala's notion regarding the building of miniature universes to support the world system (1989:51), cited in chapter seven, mirrors the mythic notions of the World Tree. Therein stress is laid on the existence of separated or opposing spheres which require an intermediary (Ivanov, 1974; Oguibenine, 1987; Hoppal, 1987). It may be noticed that here mythology and psychology concur. The conclusion of the chapter six highlighted the vital requirement for such mediation in the creative process. What the notion of a World Tree also offers is a sense of a cyclical, rather than linear process of continuity.

That teleological genesis can take on mythic effect, the preparation for the birth of something profound, is central to James Hepakoski's understanding of Sibelius (1993,1995). To recall *telos* is the Greek word for goal, teleology is the study of systems which are goal oriented. Hepakoski finds that the process of teleology describes and even explains the nurturing, preparation of something new in the music. He finds musical teleology to be "composition as gradually generative towards the revelation of a higher or fuller condition", indicating that the feminine-gendered aspects of the rotational teleological genesis are self-evident (1993:27). "In its classic pattern a mere motivic gesture or hint is planted unobtrusively in an early rotation; it then grows in later rotations and is ultimately fully unfurled - as the *telos* - in the final one." (1993:26).

Hepakoski finds that in *Luonnotar* (1913), the name of the Maiden of the Air in Finnish mythology who relates the creation of the world (*Kalevala*, Rune I), the *telos* idea is "associated with the physical actuality of the world's birth - both its mystery and its pain"(1993:27). Here "Feminized 'Nature' " is reflected in the circular, rotational gestations, and even Hepakoski believes, in the nature of relating the narrative, relating to Husserl's and later Heidegger's notion of art being the summoning of "a bringing forth of beings [...] out of concealedness" (Heidegger, 1971:59); what they explored as phenomenology.

Something of this same emergence may be found in Aalto's work. Indeed, Roger Connah also refers to the femininity of Aalto's curved forms, going on to suggest that they challenged the heady (masculinity) of Internationalism (1994:47). This may be understood to relate to the notion of preoccupation with "Feminized Nature". This may be found in his consideration and treatment of circular, undulation forms, and the masterly creation of enclosure-come-courtyard spaces.

Vladimir Šlapeta, too, alludes to the feminine in Aalto's work, as compared to the more muscular, masculine nature of Häring and Scharoun's organic work (1980:135):

> *"Aalto always strives for a perfect aesthetic impression, perhaps places his buildings in their environment better, and exhibits a woman-like beauty and perfection of contour and particularly of detail (the 'refinement' of every detail)"* (Šlapeta, 1980:135).

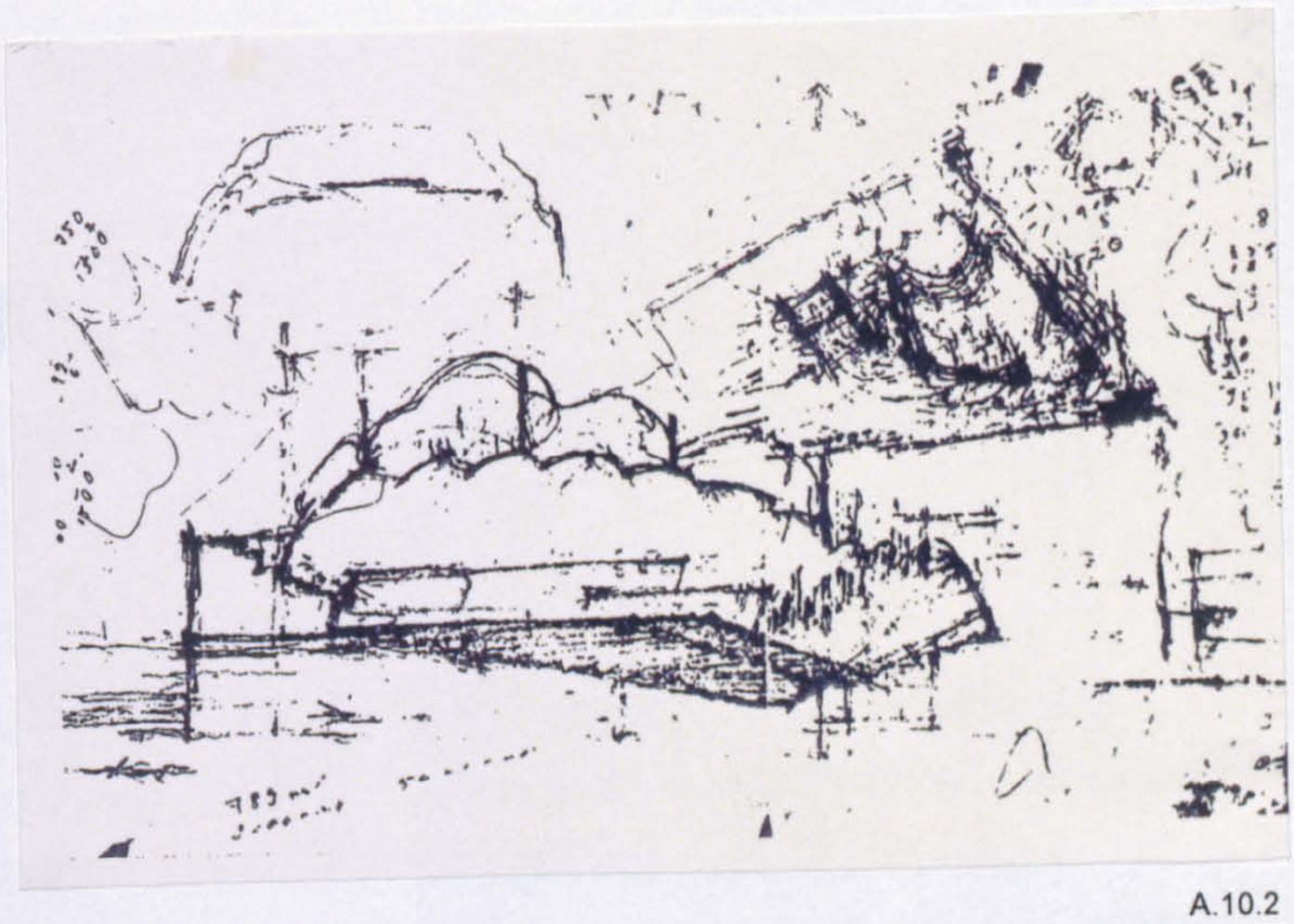
This seems ironic in one sense, since amongst those of the 'Other' tradition who Šlapeta mentions, Aalto was the one to maintain the role of the rectilinear in his architecture, thus anchoring himself in the a form which may be seen to represent the rational. Indeed, much of Aalto's formal language unashamedly combines the rectilinear and the curving elements, and such integration suggests a unity of masculine and feminine which was quite rare in modern architecture at the time.

Aalto's interest in the integration of diverse form and his repeated concern for synthesis may legitimately be linked to his interest in the analogy of composition and growth, and thus to Hepakoski's notions of teleology in composition. Indeed, Kerstin Smeds reports that Aalto himself made the connection between unity and the organic in using the interesting term "organic exhibition" in reference to his exhibition building in Paris (1937); "The guiding principle of Alvar Aalto's exhibition plans was unity. He wanted to create a seamless entirety." (Smeds, 1992:53). Indeed Aalto himself explained that,

> "This principle of unity is not just a futile aesthetic doctrine, it has a direct practical application in that only music in a single key, a symphonic structure has the power to strike the imagination and form a basis for new information and new influences". (Aalto, 1937)

The tone of this, with its musical allusions, revisits Strengell's *Challenge* of 1904, discussed in chapter four. Nevertheless, it would be too easy to comment on the wisdom of Aalto's allusion to a single key and symphonic unity, in reference to Sibelius' unified, single movement *Seventh Symphony* in a single key, but it can be argued that Aalto had insufficient musical knowledge to make such a profound connection, although his friend, composer Joonas Kokkonen with whom he talked a lot about their respective creative media, believes Aalto was not as totally non-musical as Schildt reports (pers.com.1988). What is important in this context is that Aalto was concerned with creating a synthesised unified whole, and that such a concern is traditionally thought to be the

preoccupation of the feminine side of personality. This is not to talk up the feminine sides of his, nor Sibelius' personality, but rather to acknowledge that the capacity to fulfil the longing for such fecundity and growth testifies to rounded personalities. The fact is that often their persona denied such vulnerable sides of themselves, being defensive and sometimes even brutal (see chapter five).



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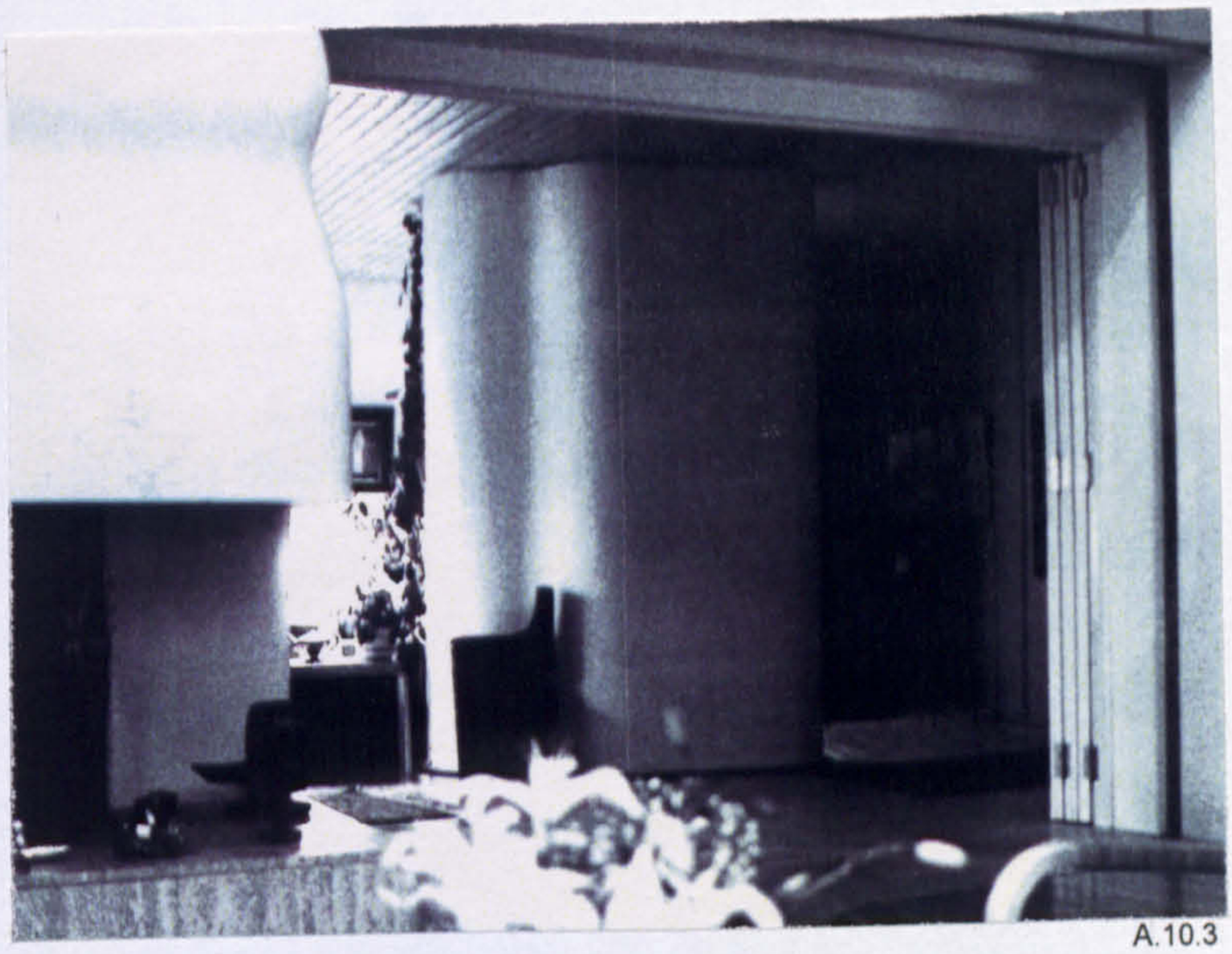

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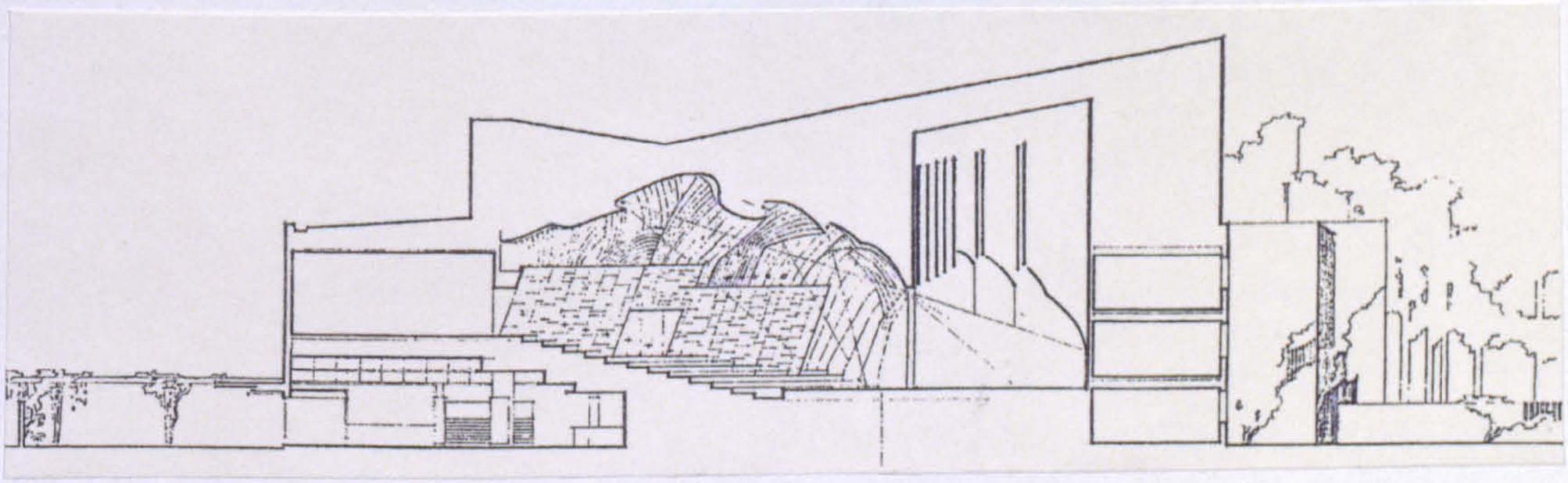

A.10.4

Fig.A.10.2 Sketch design for *Finlandia Hall*; Aalto, circa 1963

Fig.A.10.3 Interior of *Villa Kokkonen*; Aalto, 1966-9

Fig.A.10.4 Section through *Seinäjoki Theatre*; Aalto, 1968-9 (designed) -1987 (completed)

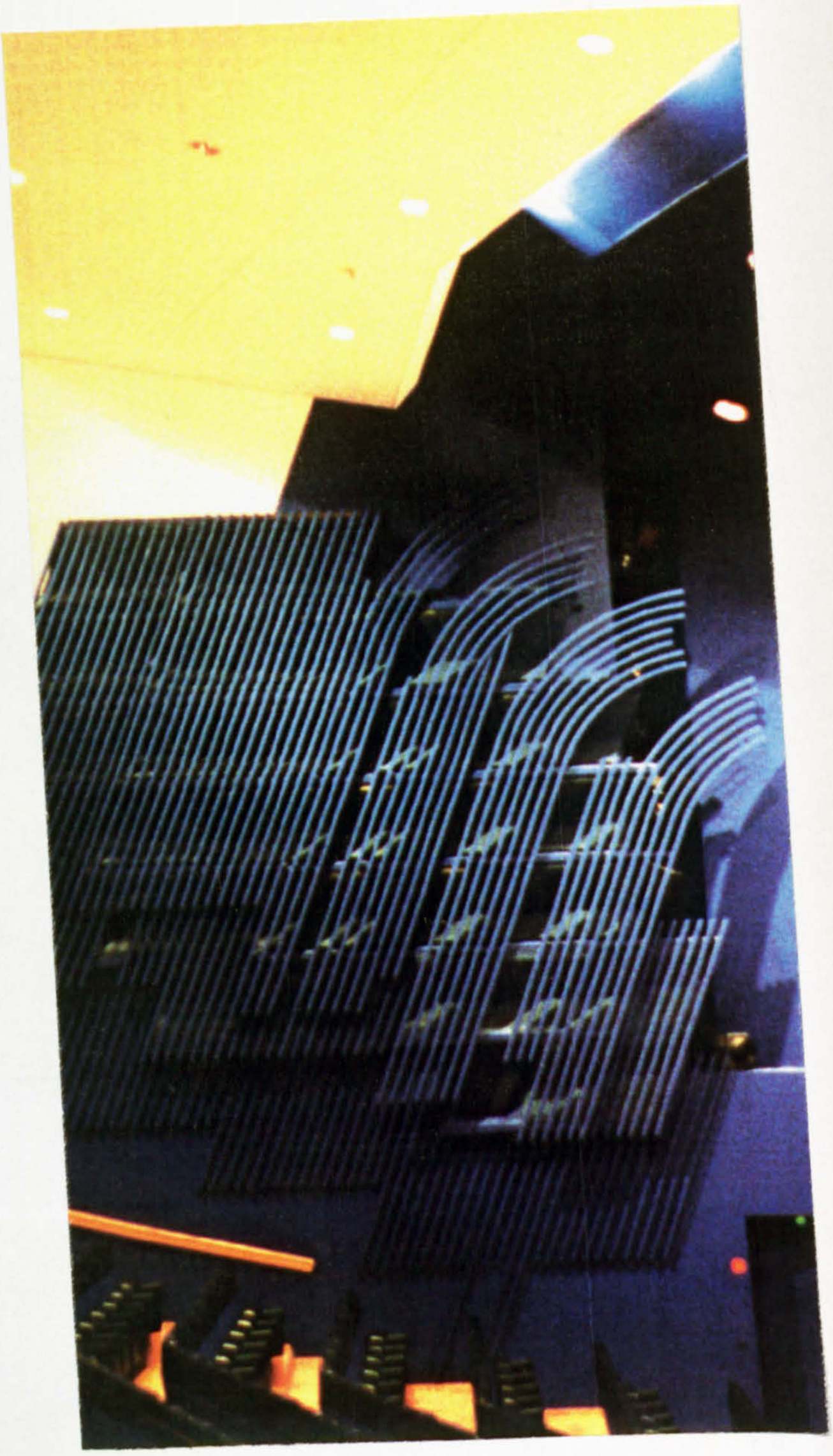

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Fig.A.11.1 Interior of *Seinäjoki Theatre*; Aalto, 1968-9 (designed) - 1987 (completed)

Appendix Eleven

A SPACE WITHIN:

An Inquiry into the Merging of Artistic Experience Through Sensory Perception[1]

This appendix draws attention to the issues relating to the possible correlation between sensory experiences of architecture and musical activity. It is not intended that a new theory of comparative analysis be determined, but rather that the synthesis of sensory modulation in Aalto's designs and Sibelius' music may be introduced.

Generally art speaks through sensory perception, creating some sort of movement within our inner world. However, as Sibelius believed, "We human beings need much more than the kind of reality that is accessible to the five senses" (Levas, 1972:67). If there is a reality greater than the sensation translated from the artist, via his art to the observer, which cannot be transmitted by the senses, a gestalt occurs.[2] In such a situation the "limits set by the field of an art" are expanded (David, 1968),[3] liberating the bounds of narrow artistic disciplines, and opening up "new modes of perception" (Mitchell, 1963).

TIME AND SPACE: THE UNCONSCIOUS PROCESS OF THE ARTS

The interpenetration of space and time adds a fourth, dynamic, dimension to the three which had held court since the Renaissance. Sigfried Giedion believed this was the essence of the modern perception which motivated, and was a liberating phenomenon in the arts of the early twentieth century (Giedion, 1967:30).[4] The phenomenon of space in architecture is established with our perception of three dimensions, relative to a moving point of reference, the observer. In modern architecture Giedion saw this most strongly demonstrated in Aalto's work.

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[1] This appendix appears as part of Menin (1992) and Menin (1995:357-388).
[2] Gestalt is defined as a perceived or organised whole that is more than the sum of the parts. There is a leap in perception whereby what is received is greater than what was tansmitted by the senses.
[3] David believes that the limits confine and only within these can correlations be examined, thus taking no account of the realm of sensory perception.
[4] Giedion explores how linear perspective offers perception of objects without reference to their whole or absolute shape or relation. Rather, up to this point the whole picture or design has been calculated to be valid for one station or observation point only. Fritz Winckel explores the psychical and physiological verification of the concept of time, and particularly the theory of relativity in which the standpoint of the absolute is relinquished, and things are seen in relation to each other. Winckel thereby verifies the fourth dimension (1967).

SOUND SPACES:[5]

> *"Music is enriched by spatial thinking"* (David, 1968:30).

Indeed, it may be argued that it is in the co-operation of the phenomena of space and time that Sibelius and Aalto are most closely related, yet in a most tantalisingly intangible way. In their work there is both a relativity and a wealth of detail which grows, so that, as Donald Mitchell found in the case of Le Corbusier and Schoenberg, "their patterns of behaviour coincide at too many important points for the concurrence to be brushed aside." (Mitchell, 1963:85). Mitchell addressed the distinction between what is "comparable" and what is "equivalent" in the arts of these two protagonists, arguing that there was a "principle capable of serving as a rule" (1967:85). This thesis has argued that the same is the case with Aalto and Sibelius .

An understanding of the correlation between the later works of Aalto and Sibelius is enhanced by an exploration of this phenomenon of musical space forms. There are two kinds of space in music; the space that sound travels through, which has been explored in the study of acoustics; and space-forms, created by the different musical parts (instruments) in relation to each other. The latter has received little attention.

On hearing his *Seventh Symphony* Vaughan Williams wrote to Sibelius to say; "You have lit a candle in the world of music that will never go out." The "sound spaces" and "the new sound world" (T2:41), which have been identified through experience of Sibelius' music, have "opened up clairvoyant vistas into a future world" of sound.[6] Indeed, Newman believed that "here we have a man really saying things that have never been said in music before." (1906). Sibelius was even heard to have "overstepped the boundaries dictated by sound." (Klemetti, T2:170)

Gianmarco Vergani, of Colombia University, recently described two ways of attempting to correlate the "antithetical" natures of music and architecture (Vergani, 1987); through an exploration of our perceptions of these arts, rather than of their formation; the poetic rather than the structural; the right rather than the left side of the brain. He uses the concept of synchrony (a subject as it exists at one moment of time) to describe the elements of architecture fixed in space. He believes that the synchronic approach "reduces music to its architectonic dimension outside of time." (Vergani, 1987:167). Structural relationships are then extracted from music and applied to architecture.[7]

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[5] Tarasti believes that spatiality is a key to musical understanding, and speaks of "inner sound spaces. (Pers.Com:8.1988).
[6] Tawaststjerna cites Wilhelm Peterson-Berger, Stockholm, February 1908. (T2:54)
[7] This approach seems to be derived from the research of John De Cesare written up in a short article, *The Theory of Visual Space in Music* (Property of the Cooper Hewitt Museum, on release to Colombia University, New York; Hand written article). De Cesare was an architect and composer who set out a synchronic form of analogy between musical structure and architectural structure outside the dimension of time. The approach seems thus limited in terms of the understanding of the natures of music and architecture.

Diachrony (the concern with historical development of a subject), on the other hand, describes the way music derives from the vitality of change and its continuous permutation in the medium of time. Vergani explains that "[t]he reading of architecture unfolds through time." (Vergani, 1987:165). The observer is required to move to set the composition in motion by investing his/her time, and enlivening a fourth dimension: i.e., through the process of the experience.

The diachronic mechanism establishes a taxonomy of elements in music (tone, timbre, duration, pitch, dynamics) and architecture (texture, material, light, colour, scale), and thus relevant events in music can be transposed into architectonic space-structures. For example musical dynamics would be transposed into spatial contraction and dilation. The range of high and low pitch or frequency, or "up" and "down", and the duration of time, can be envisaged as a lateral movement or progression.

The diachronic approach assists the correlative analysis, because it helps identify Sibelius' sound spaces, which can then be compared with Aalto's spaces. It is the more inclusive approach of Vergani's two, and, for the purposes of this particular analysis, moves in the direction of sensory modulation, by engaging time and the process of experience. Earlier research, undertaken in the sixties, enables further exploration of the existence of musical spaces. The German scientist Fritz Winckel was exploring the hearing process as "a perception through the senses, which is subject to a complicated psycho-acoustical transformation occurring before the real psychological area of perception is reached." (1967:viii). In his introduction Winckel states that,

> "In the field of music theory and musicology both simple and compound sound are treated as concrete building material having differing valences.[8] In this way a function is ascribed to each building block with respect to the others, whereby a distinctive architecture is formed, possessing a singular tonal character. Music, however, is a multiform complex function of sound series, only certain aspects of which have been known to us up to this time." (Winckel, 1967:1)

Since Sibelius is acknowledged to have explored a "new sound world", it is reasonable to credit him with offering a new acoustic experience, and an auditory glimpse of the "multiform complex function of sound" (Winckel, 1967:1) which was unknown to that point. Exploration of the relationship between this field of music and architecture has concentrated almost exclusively on the musical works and methods of Webern and Schoenberg, ignoring Sibelius' inimitable music.

Winckel too explored the space relationships in music through the information implicit in the tonal body (pitch and tone colour, dynamics and the development of these in time). Yet, as John Whitney explains in his book *Digital Harmony*, "The ear resides at the centre of a spherical domain. We hear from all around. We hear music as patterns of ups and downs, to

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[8]Valance is a unit of combining or replacing power of an atom.

and fro in a distinctly three-dimensional architectonic space - a space within." (1980). In music the listener senses "the flow of the whole". Winckel believed that the flow was the link in the chain of hearing between the outer ear and the cortex which provides a reciprocal relationship between place and time, thus enlivening the fourth dimension. Music, though experienced in a static position by the listener, is itself a dynamic phenomenon, intrinsically related to the unfolding of time. "In an acoustic perception, space and time [...] play complementary roles [...] there is no difference."(Winckel, 1967:78)[9]

At any one moment a section, or splice, taken vertically through a score of music, is perceived as a synthesised whole; a characteristic of the right side of the brain.[10] The quality of the whole may be argued to be spatial.[11] During the course of a musical audition, the vertical line (for the free movement of variation of pitch) and the horizontal line (the degree of extension of time) are never at a standstill. As soon as this concept is placed in relation to the listener, another dimension becomes evident: time (David, 1968). Winckel verifies this noting that "The whole is a gestalt in the sense of Gestalt psychology; it is perceived instantaneously, independent of time, just as thought" (1967). The process of unfolding music, may therefore be argued to be a process of the synthesis of millions of such whole spaces.

If it were possible to place an elevation or cross-section of, say, a spatial element experienced within an Aalto building adjacent to a cross-section of, say, a musical moment within a Sibelian sound, the spatial correlation between Sibelius' music and Aalto's architecture might be elucidated to some degree. It is, however, possible to abstract the two-dimensional score into graphic form and place it adjacent to a building section, to encounter something of the spatial synthesis.

This exploration introduces the idea of a vertical syntax in compositions, in which, for example, Sibelius and Aalto are each shown to have discovered the freedom to stack. That is not to say that there is a homogeneous vertical structure in their work. On the contrary, the vertical stacking is complex. However, it is clear that the coherence of Sibelius' music does not emerge from the linear tonal direction, but rather from a synthesis of the horizontal and vertical disposition of motifs, drawn from the principle melody, and reassembled in continually changing orders and textures.

SYNESTHESIA

This exploration of the human sound system illustrates how sensory perception is rooted in the physiological synthesis, or the cross fertilisation, of our senses. The concept of unity

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[9] Winckel is making reference to Well's theory of relativity.
[10] Other such characteristics include:- synthesis, spatial rather than linear perception.
[11] Its form is a unique synthesis of the composer's imaginative composition of the various musical elements of theme (or in Sibelius' case, kernel motifs), tone , rhythm etc.

among the arts is supported by a parallel theory of unity of the senses proposed by Aristotle, known as the "*sensus communis*," in which the activity of all the senses was integrated into one higher level mechanism (Marks, 1978:4); that which Sibelius referred to as the reality not appreciable by the senses. This doctrine led to the development of the psychological phenomenon of synesthesia; the involuntary transposition of sensory images from one modality to another (Cytowic, 1994). Aristotle's notion of *sensus communis* further verifies the potential for a synthesis of inter-artistic sensory experiences.[12] Indeed, in his study *The Unity of the Senses*, Lawrence Marks highlights,

> "The universal synesthetic capacity to appreciate the closeness and richness of similarities among visual, auditory, and other sensory qualities, a capacity that is strongly aroused in particular by powerful sensory-aesthetic experiences." (Marks, 1978:8)

It is logical to find oneself perceiving a synthesis of sensory stimulation from different idioms of music and architecture, (a sense of *deja vu*), if what inspired the form and content of Sibelius' musical space is the same, for example as that which stimulated Aalto's spatial creativity; i.e., nature's growth process.

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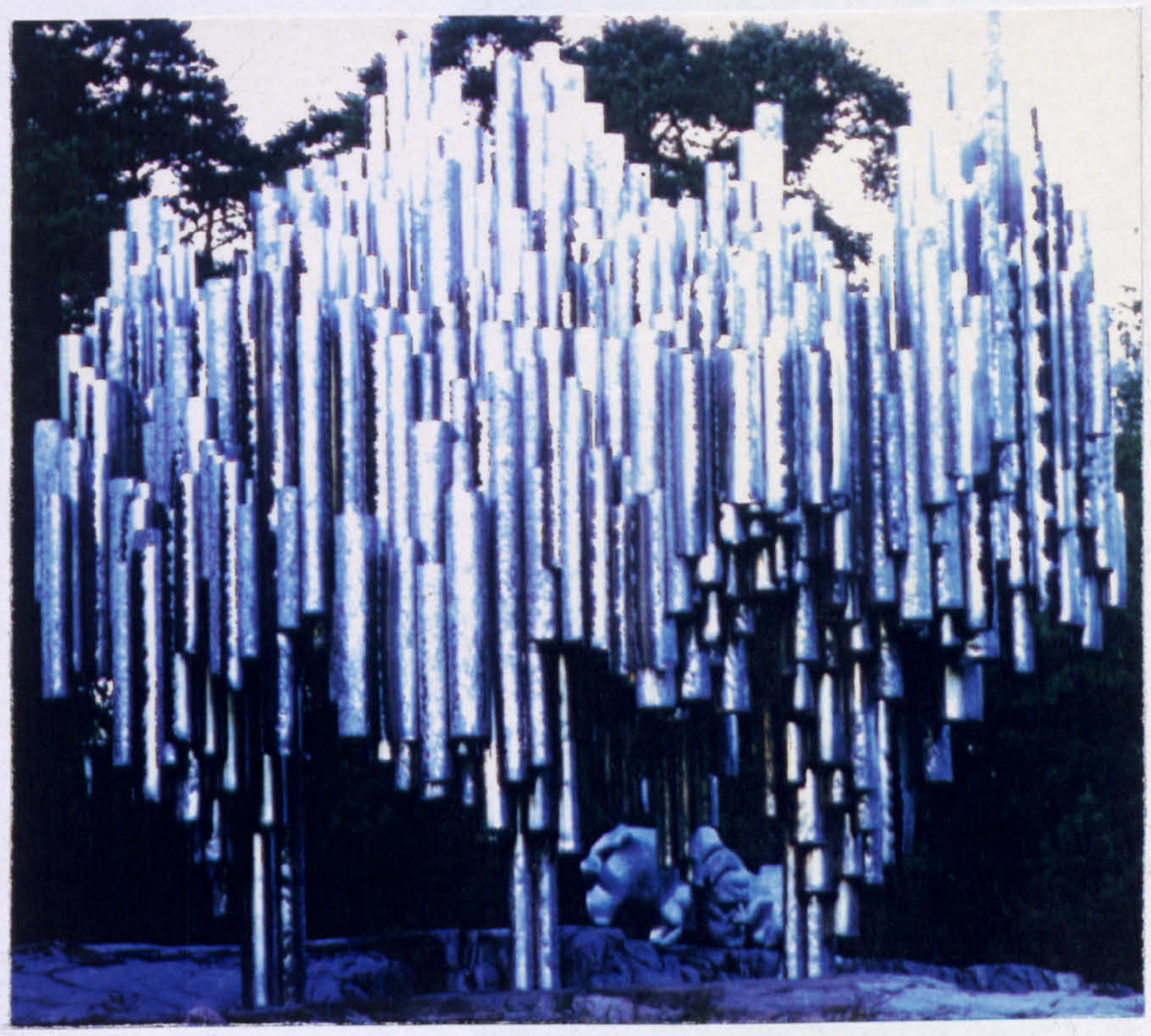
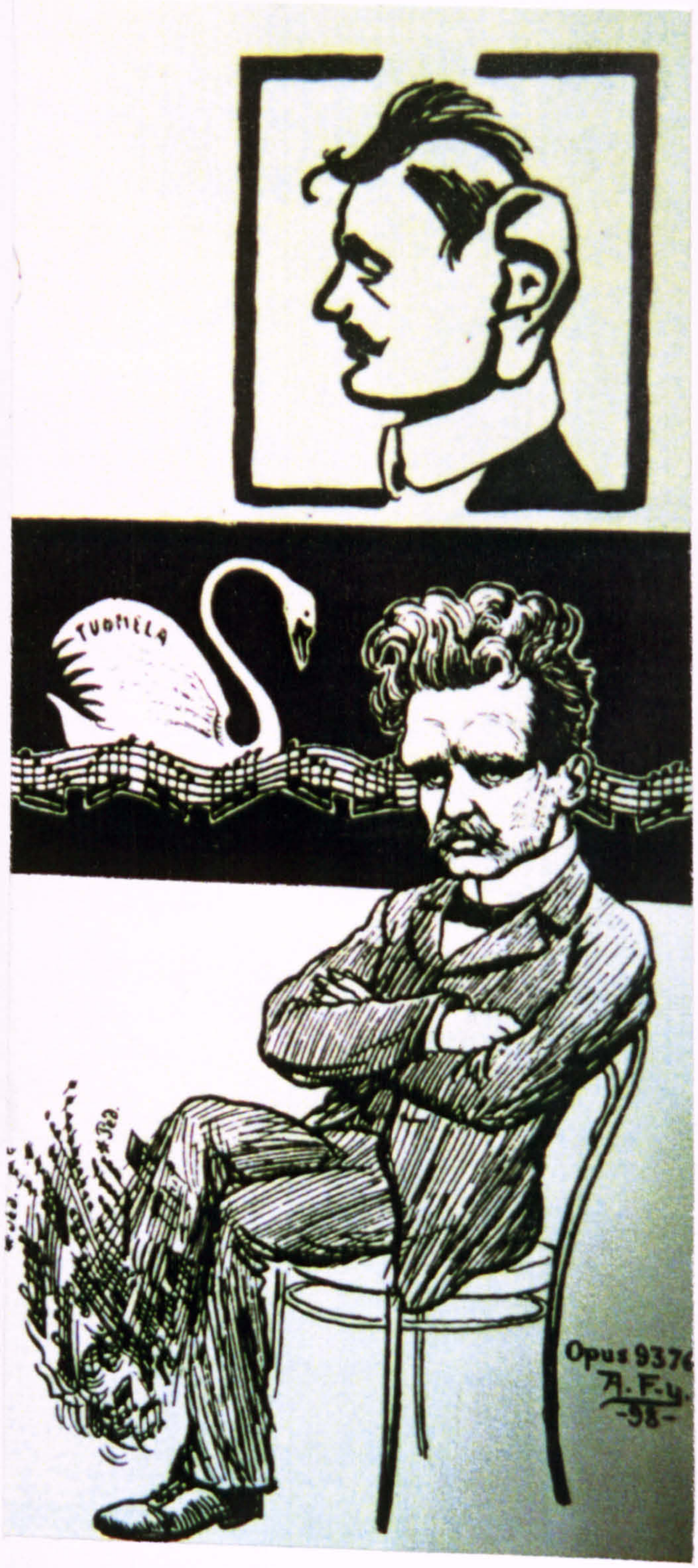
[12]It is no accident that this Hellenic concept assists in the understanding of the synthesis between the works of Sibelius and Aalto, as chapter ten has indicated, they were both interested in the Ancients' holistic cosmic view.



A.11.2

Fig.A.11.2 Three dimensional interpretation of Sibelius' music in the Sibelius Monument



A.12.1

Fig.A.12.1 Cartoons of Sibelius; A.F-y, 1898

Appendix Twelve

THE GROWTH OF THE SYMPHONY

> *"Real music is the symphony"* (Combarieu, 1910:93)

This appendix will give a brief outline of the development of the symphony to augment the discussion in chapter thirteen.

Having been defined as the consonant combination of any two notes in the Middle Ages, 'symphony' came to be applied to vocal or instrumental compositions in early counterpoint, being first used in music to describe a passage for instruments alone that acted as a prelude or interlude to a vocal piece (Hill, 1949:11). In the seventeenth century Schütz titled a piece *Symphoniae Sacrae*, the 'sounding together' of voices and instruments (Scholes, 1978:999). Bach described the 'sounding together' of strands of tone in his *Three-part Inventions* as *Symphonien*, Handel described the *Messiah* as *The Pastoral Symphony,* and Haydn later described some of his string quartets as symphonies. In the eighteenth century there was no single symphonic form, rather being influenced by the development of dance suites of different characters, and referred to the significant opening piece of an opera. This overture developed in prominence and was performed separately from the opera as a self-sufficient piece, and gradually the sonata, the *concerto grosso* and the symphony developed together.

THE SYMPHONY AS "A SELF-CONTAINED ENTITY"[1]

With the classical sonata and other cultural manifestations, the classical symphony became an expression of the classical ideal concerning man and *his* destiny (Pauly, 1973). Concurring with the discussion of classicism (see chapters two and ten), the development of the symphony was the process of "(d)etecting the unity of dialectical opposites" (Murtomäki, 1993:13), a balance of contrasts, and "over-all unity achieved within diversity" (Johnson, 1960:163). Haydn and Mozart had demonstrated the ideal of the embracing whole; the felicitous balancing of the dualistic tendencies (Ballentine, 1983:27). Beethoven's "ideal of a unified cyclic symphony" created the notion of universal sonata-dualism (Ballantine, 1983:28), dramatic conflicts in which clashes required strong and clear and convincing resolution, evinced in the resolution of the first tense bars of the finale of his *Ninth* (1823), in which the relationship between B flat and D motivate the whole symphony, through the "Ode to Joy" (Murtomäki, 1993:13). Thus unity is created by means of goal orientation (teleology),

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[1] Mahling (1979:2) quoting Hoffman.

[2] Liszt in a letter dated 1852.

increasing the process-like character, and shaping discord into an expression of perfect harmony.

In the nineteenth century the symphony corresponded with the bourgeois concept of the "ennobling, edifying and didactic purpose of music" (Murtomäki, 1993:15), becoming increasing grand, and established as given as musical form was codified, in for example, A.B. Marx' four-volume *Kompositionslehre* (1837-47), from Sibelius learnt the rudiments of musical form. When sonata form was defined as that with which to imitate the classical models, the Romantics could either accept this or seek to redefine it with every usage, and be accused, as was Lizst, of spoiling the classical heritage.

The problem of arranging different themes into an organic whole troubled composers of the Romantic era, such as Schumann and Mendelssohn. Some developed Beethoven's line, exploring the idea of symphony as concerned with unity. Significantly, in his "*Scottish" Symphony* (1842), Mendelssohn, whom Sibelius greatly admired, began to forge "intimate continuity of all four movements", as Schumann put it (1943), himself seeking the thematic evolution that creates a logical whole in his *D minor Symphony* ([1841], 1951). In his late work, Brahms abandoned the logical development of material based on kernels, and the movement towards connecting basic ideas through the classic principle of thematic transformation and allusion (Salmenhaara, 1979:159; Ballantine, 1983:35). Equally Dvorák's symphonies fail to challenge the Beethovenian heritage, being firmly rooted in sonata form.

Akin to the organic tradition referred to in chapter ten, Marx's theory of music comprised a morphological model in which composition is seen to grow from note to note (1837-47; Dunsby & Whittall, 1988:19), yet also demonstrated a conservative approach; a 'natural' concept of music in which sonata form represented formal *harmonia* of the classics. This approach forbade progress, leading to the tyranny of the study of form (Murtomäki, 1993:24). Chapter ten illustrated that the metaphor of organism imbued into musical analysis by Schenker and Réti, which, although rooted in Romantic notions of organic coherence underlying all of life, also inspired Schoenberg and Webern. Webern even developed a Goethean and Bergsonian notion of *Urform*, believing that, based on the compositional model of the organism, "[u]nity is surely the indispensable thing if meaning is to exist" (1963:42). Sibelius' proclamation about "the profound logic that created an inner connection between all the motives" (Ekman, 1935:191), suggests his expressions of aversion to the Moderns may have been somewhat misplaced.

Radical composers took a creative line; Berlioz sought to link movements at the level of ideas; Liszt developed the 'many movements in one' form, a notion of programmatic symphonic poems, "in which the thought stretches, breaks, recreates, and fashions the form and style according to its needs and inspirations" (Ballantine, 1983:41).[2] Tchaikovsky adopted the cyclic

building of forms based on a motto theme from Beethoven, developing the notion of new and violent contrasts, and consequent tensions. In Bruckner there is a slow developmental growth of material which is believed to be "outside of time" rather than in Beethoven's "journey of time" (Coad, 1985:27-8).



A.12.2

Fig.A.12.2 *A Winter Scene*; Eero Järnefelt, circa 1898



A.13.1

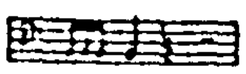
Fig.A.13.1 Knarled pine in a forest

Appendix Thirteen

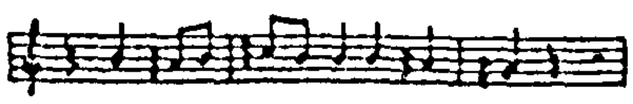
THE GERMS OF TAPIOLA:
Salmenhaara's Analysis of Tapiola

This appendix comprises details of the thirty germs from Salmenhaara's analysis of Sibelius' Tapiola (1970).

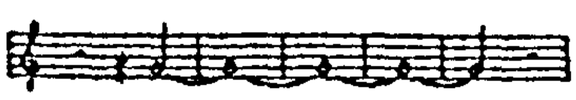
1. Patarumpumotiivi 1



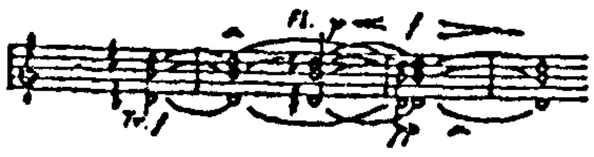
2. Avausmotiivi 1—3



3. Pitkän sävelen motiivi 1—5



4. Sointiväriasiirtymämotiivi 3—6



5. Puhallinten 2. motiivin variantti 9—11



6. Jousten tremolomotiivi 21—22



7. Kaksipisteisen rytmin motiivi 42



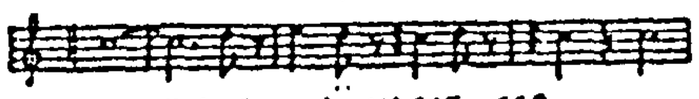
8. Rinnakkaistessimotiivi 43—46



9. Urkupistemotiivi 66—69



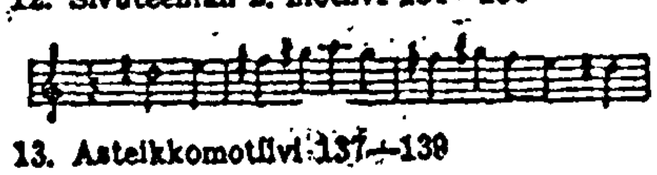
10. Sivuteeman 1. motiivi 106—109



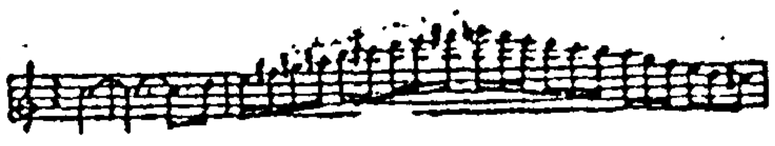
11. 10. motiivin 1. variantti 115—118



12. Sivuteeman 2. motiivi 134—136



13. Asteikkomotiivi 137—139



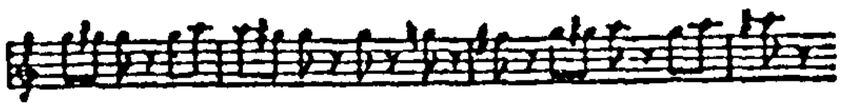
14. Ylinouseva kvartti-motiivi 106—108



15. Tanzbergerin 3. teema 145—148



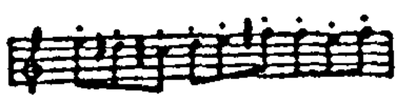
16. Puhallinten kromaattinen grazioso-motiivi 157—160



17. Puhallinten hidas kromaattinen motiivi 182—189



18. Viikas kolmisävelmotiivi 208



19. Kokosävelmotiivi 246—247

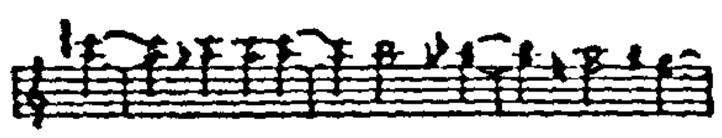
A.13.2

Fig.A.13.2 The thirty germ motives in *Tapiola* (1-19)

20. 10. motiivin 2. variantti 274—277



21. Puhallinten kromaattinen rinnakkaisterssimotiivi 284-288



22. Huipennusmotiivi 356—358



23. 10. motiivin 3. variantti 365—367



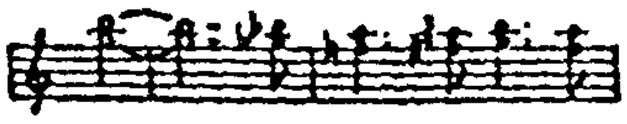
24. Puhallinten arabeskimotiivi 369—370



25. Jousten arpeggiomotiivi 397



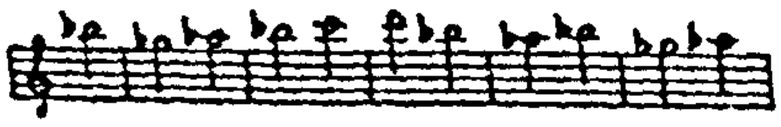
26. Puhallinten pisterytminen kromaattinen rinnakkaisterssimotiivi 417—419



27. Jousten 1. pizzicatomotiivi 417



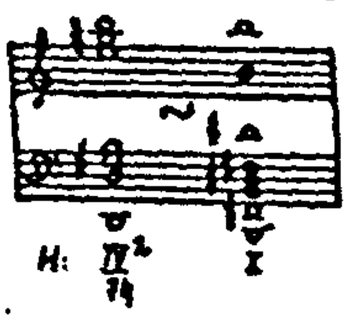
28. Jousten 2. pizzicato-, kokoäänimotiivi 431—436



29. Jousten kromaattinen tremolomotiivi 513—516



30. Harmoninen lopukemotiivi 615—624.



A.13.2cont

Fig.A.13.2 cont. The thirty germ motives in *Tapiola* (20-30)

1. 1, 7, 26—27, 59—68, 208, 211, 212, 216, 219, 220, 224, 225, 228—229, 232, 234, 397, 403, 407, 588
2. 1—3, 7—9, 26—27, 30—32, 34—36, 37—40, 41—43, 45—48, 49—51, 53—55, 57—59, 61—63, 65—67, 69—72, 73—75, 77—80, 81—83, 85—87, 90—91, 94—95, 293—295, 299—301, 304—307, 368—370, 603—611
3. 1—5, 3—6, 7—13, 11—16, 14—20, 17—20, 21—25, 32—34, 37—42, 45—50, 43—50, 55—56, 63—64, 139—154, 182—197, 200—207, 208—210, 210—213, 213—218, 218—222, 281—289, 290—292, 293—295, 296—301, 302—307, 308—312, 333—352, 353—358, 494—513, 568—584, 593—614
4. 3—6, 471—475, 584—587
5. 9—17
6. 21—22, 23, 24—25
7. 42, 50, 57, 63, 104—182, 209—210, 213—215, 217—218, 230—231, 248, 250, 252, 254, 256, 278—280, 474—489, 490—514
8. 43—44, 51—54, 58—62, 64—106, 233—240, 242, 244, 246, 250—273, 317—325, 363—366, 373—375, 376—396, 397—416, 417—431, 437—470, 607—614
9. 59—62, 65—76, 77—107, 258—273
10. 106—115, 122—130, 223—224, 225—226, 227—231, 243, 245, 247—249, 251, 253, 255—259, 262—265, 272—282, 328—332, 363—365, 373—375, 390—396, 465—474, 478—486
11. 115—120, 130—133, 260—262, 265—273, 290—292, 296—298, 302—303, 308—312, 347—355, 359—367, 371—375, 397—417, 475—477, 487—489, 490—493, 552—554, 558—560, 564—568, 577—582, 583—585
12. 134—136, 137—140, 140—146, 494—496, 500—506
13. 137—139, 497—499, 586—587
14. 106—115, 122—130, 134—136, 137—139, 140—142, 494—506
15. 145—148, 149—152, 153—160, 505—508, 509—512
16. 157—181
17. 182—207
18. 208—258, 260, 262, 264, 266, 268
19. 246—247, 252—253, 254—255, 594—597, 598—599, 610—611
20. 274—284, 313—327, 333—346, 376—391, 588—602
21. 284—289
22. 356—358, 420, 424—425, 430, 440, 444—445, 569—574, 577—582
23. 365—369, 370—389, 417—425
24. 369—370, 374—375, 379—380, 384—385, 400—401, 410—411
25. 397, 402, 407, 412
26. 417—461
27. 417—430
28. (427—461), 431—461
29. 513—578
30. 614—634

A.13.3

Fig.A.13.3 The integration, variation and repetition of the thirty motives.

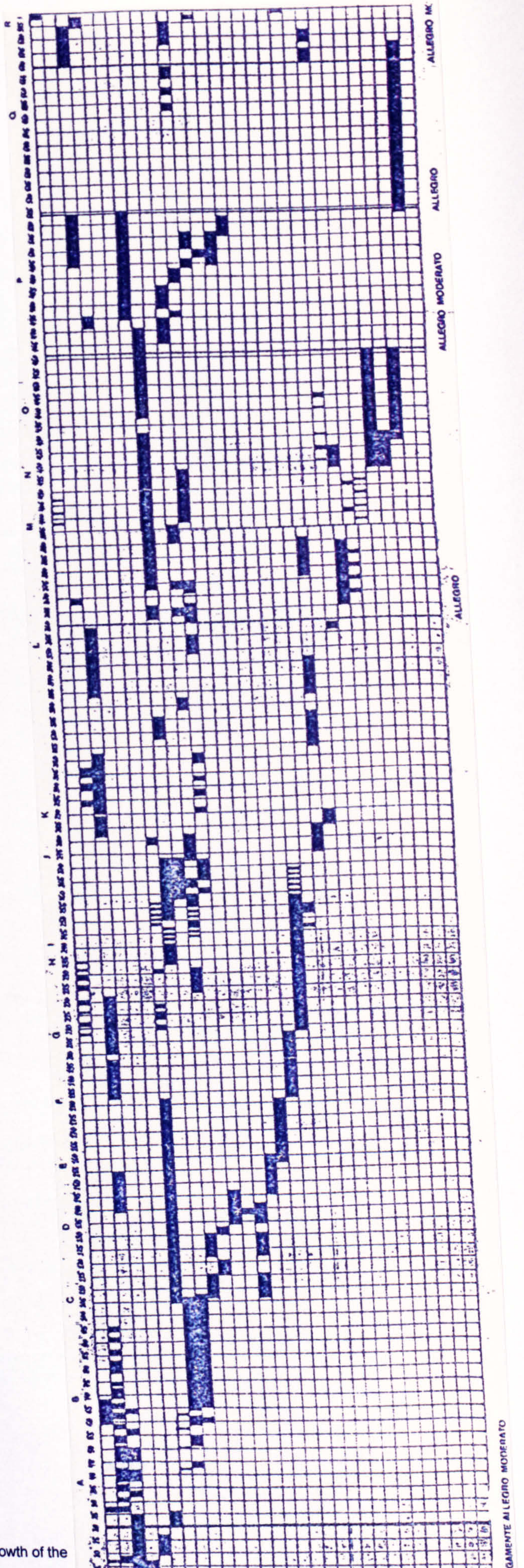
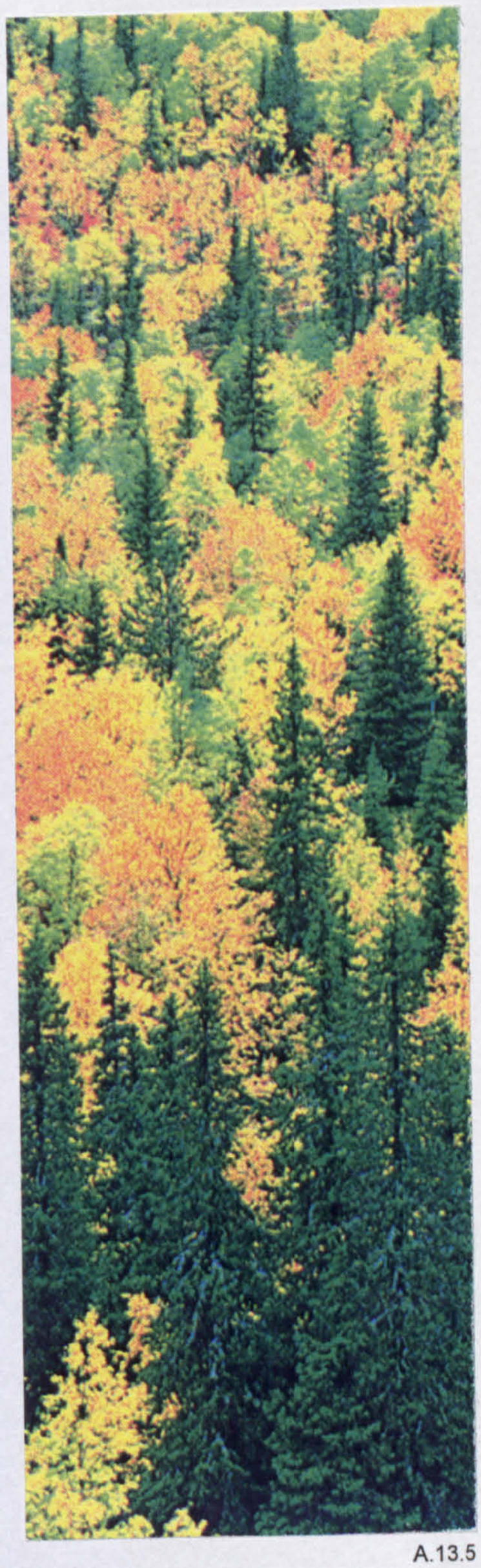


Fig.A.13.4 The graphic representation of the growth of the thirty motives into the whole piece.



A.13.5

Fig.A.13.5 Forest in autumn



A.14.1

Fig.A.14.1 *Sallow in Autumn*; Pekka Halonen, 1907

Appendix Fourteen

LIST OF INTERVIEWS AND CORRESPONDENCES

Aalto, Elissa, *Correspondence with the author*, (1988-1994). Aalto's second wife and architectural partner.

Alponen, Pirkkoliisa. *Interview and correspondance with the author* (1993). Alponen is a social scientist and philosopher at Joensuu University, Karelia.

Bergman, Eric. *Interview with the author*, (24 November, 1993, Helsinki). Bergman is a composer.

Blomstedt, Anssi. *Interview with the author*, (9 September, 1988, Helsinki). Musician and Director of the Finnish Film Institute. (Architect Aulis Blomstedt, father of the Blomstedt brothers, was married to Sibelius' daughter).

Blomstedt, Juhana. *Interview with the author*, (18 November & 2 December, 1993, Helsinki). Blomstedt is Professor of Painting in Helsinki.

Blomstedt, Peterri. *Interview with the author*, (26 November, 1993, Helsinki). Blomstedt is an architect.

Blomstedt, Severi. *Interview with the author*, (10 July, 1988, Helsinki), Architect and past director of the Finnish Museum of Architecture.

Broms, H. *Interview with the author,* (26 October, 1993, Helsinki). Broms is a writer and Professor of Aemiotics at Helsinki University.

Buchwald, Eva, *Interview with the author* (November 1993). Buchwald is researcher at t National Theatre, Helsinki.

Carpelan, Bo. *Interview with the author*, (29 November, 1993, Helsinki). Carpelan is a poet and novelist, author of Axel, the story of Sibelius' friend, Axel Carpelan, a great great uncle of Bo Carpelan.

Dalstöm, Fabian. *Interviews with the author* (September 1993). Dalström heads the Sibelius Archive in Turku and has compiled a definative bibliography on Sibelius scholarship.

Griffiths, Gareth. *Conversations with the author* (between 1993-7). Griffiths has completed extensive research into Aalto's Enzo Gutzeit Building, Helsinki. Tampere University.

Grey, Laura. C*onversations with the author,* (September 1993 & December 1995). Grey is a Sibelius scholar at Yale University, USA.

Grotenfelt, Georg. *Interview with the author*, (14 November, 1993, Helsinki). Grotenfelt is an architect and writer.

Gullichsen, Kristian. *Correspondence with the author* (1988). Gullichsen is an architect and Professor; son of Mairea Gullichsen for whom Villa Mairea was designed.

Hanson, Joachim. *Interviews* (various during summer 1988 and 1995). Writer and Aalto archivist.

Hanson, Ola. *Interview with the author*, (17 July & 14 September 1988). Late architect, Professor, and writer.

Hautamäki, Irmeli. *Interview with the author* (December 1993). Philosopher at Helsinki University.

Häyrynen, Maunu. *Interview and correspondence with the author* (1993). Häyrynen researches in the Network for Landscape studies in the Helsinki University of Technology, Otaniemi.

Hilpinen, Risto. *Interview and correspondence with the author.* (October 1993). Hilpinen is Professor of Philosophy at the University of Turku.

Kaitavuori, Kaija. *Interview with the author* (November 1993). Kaitavuori is an art historian and writer, based in Helsinki.

Kambe, Satoro. *Conversations with the author,* (September-December 1993, December 1995). Kambe is a Sibelius scholar at Helsinki University.

Kent, Neil. *Conversations with the author* (Autumn of 1993). Kent is an art scholar in Helsinki and Cambridge, England.

Kirpelainen, Kari, *Interviews with the author,* (30 September, 1995, London; 25, 27 November 1995, Helsinki). Kirpelainen is a Doctor of Music, based at the University of Helsinki. As a musicologist and archivist he has free access to the Sibelius manuscripts and archive.

Kokkonen, Joonas. *Interview with the author,* (1 September 1988, Järvenpää) Kokkonen is Professor of Music and composer (based in Järvenpää in a house designed by Aalto).

Kurkela, K. *Interview with the author,* (7 October, 1993, Helsinki) Kurkela teaches at the Sibelius Academy, and researches in psychology and music.

Layton, Robert. *Interviews with the author,* (5 February, 1989, BBC. London; 24 August, 1990, Helsinki; 30 September, 1995, London). Broadcastor and Sibelius scholar; writer of several books on Sibelius (e.g., 1970 & 1978).

Leiman, Kirsi, *Conversation with the author* (between September -December 1993). Leiman is an architect and scholar.

Leikola, Anto. *Interview and correspondance with the author*, (7 October, 1993, Helsinki). Leikola is Professor of History and writer; based at University of Helsinki.

Leikola, Matti. *Interview with the author*, (30 November, 1993, Helsinki). Leikola is Professor of Forestry and writer.

Leiviska, Juha. *Interview with the author*, (6 September 1988, Helsinki). Architect, Helsinki.

Linkola, Martti. Conversation and correspondance with the author (October 1993). Linkola is a scholar researching the cultural landscape of Finland.

Mirka, Danuta. *Conversations and correspondence with the author* (from September 1993-). Mirka is a musicologist working in both Helsinki, Finland, and Katowice, Poland.

Mirkling, Mikko. *Interviews with the author*, (during autumn 1993). Architect, Aalto's assistant.

Mitchell, Donald. *Interview with the author* (3 March 1989, London). Mitchell is a broadcaster, writer, author of *The Language of Modern Music* (1963).

Murtomäki, Veijo. *Interviews and correspondence with the author* (4 November, 1993, Helsinki; November 1995, Helsinki). Murtomäki is Professor of Music at the Sibelius Academy, writer and Sibelius scholar.

Niskanen, Aino. *Conversations with the author* (autumn 1993). Niskanen is an architectural historian based at Helsinki University of Technology (Otaniemi).

Pallasmaa, Juhani. *Interviews with the author*, (during summer 1988, 1990, 1993, 1995 Helsinki). Pallasmaa is Professor of Architecture, architect, and writer.

Pietarinen, Juhani. *Interview with the author,* (11 November, 1993. Turku). Pietarinen is Professor of Philosophy and writer; based at the University of Turku.

Reitala, Aimo. *Interview with the author,* (27 September 1993, Helsinki). Reitala is Professor of Art and writer at the University of Turku. Dept of Art Hist. SF-20500 Turku, Finland.

Reunala, Aarne. *Interview with the author,* (14 October, 1993, Helsinki). Reunala is Professor of Forestry and writer; Finnish Forest Research Institute, Dept of Forest Economics, PL37, SF-00381 Helsinki, Finland.

Salmenhaara, Erkki. *Interview with the author,* (14 September, 1992, London). Salmenhaara is Professor of Musicologist, Sibelius scholar, and writer; based at the Sibelius Academy.

Schildt, Göran. *Interview the author*, (1 July, 1988, Ekenäs). Schildt is author of 3 volume Aalto biography (GS1, GS2, GS3). (Schildt lives in a house designed by Aalto).

Sepänmaa, Yrjö. *Interview with the author*, (5 August, 1995, Lahti). Sepänmaa researches in environmental aesthetics, at the Aesthetics and Comparative Literature department, University of Joensuu, Finland.

Servant, Isabelle. Conversation and Correspondence with the author (from September 1993-). Servant is a musicologist, teaching in Aix en Provence, France.

Simonsuuri, Kirsti. *Interview with the author* (November 1993). Simonsuuri is a literature scholar; based at the Universities of Helsinki and Oxford.

Spackman, Betty. Conversations with the author (from 1991-). Spackman is an artist based in both Toronto, Canada and Linz, Austria.

Storr, Anthony. *Interview with the author*, (3 August, 1995, Lahti). Storr is a Psychiatrist and writer, author of many books, including *The Dynamics of Creation,* and *Music and the Mind.* He is associated with Green College, Oxford.

Suhonen, Pekka. *Interview the author*, (13 July, 1988, Helsinki). Suhonen is a scholar and writer.

Szto, John. Conversation with the author, (October, 1990). Szto teaches architecture at Rhode Island School of Design, USA.

Tarasti, Eero. *Interview the author*, (during summer 1988, 1990, 1993, 1995. Helsinki). Tarasti is Professor of Musicology in Helsinki, a leading Semiotician, author and Sibelius scholar.

Tawaststjerna, Eric. *Interview the author*, (9 September, 1988, Helsinki). The late Professor Tawaststjerna was based at the University of Helsinki. As writer (author of 5 volume biography of Sibelius (translated as T1,T2,T3), he was the world's leading authority on Sibelius.

von Schultz, Solveig, *Interview the author*, (17 November, 1993, Helsinki). von Schultz is a poet and writer.

Wallgren, Henrik. *Interviews and correspondance with the author* (autumn 1993). Wallgren is a Professor of biology ay the University of Helsinki.

Wessman, Harri. *Interview the author*, (1 September, 1988, Helsinki). Wessman is a Composer.

Weston, Richard. Conversation with the author (from 1988-). Weston teaches architecture in Cardiff and has written on Aalto.

Wickberg, Nils Eric. *Conversation with author,* (16 September, 1988, Helsinki). Wickberg was an architect, writer, composer and friend of Aalto's.



A.14.2

Fig.A.14.2 Marsh scene in winter, Otaniemi



A.15.1

Fig.A.15.1 Islands of the Turku archipelago

Appendix Fifteen

ORGANISATIONS AND CONFERENCES

LIST OF ORGANISATIONS APPROACHED IN THE COURSE OF THE RESEARCH; CONFERENCES ATTENDED; CONFERENCES AT WHICH PAPERS WERE GIVEN

Alvar Aalto Foundation, Helsinki, Finland

Alvar Aalto Museum, Jyväskylä, Finland

Ateneum Archive and Library, Helsinki, Finland

Canadian Centre for Architecture, Montreal, Canada

Finnish Literature Society, Folklore Archive

Finnish Museum of Architecture, Helsinki, Finland.

Finnish Music Information Centre, Helsinki, Finland

Helsinki University of Technology, Otaniemi, Espoo, Finland

Lusto Forest Museum and Research Centre, Punkaharju, Finland

M.I.T. Department of Architecture, Cambridge, MA. USA

National Theatre, Helsinki, Finland

Revall Institute of Historical Research, Helsinki, Finland

RIBA, London, England

Sibelius Academy, Helsinki, Finland

Sibelius Museum, Turku, Finland

Sibelius Museum, Hämeenlinna, Finland

University of Industrial Arts, Helsinki, Finland

University of Joensuu, Joensuu, Finland
Department of Social Policy and Philosophy

University of Turku, Turku, Finland
Department of Philosophy
Department of Art

University of Helsinki, Helsinki, Finland
Department of Art
Department of History,
Department of Music
Department of Geography
Department of Forestry
Department of Biology

Conferences Attended

Alvar Aalto Symposium, Jyväskylä, Finland, August 1988

Heroes in Architecture. Do we Need Them? SAFA Conference, Helsinki, July 1988

First International Jean Sibelius Conference, University of Helsinki, August 1990

Music and Nationalism in Twentieth Century Finland and Great Britain, Finnish Institute, London. December 1992

Music and Semiotics Symposium, University of Helsinki, September 1993 (Paper given; *Aalto, Sibelius and the New Sound and Space*; published as *Spatial Soundings*, Menin (1996)

Nation Building and Periphery in the North, University of Helsinki, December 1993

XIIIth International Congress of Aesthetics; Aesthetics in Practice, Lahti, Finland. August 1995 (Paper given; *Aalto, Sibelius and the Growth of Form*)

Sibelius Conference, Wigmore Hall, London (part of Sibelius Weekend Festival) September 1995.

Second International Jean Sibelius Conference, University of Helsinki. December 1995 (Paper given; *Soap Bubbles Hovering in the Air; Or Why Jean might drink spring water with Alvar not cocktails with Eliel* ; at press under same title, Menin (1997))



Fig.A.15.2 Sunset in Karelia



A.15.3

Fig,.A.15.3 *Wilderness*; Pekka Halonen, 1899

BIBLIOGRAPHY:

PUBLISHED WORKS

GS1= Schildt (1984)
GS2= Schildt (1986a)
GS3= Schildt (1991)
T1= Tawaststjerna (1976)
T2= Tawaststjerna (1986)
T3= Tawaststjerna (at press)

Aalto, A. (1922): Motifs from the Past, *Arkkitehti*, reprinted in Schildt, G. (1985:1)

Aalto, A. (1926): From Doorstep to Living Room, *Aitta*, reprinted in (GS1:214-8)

Aalto, A. (1927): Finnish Independence Monument, *Uusi Suomi*, 25 November, 1917.

Aalto, A. (1928): Interview with *Uusi Aura*, 1 January, 1928

Aalto, A. (1930a): Stockholm Exhibition I. *Åbo Underrättelser*, 22 May 1930, reprinted.in Schildt, G.(1985:15)

Aalto, A. (1930b): Stockholm Exhibition II. *Arkkitehti*, reprinted.in Schildt, G.(1985:18)

Aalto, A. (1930c): Housing Construction in Existing Cities, *Bruggmästen*, reprinted in Schildt, G.(1985:3)

Aalto, A. (1930d): The Dwelling as a Problem, *Domus*, reprinted in Schildt, G.(1985:29)

Aalto, A. (1931): Letter from Finland, *Bauwelt*, 25:1931, reprinted in Schildt, G.(1985:34)

Aalto, A. (1932a): The Geography of the Housing Question, *Arkitektur och samhälle*, reprinted in Schildt, G.(1985:44)

Aalto, A. (1932b): Article, in *Architecture and Society*, (Stockholm:Specktrum)

Aalto, A. (1935): Rationalism and Man, *Swedish Crafts Association,* reprinted in Schildt, G.(1985:47)

Aalto, A. (1936): Interview with *Dagens Nyheter*, 28 October, 1936

Aalto, A. (1937): Helhet och Kvalitet, in *Hufvudstadsbladet*, 24 March, 1937,

Aalto, A. (1938): The Influence of Construction and Materials on Modern Architecture. Lecture at the Nordic Building Conference in Oslo, 1938. Reprinted in Schildt, (1985:60).

Aalto, A. (1939): World's Fair: The New York World's Fair and the Golden Gate Exposition, *Arkkitehti*, reprinted in Schildt, G. (1985:64)

Aalto, A. (1940a): E.G.Asplund in Memoriam, *Arkkitehti*, reprinted in Schildt, G.(1985:66)

Aalto, A. (1940b): The Humanizing of Architecture, *Technology Review,* MIT (Nov. 1940:14-16), reprinted in Schildt, G.(1985:76)

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List of Illustration

Unless otherwise stated illustrations are taken by the author in Finland

Fig 0.1 Depths of the forest (Kohonen, 1993:24)

Fig.0.2 Sketch of the Temple of Apollo; Aalto, 1953 (Alvar Aalto Archive; Schildt, 1985a:14)

Fig.0.3 Koli mountain, Karelia

Fig.0.4 Fan-shaped chair legs; Aalto, 1954

Fig.0.5 River at Kuusamo (Kohonen, 1993:12)

Fig.0.6 Sibelius at home in Ainola (Kallio, 1994:127)

Fig.1.0 *The Red Trees*; Erland Cullberg, 1982

Fig.1.1 Sketch of alterations to *Baker House Dormitoery*, M.I.T; (M.I.T.Archive)

Fig.1.2 Plan of *Seinäjoki Library*; Aalto, 1963-65 (Alvar Aalto Archive)

Fig.1.3 Birch forest, Kitee, Karelia

Fig.1.4 Detail of *Finnish Pavilion,* New York World Fair; Aalto, 1939 (Finnish Fair Corporation; McKeith, 1993:47)

Fig.1.5 Painting; Aalto, 1948 (Alvar Aalto Archive)

Fig.1.6 Edge of Helvetinjärvi Lake (Hautala, 1995:60)

Fig.1.7 Wood Experiment; Aalto, 1930-1947 (Museum of Finnish Architecture)

Fig.1.8 River in Winter (Hautala, 1995:156)

Fig.1.9 Birch and hair moss (Hautula, 1995:21)

Fig.1.10 Sketch of trees and ruins, Olympia; Aalto, 1953 (Alvar Aalto Archive)

Fig.1.11 Model of *Vuoksenniska Church*; Aalto, 1955-9

Fig.1.12 Sibelius; circa 1940 (Sandberg, 1940:48)

Fig.1.13 Aalto in New York; circa 1939 (Mairea Gullichsen; Schildt, 1986:177)

Fig.1.14 Design sketch of *Vuoksenniska Church*; Aalto, 1955 (Alvar Aalto Archive)

Fig.2.1 *Boy and Crow* ; Gallen-Kallela, 1884 (Ateneum)

Fig.2.2 Detail from *Old Woman with a Cat*; Gallen-Kallela, 1885 (Turku Art Museum)

Fig.2.3 Woman from Eastern Karelia drying fat and tar soap, circa 1920; Anhti Rytkönen (Seurasaari-tuote)

Fig.2.4 Detail from *Larin Paraske*; Albert Edelfelt, 1893 (Hämeenlinna Art Museum/Viipuri Foundation)

Fig.2.5 *Finnish Hop Garden*; Werner Holmberg, 1860 (Ateneum, Helsinki)

Fig.2.6 Sunset in Kitee, Karelia

Fig.2.7 *Finnish Pavilion*, New York World Fair; Aalto, 1939 (Museum of Finnish Architecture, Helsinki)

Fig.2.8 Woman marking tree, circa 1920 (Finnish Board of Antiquities and Historical Monuments)

Fig.2.9 View of lake and forest; (Studio Matti A.Pitkänen, Helsinki)

Fig.2.10 *Stockmann Academic Bookshop*, Helsinki; Aalto, 1962-69

Fig.2.11 Rocks at Pietasaari, Ostrobothnia

Fig.2.12 Boats at Tammisaari

Fig.2.13 Olaus Magnus *Carta Marina*, 1539 (Rikkinen, 1992:12)

Fig.2.14 Child in farm, Karelia, circa 1894; I.K.Inha (Museovirasto; Lieksa, Karelia)

Fig.2 15 Detail from *Wage Slaves*; Eero Järnefelt, 1893 (Ateneum)

Fig.2.16 Detail of fence, Seurasaari Folk Museum, Helsinki

Fig.2.17 Skata, Jacobstad (Pietarsaari), Ostrobothnia

Fig.2.18 Medieval church, Hauho, near Hämeenlinna

Fig.2.19 National Romantic building; Corner of Luotsikatu and Katajanokakatu, Helsinki ; circa 1890

Fig.2.20 Wooden church on Seili, c.1733. Turku Archipelago

Fig.2.21 Orthodox burial ritual of a woman, Karelia (Laitinen, 1994:16)

Fig.2.22 Sketch of *Paganism and Christianity* for Paris World Fair building; Akseli Gallen-Kallela, 1900 (Private Collection)

Fig.2.23 Young women sitting by a window, Karelia. circa 1894; I.K.Inha (National Board of Antiquities and Historical Monuments)

Fig.2.24 *Thunderstorm Approaching, View from the Viipuri Region*; Fanny Churberg, 1877 (Private Collection)

Fig.2.25 Columns in the forest, Seurasaari, Helsinki

Fig.2.26 Karelian Woman ; I.K.Inha, 1894 (National Board of Antiquities and National Monuments)

Fig.2.27 *Kullervo Tearing his Swaddling Clothes*; C.E.Sjöstrand, 1858 (Ateneum)

Fig.2.28 *Maamme* (Our Land) from Runeberg's The Song's of the Ensign Stål; Illustration by Albert Edelfelt, (Molarius, 1993:109)

Fig.2.29 *Lake Landscape*; Eero Järnefelt, 1890 (The Didrichsen Museum, Helsinki)

Fig.2.30 Neo-classical Helsinki (1841). Drawn by J.A.Ehrenström; most building designed by C.L.Engel. (Museum of Finnish Architecture)

Fig.2.31 Senate Square; C.L.Engel, circa.1820-1840 (Otava Publishing)

Fig.2.32 *Väinämöinen Stringing his Kantele*; J.Z.Blackstadius , 1851 (Kalevala Society, Helsinki)

Fig.2.33 *Väinämöinen Playing his Kantele*; R.W.Ekman, 1866 (Klinge, 1992a:133)

Fig.2.34 Etching of peasant Finn or Ingrian Constructing St.Petersburg. (Klinge, 1993:66)

Fig.2.35 *Lutheran Cathedral*, Helsinki; C.L.Engel, 1816-40

Fig.2.36 Karelian Manor House in Ala-Urpala; C.L.Engel, 1815 (Wickberg, 1959:59)

Fig.2.37 House in Skata, Jacobstad (Pietarsaari)

Fig.2.38 Detail of *Lutheran Cathedral*, Helsinki; C.L.Engel, 1816-40

Fig.2.39 *Washing on the Ice*; Pekka Halonen, 1900 (Antell Collection) (Levanto, 1991:97)

Fig.2.40 *University Building*, Senate Square, Helsinki; C.L.Engel, 1832

Fig.2.41 Four Seasons at Saikkalanjoki, Mouhijärvi (Reijo Wallin; Neuvonen, et al, 1989:292-3)

Fig.2.42 Still from film of Kivi's *Seven Brothers*; Wilho Ilmari, 1939 (Finnish Film Archive, The Finnish Broadcasting Company)

Fig.2.43 Detail from *The Little Convalescent*; Helen Schjerfbeck, 1888 (Ateneum, Helsinki)

Fig.2.44 *Seinajöki Church*; Aalto, 1952-58

Fig.2.45 View of sea through trees, Hauho

Fig.2.46 Buttress detail, Katajanokka, Helsinki

Fig.2.47 Buttress detail, Katajanokka, Helsinki

Fig.2.48 Buttress detail, Katajanokka, Helsinki

Fig.3.1 Detail of timber joint, Seurasaari, Helsinki

Fig.3.2 Sibelius with Eero Järnefelt and I.K.Inha in Karelia; circa.1898 (Vuorenmaa et al., 1981:32)

Fig.3.3 View from Koli mountain, Karelia

Fig.3.4 Detail from *Larin Paraske*; Albert Edelfelt, 1893 (Hämeenlinna Art Museum/Viipuri Foundation)

Fig.3.5 Gallen-Kallela's house at Ruovesi , 1894 (Museum of Finnish Architecture)

Fig.3.6 Frost on reed in Kitee, Karelia

Fig.3.7 Detail of farmstead in folk museum, Lieksa, Karelia

Fig.3.8 Drawing of *Finnish Pavilion*, New York World Fair; Aalto, 1939 (Museum of Finnish Architecture)

Fig.3.9 Sauna, *Villa Mairea*, Noormarkku; Aalto, 1937-9

Fig.3.10 Gate, Niemelä Farm, Seurasaari, Helsinki

Fig.3.11 One room log hut (kota), Seurasaari, Helsinki

Fig.3.12 Store house (aitta), Seurasaari, Helsinki

Fig.3.13 Kota in Niemelä Farm, Seurasaari, Helsinki

Fig.3.14 All-purpose living space (tupa) (Ruovesi local history museum; Nikula, 1993:16)

Fig.3.15 Vuokatti Hills; I.K.Inha, circa 1900 (Museum of Finnish Architecture)

Fig.3.16 Layout of Niemelä Farm, moved from Konginkangas to Seurasaari (Wickberg, 1959: 53)

Fig.3.17 Aitta at Niemelä Farm, Seurasaari, Helsinki (Wickberg, 1959:54)

Fig.3.18 Fencing at Niemelä Farm, Seurasaari, Helsinki

Fig.3.19 Engraving of Farm at Kittisvaara, Tornio River valley (circa.1730) from M.*Outhier's Journal d'un Voyage au Nord en 1732-1737.* (Wickberg, 1959:17)
Fig.3.20 Layout of typical Ostrobothnian farm/ settlement Perttulan Puhto, Lohtaja; (Wickberg, 1959:52)
Fig.3.21 Plan of Karelian house from Moiseinvaara, Suojärvi, Eastern Karelia. (Wickberg, 1959:56)
Fig.3.22 Hanging poles in tupa. Ruovesi Local History Museum (Nikula, 1993:16)
Fig.3.23 Large store building, Seurasaari, Helsinki
Fig.3.24 Auditorium, *Viipuri Library*; Aalto, 1933-5 (Finnish Museum of Architecture)
Fig.3.25 Sketch of *Villa Mairea*, Noormarkku; Aalto, 1936-9 (Alvar Aalto Archive)
Fig.3.26 Vuokatti Hills; I.K.Inha, circa 1900 (Museum of Finnish Architecture)
Fig.3.27 Entrance canopy, *Villa Mairea*, Noormarkku; Aalto, 1936-9
Fig.3.28 External living room blinds, *Villa Mairea*, Noormarkku; Aalto, 1936-9
Fig.3.29 Entrance hall, *Villa Mairea*, Noormarkku; Aalto, 1936-9
Fig.3.30 Plan of *Villa Mairea*, Noormarkku; Aalto, 1936-9 (Alvar Aalto Archive)
Fig.3.31 *Hvitträsk* interior; Gesellius, Lindgren and Saarinen, 1901 (Pallasmaa, 1987a:52)
Fig.3.32 Detail from *Karelian Women*; Albert Edelfelt, 1887 (Turku Art Museum)
Fig.3.33 First appearance in print of rune poetry; circa 1795 (Bosely, 1989:xxii)
Fig.3.34 Väinö Salminen recording runes from Karelian incantation virtuoso, Matjoi Plattonen, 1911 (The Folklore Archive/ The Finnish Literature Society (Molarius, 1993:119)
Fig.3.35 Folk poem written down by J.Acerbi, 1802 (Laitinen, 1994:8)
Fig.3.36 Ilvana Sirgo playing the kantele ; Inha, circa 1894 (National Board of Antiquities and Historical Monuments; Kirkinen, et al 1985:30)
Fig.3.37 Rune singers Petri Shemeikka and Iivana Shemeikka; Inha, circa 1894 (National Board of Antiquities and Historical Monuments; Kirkinen, et al 1985:30)
Fig.3.38 Blind rune singer Mihkali Perttunen; I.K.Inha, 1894 (National Board of Antiquities and Historical Monuments)
Fig.3.39 Rune fragment recorded from Larin Paraske; circa 1893
Fig.3.40 *Kreeta Haapasalo Playing the Kantele in a Peasant Cottage*; R.W.Ekman, 1868 (Ateneum)
Fig.4.1 *Savoy Vase*; Aalto, 1935 (Museum of Finnish Architecture)
Fig.4.2 *Finnish Pavilion*, Paris World Fair, 1900; Gesellius, Lindgren and Saarinen, 1900 (National Board of Antiquities and Historic Monuments)
Fig.4.3 Olavinlinna castle, Savolinna; circa 1470-1700
Fig.4.4 Figures adorning *Helsinki Railway Station*; Gesellius, Lindgren and Saarinen, 1906-16
Fig.4.5 Detail of timber jointing in aitta, Seurasaari, Helsinki
Fig.4.6 Detail of carved bear and small spire on roof of *Finnish Pavilion*, Paris World Fair, 1900; Gesellius, Lindgren and Saarinen, 1900 (National Board of Antiquities and Historic Monuments)
Fig.4.7 View of *Hvitträsk*; Gesellius, Lindgren and Saarinen, 1901-4
Fig.4.8 Table set in living room at *Hvitträsk* & seating plan (Private collection; Pallasmaa, 1987a:58)
Fig.4.9 Gustav Mahler during visit to *Hvitträsk* ; Akseli Gallen-Kallela, 1907 (The Gösta Serlachius Fine Arts Foundation, Helistö, 1995:19)
Fig.4.10 Interior of medieval church at Rymättylä; circa 1500 (Wickberg, 1959:31)
Fig.4.11 Interior of *Hvitträsk*; drawn by Saarinen, 1902 (Museum of Finnish Archtecture)
Fig.4.12 Initial *Helsinki Railway Station* Competition entry; Gesellius, Lindgren and Saarinen, 1904 (Museum of Finnish Architecture)
Fig.4.13 *Helsinki Railway Station* competition entry; Sigurd Frosterus, 1904 (Museum of Finnish Architecture)
Fig.4.14 Final *Helsinki Railway Station*; Gesellius, Lindgren and Saarinen, 1906-16 (Museum of Finnish Architecture)
Fig.4.15 Competition design for *Finnish Parliament*; Saarinen, 1907 (Museum of Finnish Architecture)
Fig.4.16 Detail of *Pohjola Insurance Company Building*; Gesellius, Lindgren and Saarinen, 1901 (Museum of Finnish Architecture)
Fig.4.17 Birch tree in Karelia

Fig.4.18 Entrance of *Pohjoismaiden Osakepankki*, Helsinki; Gesellius, Lindgren and Saarinen, 1904 (demolished 1934) (Museum of Finnish Archiecture, Wickberg, 1959:93)

Fig.4.19 Chancel of *Seinäjoki Church*; Aalto, 1952-60

Fig.4.20 Leaf shadow of birch tree, Karelia

Fig.4.21 Stone bear, *Hvitträsk* (Pallasmaa, 1987a:114)

Fig.4.22 Saarinen with Aalto, Cranbrook, USA, 1939 (Alvar Aalto Archive)

Fig.4.23 Aalto, as Chairman of the Finnish Association of Architects (SAFA), presenting silver plaque to Sigurd Frosterus; circa 1955 (Alvar Aalto Archive, Schildt, 1989:87)

Fig.4.24 Gustav Strengell (Museum of Finnish Architecture)

Fig.4.25 View of undulating auditorium ceiling, *Viipuri Library*; Aalto, 1927-35 (Museum of Finnish Architecture)

Fig.4.26 Detail from *Pohjola Insurance Company Building*; Gesellius, Lindgren and Saarinen, 1901

Fig.4.27 Sloping wall of *Finnish Pavilion*, New York World Fair, New York; Aalto, 1939 (Museum of Finnish Architecture)

Fig.4.28 View of lake Hvitträsk

Fig.4.29 Sunset, Jacobstad (Pietasaari), Ostrobothnia

Fig.4.30 Aalto in Seinäjoki (Saari, 1976)

Fig.4.31 Plan of Niemelä Farm, Seurasaari, Helsinki (Wickberg, 1959:53)

Fig.4.32 Plan of the 'Modern Niemelä ', *Aalto's Own House*, Munkkkiniemi; Aalto, 1934-36 (Alvar Aalto Archive)

Fig.4.33 Aalto at home (Museum of Modern Architecture)

Fig.4.34 Sibelius and Busoni in London (Jalas, 1952:55)

Fig.4.35 Aalto at Le Corbusier's *Villa Stein-de-Monzie* (Alvar Aalto Archive)

Fig.4.36 Le Corbusier's *Modulor* (1942-8) (Foundation Le Corbusier, Paris)

Fig.4.37 Opening of a letter from Le Corbusier to Aalto; December 1950

Fig.4.38 Balcony of the *Ozenfant Studio*, Paris; Le Corbusier, 1924 (Foundation Le Corbusier, Paris; Raeburn, 1987:50)

Fig.4.39 Door handle of *Säynätsalo Town Hall* ; Aalto , 1950-52

Fig.4.40 Design for skyscraper, *Plan Obus*, Algiers; Le Corbusier, 1938 (Foundation Le Corbusier, Paris; Raeburn, 1987:82)

Fig.4.41 Sketch juxtaposing *Neue Vahr Apartments*, Bremen, with the more common rectilinear solution; Aalto, circa. 1958 (Alvar Aalto Archive)

Fig.4.42 Birch branch

Fig.4.43 Model of *Neue Vahr Apartments*, Bremen; Aalto, 1958-62

Fig.4.44 Rock pool, Ostrobothnian coast near Jacobstad (Pietarsaari)

Fig.4.45 Sketch of Agrigento; Aalto, 1952 (Alvar Aalto Archive)

Fig.4.46 *Muramme Church*; Aalto, 1926-9 (Alvar Aalto Archive)

Fig.4.47 Sketch of ruined capitals, Olympia; Aalto, 1953 (Alvar Aalto Archive)

Fig.4.48 *Maison Carré*, France; Aalto, 1956-9 (Museum of Finnish Architecture)

Fig.4.49 View towards the *Enzo-Gutzeit Building*, Helsinki; Aalto, 1959-62 (Fleig, 1963:265)

Fig.4.50 Photo of *Parthenon* columns, Athens; Aalto, 1933 (Alvar Aalto Archive)

Fig.4.51 *Autumn View of Koli*; Eero Järnefelt, 1910 (Lahti Art Museum)

Fig.4.52 *Workers Club*, Jyväskylä; Aalto, 1923-5 (Alvar Aalto Archive)

Fig.4.53 Pillars of the *Enzo-Gutzeit Building*, Helsinki; Aalto, 1959-62 (Fleig, 1971:213)

Fig.4.54 *Turun Sanomat Building*, Turku; Aalto , 1927-9 (Alvar Aalto Archive)

Fig.4.55 Entrance to *Viipuri Library*; Aalto, 1927-35 (Museum of Finnish Architecture)

Fig.4.56 Stairs in the *Finnish Theatre*, Turku; Aalto, 1927-29 (Museum of Finnish Architecture)

Fig.4.57 Early frieze design of a classical motif for the stage curtain, *Finnish Theatre*, later discarded, Turku; Aalto, 1927-9 (Alvar Aalto Archive)

Fig 4.58 *Woodland Cemetry*, Stockholm; Gunnar Asplund, 1918-20 (AJ, 5 August 1987)

Fig.4.59 *Burial Chapel*, Turku; Eric Bryggman, 1941

Fig.4.60 Early design for *Viipuri Library*; Aalto, 1927

Fig.4.61 *Viipuri Library*; Aalto, 1927-35

Fig.4.62 *Stockholm City Library*; Gunnar Asplund, 1924-8 (AJ, 9 September 1987)

Fig.4.63 West elevation, *Viipuri Library*; Aalto, 1927-1935 (Museum fo Finnish Architecture)

Fig.4.64 Balcony detail, *Paimio Sanatorium*; Aalto, 1928-33 (Museum of Finnish Architecture, Hoesli, 1980:70)

Fig.4.65 Section through competition entry for *Tehtanpuisto Church*; Aalro, 1930 (Alvar Aalto Foundation; Spens, 1994:35)

Fig.4.66 *Kauttua Housing*; Aalto, 1937-40 (Simo Rista; Helander, 1994:126)

Fig.4.67 Auditorium, *Viipuri Library*; Aalto, 1927-35 (Alvar Aalto Foundation)

Fig.4.68 Undulating auditorium ceiling, *Viipuri Library*; Aalto, 1927-35 (Alvar Aalto Foundation)

Fig.4.69 *Spring-Winter Sun*; Eero Järnefelt, 1893 (Turku Art Museum)

Fig.4.70 Undulating design sketch for *Baker House Dormitory*, M.I.T.; Aalto, 1946 (Alvar Aalto Foundation)

Fig.4.71 Clerestorey windows, *Vuoksenniska Church*, Imatra; Aalto, 1956-59

Fig.4.72 Rear of *Aalto's Own House*, Munkkiniemi; Aalto, 1934-36 (Museum of Finnish Architecture)

Fig.4.73 Stepped elevation of *Sunila Pulp Factory*; Aalto, 1935-9 (Heikki Havas; Hoesli, 1980:113)

Fig.4.74 Plan of *Workers Housing*, Sunila; Aalto, 1935-9 (Alvar Aalto Archive)

Fig.4.75 Plan of *Tsit tsit Pom* entry for Finnish Pavilion competition, Paris World Fair; Aalto 1936 (Alvar Aalto Archive)

Fig.4.76 Plan of winning *Le Bois est en Marche* entry for Finnish Pavilion competition, Paris World Fair; Aalto 1936-7 (Alvar Aalto Archive; Schildt, 1986:133)

Fig.4.77 Final plan of *Villa Mairea*, Noormakku; Aalto, 1939 (Alvar Aalto Archive)

Fig.4.78 *Harvard Graduate School*, (inc. Harkness Dormitory); Walter Gropius, 1949-50 (Fred Stone; Hitchcock, 1954:31)

Fig.4.79 Front facade of *Baker House Dormitiry*, M.I.T.; Aalto, 1946-9

Fig.4.80 Water-struck brick from Baker House

Fig.4.81 View of M.I.T campus showing the classical Roger's Building on the far right and Baker House on the far left

Fig.4.82 Part of *Tapiola*; Sibelius, 1925 (Breitkopf & Härtel)

Fig.4.83 Stairs in the *Architecture Faculty* of the *Helsinki Technical University*, Otaniemi; Aalto, 1955-64

Fig.4.84 East facade of *Finlandia Hall*, Helsinki; Aalto, 1962-71 (Museum of Finnish Architecture)

Fig.5.1 Detail of *Frost*; Hugo Simberg, 1895 (Museum of Ostrobothnia)

Fig.5.2 Portrait of Sibelius; Akseli Gallem-Kallela, 1894 (Ainola; Home of Sibelius)

Fig.5.3 Portrait of Aalto; circa 1930 (Museum of Finnish Architecture; photo Iffland 1930)

Fig.5.4 Rocks, Ostrobothnia

Fig.5.5 *Mother*; Elin Danielson-Gambogi, 1893 (Ateneum)

Fig.5.6 *Girl Singing the Bread-bark Hymn*; Akseli Gallen-Kallela, 1890 (Private Collection)

Fig.5.7 Detail from *Boy and Skulll*; Hugo Simberg, 1893 (Ateneum)

Fig.5.8 Sibelius as a child; circa 1877 (Sibelius Museum Archive, Turku)

Fig.5.9 Aalto with his siblings; circa 1903 (Alvar Aalto Archive; Schildt, 1984:36)

Fig.5.10 Sketch of J.H.Aalto; Aalto, 1913 (Alvar Aalto Archive; Schildt, 1984:45)

Fig.5.11 *The Wounded Angel*; Hugo Simberg, 1903 (National Gallery of Finland and Fresco in Tampere Cathedral)

Fig.5.12 Aalto Children; circa 1912 (Alvar Aalto Archive; Schildt, 1984:52)

Fig.5.13 *My Father's Death;* Juho Rissanen, 1902 (Museum of Ostrobothnia)

Fig.5.14 Sibelius Children; circa 1877 (Sibelius Museum Archive)

Fig.5.15 Sibelius' parenta; circa 1863 (Sibelius Museum Archive)

Fig.5.16 Sibelius' mother; circa 1867 (Sibelius Museum Archive)

Fig.5.17 Sibelius' Uncle Pehr (Sibelius Museum Archive)

Fig.5.18 The trio of the Sibelius Siblings (Sibelius Museum Archive)

Fig.5.19 Aalto in acting clothes; circa 1907 (Alvar Aalto Archive; Schildt, 1984:70)

Fig.5.20 Common darter dragonfly (David Feige)

Fig.5.21 Trunk and leaves in sun

Fig.5.22 Sea worn Rocks

Fig.5.23 Nude in Aalto's sketchbook; circa 1930's (Alvar Aalto Archive)

Fig.5.24 Portrait of unknown woman; circa 1930's (Alvar Aalto Archive)
Fig.5.25 Sibelius at home (Sibelius Museum Archive)
Fig.5.26 Aalto in Stockholm, 1929 (Alvar Aalto Archive; Schildt,1986:52)
Fig.5.27 Aalto (right) with Wallace K.Harrison; circa 1940's (Alvar Aalto Archive)
Fig.5.28 Sibelius (third from right) with colleagues, Copenhagen, 1919 (Sibelius Museum Archive)
Fig.5.29 Aalto in his boat, Nemo Propheta in Patria (Alvar Aalto Archive; Schildt, 1989:277)
Fig.5.30 Aino Järnefelt, 1890 (Sibelius Museum Archive)
Fig.5.31 Aino Marsio; circa 1925 (Schildt, 1986:132)
Fig.5.32 Jean and Aino Sibelius at home in Ainola (Sibelius Museum Archive)
Fig.5.33 Baron Axel Carpelan (Sibelius Museum Archive)
Fig.5.34 Sibelius with daughters, Margareta and Heidi, 1912 (Sibelius Museum Archive)
Fig.5.35 Aalto with his daughter Mossi (Hanna-Maija) at Alajävi (Alvar Aalto Archive)
Fig.5.36 Alvar and Elissa Aalto in the studio; circa 1960 (Havas, Schildt, 1989:143)
Fig.5.37 Aino Sibelius; circa 1904 (Sibelius Museum Archive)
Fig.5.38 Sketch of Aino Aalto a short time before dying, inscribed with a familiar form of 'mother'; Aalto, 1949 (Alvar Aalto Archive)
Fig.5.39 Professor Aalto and graduate Elissa Mäkiniemi, at Muuratsalo, shortly after their marriage in 1952 (Schildt, 1989:153)
Fig.5.40 Elissa and Alvar Aalto in his last years; circa 1974 (Woolfit; Schilst, 1989:322)
Fig 5.41 Portrait of *Aino Sibelius*; Eero Järnefelt, 1908 (Ainola: Home of Sibelius)
Fig.5.42 *Lemminkäinen's Mother*; Akseli Gallen-Kallela, 1897 (Ateneum)
Fig.5.43 Child in midnight sun, Lieksa, Karelia
Fig.6.1 Birch growing through rock, Joensuu, Karelia
Fig.6.2 Sibelius working on his birthday, December 8, 1915 (Sibelius Museum Archive)
Fig.6.3 Aalto at the drawing board; circa 1937 (Quantrill, 1983:viii)
Fig.6.4 Forest near Vaasa
Fig.6.5 Sibelius at Ainola, 1904 (Sibelius Museum Archive, Jalas, 1952:38)
Fig.6.6 Portrait sculpture of Aalto; Alexander Calder, Paris 1937 (Schildt, 1986:135)
Fig.6.7 Sketch for *Fourth Symphony*; Sibelius, 1910 (Sibelius Museum Archive; T2:fig.24)
Fig.6.8 Design sheet showing Elissa Aalto's profile and Kuopio Theatre; Aalto, 1951 (Alvar Aalto Archive)
Fig.6.9 Sketch for the setting of Poe's *The Raven*; Sibelius, 1910 (Sibelius Museum Archive; T2.fig.23)
Fig.6.10 Painting; Aalto, 1946-7 (Hoesli, 1980:71)
Fig.6.11 *Sibelius*; Väino Aaltonen; circa 1940 (Levas, 1972)
Fig.6.12 *Finnish Pavilion*, New York World Fair; Aalto, 1939 (Museum of Finnish Architecture)
Fig.6.13 Sibelius as a student, 1888 (Sibelius Museum Archive; Jalas, 1952:19)
Fig.6.14 Sibelius composing; circa 1940 (Sandberg, 1940:14)
Fig.6.15 Aalto relaxing (Schildt, 1989:171)
Fig.6.16 Painting; Aalto, 1949 (Hoesli, 1980:133)
Fig.6.17 Designs for *Vuoksenniska Church*, Imatra, 1955-58 (Alvar Aalto Archive)
Fig.6.18 Dynamic Life Cycle diagram (Lake, Constricted Confusion: Na.2)
Fig.6.19 Frozen lake, Kitee, Karelia
Fig.7.0 Detail of *Scene from Otalampi*; Aimo Kanerva, 1951 (Private Collection)
Fig.7.1 Light through trees (Studio Matti Pitkänen)
Fig.7.2 Man fishing on ice, Helsinki
Fig.7.3 Window of cottage, Seurasaari
Fig.7.4 Birch bark peeled for utility articles; Eastern Finland, circa 1920 (National Board of Antiquities and Historic Monuments)
Fig.7.5 Detail from *Herd-Boy at Paanajärvi*; Akseli Gallen-Kallela, 1892 (Private Collection)
Fig.7.6 Swidden Cultivation; I.K.Inha, 1894 (National Nboard of Antiquities and Historic Monuments)

Fig.7.7 *Forest Pool by Moonlight*; Hjalmar Munsterhjelm, 1883 (Turku Art Museum)
Fig.7.8 Wood pile in urban farm, Jacobstad (Pietasaari)
Fig.7.9 Tower of smaller house, *Hvitträsk*; Gesellius, Lindgren and Saarinen, 1901-4
Fig.7.10 Detail of roof, Seurasaari
Fig.7.11 Forest in Häme district
Fig.7.12 Sauna building, *Villa Mairea*; Aalto, 1936-9
Fig.7.13 Fan connection for chair leg; Aalto, circa 1954
Fig.7.14 Detail of birch close to aitta (
Fig.7.15 Detail of wall, *Seinäjoki Town Hall*; Aalto, 1961-5 (Seinäjoki Town Hall Publications)
Fig.7.16 Pond; Olavi Lanu, 1980 (Lintinen, 1978:104)
Fig.7.17 Summer Cottage, Hauho
Fig.7.18 Forest
Fig.7.19 *Lemminkäinen's Mother*; R.W. Ekman, 1862 (Cygnaeus Gallery)
Fig.7.20 Detail of *Mail Road*; Werner Holmberg, 1860 (Ateneum)
Fig.7.21 Man in nature (Pitkänen, 1975:no.432)
Fig.7.22 Sibelius' home, Ainola
Fig.7.23 Etching depicting slash and burn (swidden) cultivation (Klinge, 1993:29)
Fig.7.24 Nattaset, gateway to the Tundra (Aimo Holtari, Neuvonen, 1989:179)
Fig.7.25 Detail of wooden door handle
Fig.7.26 Sacred birch growing by house (Aimo Holtari, Neuvonen, 1989:268)
Fig.7.27 Sunset, Kitee, Karelia
Fig.7.28 Detail from *Spring*; Akseli Gallen-Kallela, 1903 (Sigrid Jusélius Foundation)
Fig.7.29 Detail from *In Somewhat Bad Humour*; Fredrik Ahlstedt, 1889 (Cygnaeus Gallery)
Fig.7.30 Multi-purpose living space, tupa (Wickberg, 1959:55)
Fig.7.31 Isolated hut, aitta in Riisitunturi (Aimo Holtaris, Neuvonen, 1989:121)
Fig.7.32 Detail from *Spring*; Akseli Gallen-Kallela, 1903 (Sigrid Jusélius Foundation)
Fig.7.33 Skata, Jacobstad (Pietarsaari)
Fig.7.34 Detail of fence, *Aalto's Office*; Aalto, 1953-6
Fig.7.35 *Inspiration*; Akseli Gallen-Kallela, 1896 (Helsinki City Art Museum)
Fig.7.36 Smoke cottage, savutupa (Wickberg, 1959:47)
Fig.7.37 Plan of *Baker House Dormitory*; Aalto, 1946-9 (M.I.T.Archives)
Fig.7.8 View of lake through trees at sunset, Otaniemi
Fig.8.1 Mist in trees (Kohonen, 1993:27)
Fig.8.2 2pm Sunset on Christmas Day, Kitee, Karelia
Fig.8.3 Detail from *The Forest*; Fanny Churberg, 1876 (The Hedman Collection, Pohjanmaa Museum, Vaasa)
Fig.8 4 Death Flowers; Akseli Gallen-Kallela, 1895 (Ateneum)
Fig.8.5 *Leena as a Baby*; Eero Järnefelt (Private Collection)
Fig.8.6 Karelian sunset over frozen lake
Fig.8.7 View from Koli Mountain, Karelia; I.K.Inha, 1893 (National Board of Antiquities and Historical Monuments)
Fig.8.8 Prints on frozen lake, Karelia
Fig.8.9 *Waterfall at Mäntykoski*; Akseli Gallen-Kallela, 1892-4 (Jorma Gallen-Kallela Family Collection)
Fig.8.10 Storm damaged tree
Fig.8.11 Sunset, Lieksa, Karelia
Fig.8.12 *Lynx Den*; Akseli Gallen-Kallela, circa 1906 (Private Collection)
Fig.8.13 View from Hvitträsk
Fig.8.14 Forest stream (Aimo Holtari, Neuvonen, 1989:12)
Fig.8.15 Swans flying out of the forest (Hannu Hautala, Neuvonen, 1989:118)
Fig.8.16 *House of Culture*, Helsinki; Aalto, 1955-8 (Fleig, 1963:190)
Fig.8.17 *Finnish Pavilion*, Paris World Fair; Aalto, 1937 (Museum of Finnish Architecture)

Fig.8.18 Light through trees

Fig.8.19 Mist rising over forest (Tommi Pitkänen; Matti Pitkänen Studio)

Fig.8.20 *Broken Pine*; Akseli Gallen-Kallela, 1904-6 (Private Collection)

Fig.8.21 Journey over a frozen lake, Karelia

Fig.8.22 Birch forest, Karelia

Fig.8.23 Detail of white timber screen, *Experimental House*, Muuratsalo; Aalto, 1953

Fig.8.24 Light through trees Karelia

Fig.8.25 Clerestory window, *Vuoksenniska Church*, Imatra; Aalto, 1956-9

Fig.8.26 Sunset, Otaniemi

Fig.9.1 Undulating wall of lecture theatre, Architecture Faculty, *Helsinki University of Technology*, Otaniemi

Fig.9.2 From *View of Pyhävuori*; Aalto, 1914 (Schildt, 1984:151)

Fig.9.3 Etching of Hämeenlinna; circa 1867 (C.Jansson; Jalas, 1952:16)

Fig 9.4 Kuortane; circa 1900 (Schildt, 1984:23)

Fig.9.5 Lovisa; circa 1890 (Jalas, 1952:20)

Fig.9.6 Map of Finland showing the positions of Jyväskyla, Hämeenlinna and Lovisa (Häikio, 1992)

Fig.9.7 Light animating the forest, Koli, Karelia

Fig.9.8 Sunset reflecting on waves

Fig.9.9 Inhabited island in the Baltic

Fig 9.10 Finnish coastline

Fig.9.11 From *Aunt Helmi's House*, Lovisa; Aalto, 1917 (Alvar Aalto Archive; Schildt, 1984:60)

Fig.9.12 Sääksmäki landscape of Sibelius' childhood haunts; circa 1870 (Jalas, 1952:16)

Fig.9.13 Boletus toadstool

Fig 9.14 Red squirrel

Fig.9.15 Brimstone on Spear thistle (David Feige)

Fig.9.16 Aalto, on return from a forestry expedition, 1914 (Alvar Alto Archive; Schildt, 1984:59)

Fig.9.17 Bilberry

Fig.9.18 Ringlet butterfly (David Feige)

Fig.9.19 White-tailed eagle (Hannu Hautala; Neuvonen, 1989:180)

Fig.9.20 Depths of the forest (Kohonen, 1993:75)

Fig.9.21 Detail from *Frosty Mist*; Aalto, 1916 (Alvar Aalto Archive; Schildt, 1984:105)

Fig.9.22 Baltic coast at Helsinki

Fig.9.23 The grounds of Ainola, Sibelius' home

Fig.9.24 Sibelius on a daily walk (Jalas, 1952:62)

Fig.9.25 Sunset over a lake

Fig.9.26 Red-necked phalarope in reed (Matti Pitkänen Studio)

Fig.9.27 Forest in autumn (Tommi Pitkänen; Matti Pitkänen Studio)

Fig.9.28 View from Koli mountain

Fig.9.29 Jean and Aino Sibelius in the grounds of Ainola (Jalas, 1952:72)

Fig.9.30 Knarled pine tree, Gallen-Kallela Museum grounds, Helsinki

Fig.9.31 Staircase, *Villa Mairea*; Aalto 1936-9

Fig.9.32 Roof truss, *Säynätsalo Town Hall*; Aalto, 1949-52

Fig.9.33 Willows in snow

Fig.9.34 Tsit Tsit Pom entry to the Compeition for the *Finnish Pavilion*, Paris World Fair; Aalto, 1936 (Alvar Aalto Archive)

Fig.9.35 Undulating balcony of the *Tsit Tsit Pom* entry; Aalto, 1936 (Alvar Aalto Archive)

Fig.9.36 Multi-purpose living space, tupa (Wickberg, 1959:47)

Fig 9.37 Plan of *Farnsworth House*, Mies van der Rohe, 1946-50 (Gössel, 1991:226)

Fig.9.38 Section through *Tsit Tsit Pom* entry; Aalto, 1936 (Alvar Aalto Archive)

Fig.9.39 Elevation of *Tsit Tsit Pom* entry; Aalto, 1936 (Alvar Aalto Archive)

Fig.9.40 Winning plan of *Le Bois est en Marche* entry fo the compeition for the Finnish Pavilion, Paris World Fair; Aalto, 1936-7 (Alvar Aalto Archive)
Fig.9.41 Entrance to *Le Bois est en Marche*; Aalto, 1936-7 (Museum of Finnish Architecture)
Fig.9.42 Steps and balcony, *Le Bois est en Marche*; Aalto, 1936-7 (Museum of Finnish Architecture)
Fig.9.43 Clerestory windows, *Le Bois est en Marche*; Aalto, 1936-7 (Fleig, 1963:79)
Fig.9.44 Clerestory windows, Vuoksenniska Church, Imatra; Aalto, 1956-9
Fig.9.45 Central glazed court, *Le Bois est en Marche*; Aalto, 1936-7 (Alvar Aalto Archive)
Fig.9.46 Sketch for bent wood chairs displayed in the exhibition; Aalto, circa 1933 (Alvar Aalto Archive)
Fig.9.47 Open court with birch tree posts, *Le Bois est en Marche*; Aalto, 1936-7 (McKeith, 1992:134)
Fig.9.48 Detail of hinges in fencing, Lieksa Folk Museum, Karelia
Fig.9.49 Detail of pole strapping, *Le Bois est en Marche*; Aalto, 1936-7 (Fleig, 1963:78)
Fig.9.50 *Nazi Pavilion*, Paris World Fair; Albert Speer, 1937 (Curtis, W. 1983:216)
Fig.9.51 *Finnish Pavilion*, Paris World Fair; Gesellius, Lindgren and Saarinen, 1900 (Museum of Finnish Architecture; Karvonen-Kannas, 1992:28)
Fig.9.52 Wood Experiments; Aalto, circa 1930-40
Fig.9.53 Aalto building fire at his summer house (Muuratsalo Experimental House) (Schildt, 1989:275)
Fig.9.54 Pine forest in Pyhä-Häkki (Hautala, 1995:107)
Fig.9.55 Enclosure in farmstead, Lieksa Folk Museum, Karelia
Fig.9.56 Pile of wood
Fig.9.57 Store house, *Seurasaari Folk Museum*, Helsinki
Fig.9.58 Ceiling of *Maison Carré*; Aalto, 1956-9 (Fleig, 1963:244)
Fig.9.59 Roof overhang, *Villa Kokkonen*; Aalto, 1966-9
Fig.9.60 *Finnish Pavilion*, New York World fair; Aalto, 1939 (Museum of Finnish Architecture)
Fig.9.61 Sketch for wooden relief, *International Institute for Education* , New York; Aalto, 1961-5 (Alvar Aalto Archive)
Fig.9.62 Entrance canopy, *Villa Mairea*; Aalto, 1936-9
Fig.9.63 Logs being moved by water (LKA, R.Pelkonen; Neuvonen, 1989:298)
Fig.9.64 Model of *Neur Vahr Apartment Block*, Bremen; Aalto, 1958-62
Fig.9.65 Farmstead at Korpilahti (Wickberg, 1959:46)
Fig.9.66 Etching of slash and burn agriculture (Klinge, 1993:29)
Fig.9.67 Sunset on porch at Sibelius' home, Ainola
Fig.9.68 Swans at sea (Hautala, 1995:11)
Fig.9.69 Foyer of *Seinäjoki Town Hall*; Aalto, 1961-65
Fig.9.70 Birch in winter
Fig.9.71 Undulating ceiling, *Viipuri Library*; Aalto, 1927-35 (Museum of Finnish Architecture)
Fig.9.72 Forest (Kohonen, 1993:75)
Fig.10.0 View of the *House of Culture*, Helsinki; Aalto, 1955-8 (Alvar Aalto Achives)
Fig.10.1 *Autumnal Birches*; Akseli Gallen-Kallela, 1900 (Turku Art Museum)
Fig.10.2 Detail of colonnade, *Muurame Church*; Aalto, 1927 (Alvar Aalto Museum)
Fig.10.3 Ice cracking, Helsinki
Fig.10.4 Forest stream (Juha Luhta; Neuvonen, 1989:161)
Fig.10.5 Bow striking string
Fig.10.6 Wood Experiment; Aalto, 1940-47
Fig.10.7 *Rapids*; Victor Westerholm, 1902 (Turku Art Museum)
Fig.10.8 Chancel of *Vuoksenniska Church*, Imatra; Aalto, 1956-9
Fig.10.9 Detail of top lighting above chancel, *Vuoksenniska Church*; Aalto, 1956-9
Fig.10.10 Third part of building in use as congregation room, *Vuoksenniska Church*; Aalto, 1956-9
Fig.10.11 Exterior of the three volumes of *Vuoksenniska Church*; Aalto, 1956-9
Fig.10.12 Low entrance canopy, *Vuoksenniska Church*; Aalto, 1956-9 (Weston, 1995:205)
Fig.10.13 Stained glass window opposite entrance, *Vuoksenniska Church*; Aalto 1956-9

Fig.10.14 Sketch of interior sculpture for *Essen Opera House*; Aalto, 1959-61 (completed 1991) (Alvar Aalto Archive)

Fig.10.15 Enclosure of *Experimental House* , Muuratsalo (Aalto's summer cottage); Aalto, 1953 (Weston, 1995:116)

Fig.10.16 Plan of *Schönbühl Apartments*, Lucerne; Aalto, 1965-8 (Alvar Aalto Archive)

Fig.10.17 Design sketch of clerestory lighting, *Vuoksenniska Church;* Aalto, 1956-9 (Alvar Aalto Archive)

Fig.10.18 *Harvard Graduate Centre*, Cambridge, MA; Walter Gropius (TAC), 1949-50 (Sharp, 1991:182)

Fig.10.19 Model of *Baker House* Dormitory, M.I.T., Cambridge, MA; Aalto, 1946-9 (M.I.T. Archives)

Fig.10.20 Plan of *Gut Garkau Farm* cow shed, Lübeck; Hugo Häring, 1924-5 (Gössel, 1991:128)

Fig.10.21 Exterior of *Gut Garkau Farm* cow shed; Hugo Häring, 1924-5 (Gössel, 1991:128)

Fig.10.22 Sketch of Le Corbusier; Aalto, 1933 (Alvar Aalto Archive; Schildt, 1996:96)

Fig.10.23 Plan of the *House of Culture*, Helsinki; Aalto, 1955-8 (Alvar Aalto Archive)

Fig.10.24 View of *House of Culture*, Helsinki; Aalto, 1955-8 (Fleig, 1963:190)

Fig.10.25 Plan of *Avery Coonly House*, Riverside, IL; Frank Lloyd Wright, 1907-8 (Gössel, 1991:74)

Fig.10.26 View of *Falling Water*, Bear Run, Penn; Frank Lloyd Wright, 1935-9 (Gössel, 1991:118)

Fig.10.27 Persperctive of *Robie House*, Chicago, IL; Frank Lloyd Wirght, 1906-9 (Gössel, 1991:74)

Fig.10.28 Columns in the *Johnson Wax Factory*, Administrative building, WI; Frank Lloyd Wright, 1936-9 (Gössel, 1991:144)

Fig.10.29 Columns in storage shed, *Turun Sanomat*, Turku; Aalto , 1927-9 (Fleig, 1963:26)

Fig.10.30 Columns in entrance bay, *Turun Sanomat*, Turku; Aalto, 1927-9 (Fleig, 1963:26)

Fig.10.31 Late sketch designs for *Villa Mairea* , drawn on seeing pictures of Wright's Falling Water (fig.10.26); Aalto, 1938 (Alvar Aalto Archive)

Fig.10.32 View of the *Guggenheim Museum*, New York; Frank Lloyd Wright, 1943-6, 1956-9

Fig.10.33 Plan of TKY2 d ormitories of *Helsinki University of Technology*, Otaniemi; Aalto, 1962-6 (Alvar Aalto Archive)

Fig.10.34 Interior ramp of *Guggenheim Museum* , New York; Frank Lloyd Wright, 1943-6 1956-9

Fig.10.35 View of the *Price Tower*, Okla; Frank Lloyd Wright, 1953-6 (Gössel, 1991:165)

Fig.10.36 Plan of *Price Tower*, Okla; Frank Lloyd Wright, 1953-6 (Gössel, 1991:164)

Fig.10.37 Ceiling detail of auditoria in *Wolfsburg Cultural Centre*; Aalto, 1958-62 (Hoesli, 1980:68)

Fig.10.38 Undulating mass of TKY2 dormitories, *Helsinki University of Technology*, Otaniemi; Aalto, 1962-6

Fig.10.39 Aerial view of *Seinäjoki Library*; Aalto, 1963-5 (Dunster, 1984:50)

Fig.10.40 Sketches for the *Fourth Symphony*; Sibelius, 1910 (Sibelius Museum Archive)

Fig.10.41 Detail of *Moonlit Landscape*; Hugo Simberg, circa 1890 (Helsinki City Art Museum)

Fig.10.42 Aalto in old age; circa 1974 (A.Woolfit; Schildt, 1984·14)

Fig.10.43 Painting; Aalto, 1946-7 (Hoesli, 1980: 71)

Fig.11.1 View from Koli mountain

Fig.11.2 Sketch of foundations and runied columns, Olympia; Aalto 1953

Fig.11.3 Rock pool

Fig.11.4 Aalto vase, circa 1935

Fig.11.5 Oak sapling spreading towards the light

Fig.11.6 Sketch design for end of the *Baker House* building, spreading towards the light like a branch; Aalto, 1947

Fig.11.7 Striated rock

Fig.11.8 Oak leaves

Fig.11.9 Aalto vases, circa 1935 (Museum of Finnish Architecture)

Fig.12.1 Sibelius Monument; Eila Hiltunen, 1961-7

Fig.12.2 Rowan

Fig.12.2 cont. Rowan and pine

Fig.12.3 *Sphagnum* moss

Fig.12.4 Plan and sketch of wing of *Baker House Dormitory*, M.I.T; Aalto, 1946-9 (Alvar Aalto Archive)

Fig.12.5 Progress of augmented fourth in *Fourth Symphony*; Sibelius, 1911 (Collins, 1962:242)

Fig.12.6 Tiny fragments in *Lemminkäinen's Return*; Sibelius, 1900 (Ringbom, 1954:49)

Fig.12.7 Tritone and fourth motifs in the *Fourth Symphony*; Sibelius, 1911 (Parmet, 1959:49)

Fig.12.8 Kernal motif in the *Sixth Symphony*; Sibelius, 1923 (Parmet, 1959:94)

Fig.12.9 Three stepwise fragments, *Tapiola*; Sibelius, 1925 (Pike, 1978:114)

Fig.12.10 Leitmotives in the *Third Symphony*; Sibelius, 1904-7 (Ilmari Krohn, Murtomäki, 1993b:102)

Fig.12.11 Alder Buckthorn

Fig.12.12 Spruce banches

Fig.12.13 Plan of *Baker House Dormitory*; Aalto, 1946-9 (Alvar Aalto Archive)

Fig.12.14 Sketch plan of *Neue Vahr Apartments*, Bremen; Aalto, 1958-62 (Alvar Aalto Archive)

Fig.12.15 Stack of 'Y' leg bent-wood chairs; Aalto, 1946 (Alvar Aalto Museum)

Fig.12.16 Plan of *Rovaniemi Library*; Aalto, 1963-8 (Alvar Aalto Archive)

Fig.12.17 Plan of *Seinäjoki Library*; Aalto, 1963-5 (Alvar Aalto Archive)

Fig.12.18 Lady Fern

Fig.12.19 Plan of *Wolfsburg Cultural Centre*; Aalto, 1958-62 (Alvar Aalto Archive)

Fig.12.20 Section through *Seinäjoki Library*; Aalto, 1963-5 (Alvar Aalto Archive)

Fig.12.21 Part plan of *Baker House* study-bedrooms; Aalto, 1946-9 (Alvar Aalto Archive)

Fig.12.22 Plan of *Helsinki University of Technology Dormitories,* Otaniemi; Aalto, 1962-6 (Alvar Aalto Archive)

Fig.12.23 Pine branch growing towards sun

Fig.12.24 The 'little sister of the column'; Stackable *Bent-wood Stools*; Aalto, 1933 (Museum of Finnish Architecture)

Fig.12.25 Fungus growing on Alder

Fig.12.26 *Wood Experiment*; Aalto, circa 1930

Fig.12.27 *Wood Experiment*; Aalto, circa 1930

Fig.12.28 Section through undulating ceiling, *Viipuri Library*; Aalto 1927-35 (Alvar Aalto Archive)

Fig.12.29 *Savoy Vase*; Aalto, 1936 (Museum of Finnish Architecture)

Fig.12.30 Chimney breast, *Villa Mairea*; Aalto, 1936-9

Fig.12.31 View of first floor studio, *Villa Mairea*; Aalto, 1936-9

Fig.12.32 Axonometric of the *Finnish Pavilion*, New York World Fair; Aalto, 1939 (Laura Mark; McKeith, 1992:149)

Fig.12.33 Ceiling of *House of Culture*; Aalto, 1955-58 (Museum of Finnish Architecture)

Fig.12.34 Sketch section through *Helsinki University of Technology* lecture theatres; Aalto, 1955-64 (Alvar Aalto Archive)

Fig.12.35 Section through *Riola Church*; Aalto, 1966-7 (designed) (Alvar Aalto Archive)

Fig.12.36 Plan and section of *Vuoksenniska Church*, Imatra; Aalto, 1956-9 (Alvar Aalto Archive)

Fig.12.37 Section through chancel and top lighting, Vuoksenniska Church, drawn as a 'little sister of the column'; Aalto, 1957 (Alvar Aalto Archive)

Fig.12.38 View of *Seinäjoki Library* clerestory lighting; Aalto, 1963-5

Fig.12.39 Interior of *Seinäjoki Library* showing book shelves and clerestory lighting; Aalto, 1963-5

Fig.12.40 Facade of *Workers' Housing*, Sunila; Aalto, 1935-9

Fig.12.41 Plan of *Workers' Housing*, Sunila; Aalto, 1935-9 (Alvar Aalto Archive)

Fig.12.42 Terraced housing at *Kauttua*; Aalto, 1937-40 (Weston, 1995:77)

Fig.12.43 Plan of *Schönbühl Apartments*, Lucerne; Aalto, 1965-8 (Alvar Aalto Archive)

Fig.12.44 Model of *Neue Vahr Apartments*, Bremen; Aalto,1958-62

Fig.12.45 Plan of *Gammelbacka Housing Development*, Porvoo; Aalto, 1966 (designed) (Alvar Aalto Archive)

Fig.12.46 Bracken gowth

Fig.12.47 Clerestory lighting, *Helsinki University of Technology Library*, Otaniemi; Aalto, 1964-9

Fig.12.48 Plan of *Mount Angel Library*, Michigan; Aalto, 1965-70 (Alvar Aalto Archive)

Fig.12.49 Section through *Jyväskulä Pedigogical University* auditorium; Aalto, 1950-6 (Alvar Aalto Archive)

Fig.12.50 Plan of *Helsinki University of Technology* lecture theatres; Aalto, 1955-64 (Alvar Aalto Archive)

Fig.12.51 Interior of *Alvar Aalto Museum*, Jyväskulä; Aalto, 1971-73

Fig.12.52 Plan of *Museum of Central Finland*; Aalto, 1959-62 (Alvar Aalto Archive)

Fig.12.53 Sketch plan of *Museum of Fine Art,* Chiraz; Aalto, 1970 (designed) (Alvar Aalto Archive)

Fig.12.54 *Wood Experiment*; Aalto, circa 1940

Fig.12.55 Sketch plan of *Vuoksenniska Church*, Imatra; Aalto, 1956-9 (Alvar Aalto Archive)

Fig.12.56 Interior of *Students Administration Headquarters*, Uppsala; Aalto, 1961-5 (Museum of Finnish Architecture)
Fig.12.57 Sketch design for *Finlandia Hall*, Helsinki; Aalto, 1962-71 (Alvar Aalto Archive)
Fig.12.58 Experiments with building forms for *Baker House Dormitory*; Aalto, 1946 (Alvar Aalto Archive; Schildt, 1989:122)
Fig.12.59 Undulating plan superimposed upon 'H' plan from *Baker House*; Aalto, 1947 (Alvar Aalto Archive)
Fig.12.60 'Elephant' room divider, *Baker House*; Aalto, 1948
Fig.12.61 Artek book shelves, *Baker House*; Aalto, 1948
Fig.12.62 Plan of rectilinear study-bedroom, *Baker House*; Aalto, 1946-9 (Alvar Aalto Archive)
Fig.12.63 Plan of wedge-shaped study-bedroom, *Baker House*; Aalto, 1946-9 (Alvar Aalto Archive)
Fig.12.64 End of *Baker House* with staggered windows to absorb light; Aalto, 1946-9
Fig.12.65 Final plan of splayed end of *Baker House*; Aalto, 1947 (Alvar Aalto Archive)
Fig.12.66 View of cantilevered stair
Fig.12.67 Sketch of branch and end of dormitory accommodating more rooms; Aalto, November 1947 (M.I.T Archive)
Fig.12.68 'Avowedly slight' motivic idea behind *Tapiola*; Sibelius, 1925 (Goss, 1995:68)
Fig.12.69 Sibelius Monument, Helsinki; Eila Hiltunen, 1961-7
Fig.12.70 Hepakoski's illustration of teleological processes in Sibelius' work (unpublished)
Fig.12.71 Sphagnum moss
Fig.12.72 Sketch of *Neue Vahr Apartments* and rectilinear block; Aalto, circa 1958 (Alvar Aalto Archive)
Fig.13.1 Ice and reflected trees, Helsinki
Fig.13.2 Birch leaf growing from trunk
Fig.13.3 Sketch plan for *Neue Vahr Apartments*, Bremen; Aalto, 1958-62 (Alvar Aalto Archive)
Fig.13.4 Wood sculpture, *Institute of International Education*, New York; Aalto, 1963-5 (Museum of Finnish Architecture)
Fig.13.5 Surveying the forest; circa 1920 (National Board of Antiquities and Historic Monuments)
Fig.13.6 Willow woodland
Fig.13.7 Sketch for interior of *Vuoksenniska Church*, Imatra; Aalto, 1956-9 (Alvar Aalto Archive)
Fig.13.8 Male fern
Fig.13.9 Design sheet; Aalto, circa 1956 (Alvar Aalto Archive)
Fig.13.10 The 'X' leg; Aalto, 1954 (Alvar Aalto Museum)
Fig.13.11 The bow and the string
Fig.13.12 Intermingling of holly, honeysuckle and willow
Fig.13.13 Wood experiment
Fig.13.14 Bow striking the string
Fig.13.15 Pedal and Wave at *Seinäjoki Library*; Aalto, 1963-5
Fig.13.16 Motivic 'germs' above Pedal in *Tapiola*; Sibelius, 1925 (Wiesbaden; Breitkopf & Härtel)
Fig.13.17 Pedal and Wave in *Baker House* plan; Aalto, 1946-9
Fig.13.18 Pedal and Wave in *House of Culture* plan; Aalto, 1955-8
Fig.13.19 Pedal and Wave in *Neue Vahr* plan; Aalto, 1958-62
Fig.13.20 Pedal and Wave in *Viipuri Library* auditorium section; Aalto, 1927-35
Fig.13.21 Anchoring Pedal of covered canopy , *House of Culture*; Aalto, 1955-8
Fig.13.22 Plan and section showing 3D integration of*Vuoksenniska Church*; Aalto, 1956-9 (Alvar Aalto Archive)
Fig.13.23 Final plan of*Vuoksenniska Church* showing Wave elements rooted in stright, Pedal elements; Aalto, 1956-9 (Alvar Aalto Archive)
Fig.13.24 Design sketches of *Vuoksenniska Church* showing growth of spatial elements from a rooting Pedal; Aalto, circa 1956 (Alvar Aalto Archive)
Fig.13.25 Stasis in relation to activity in *Seventh Symphony*; Sibelius, 1924 (Copenhagen:Wilhelm Hansen)
Fig.13.26 Brass Pedal rooted in dissonance in *Seventh Symphony*; Sibelius, 1924 (Copenhagen:Wilhelm Hansen)
Fig.13.27 Wind Pedal against rushing strings in *Tapiola*; Sibelius, 1925 (Wiesbaden: Breitkopf & Härtel)
Fig.13.28 Level changes between the entrance and living area, *Villa Mairea*; Aalto, 1936-9
Fig.13.29 Sunken reading area, *Viipuri Library*; Aalto, 1927-35 (Museum of Finnish Architecture)

Fig.13.30 Sunken reading area, *Rovaniemi Library*; Aalto, 1963-8 (Museum of Finnish Architecture)
Fig.13.31 Clerestory lighting over shelving areas, *Rovaniemi Library*; Aalto, 1963-8
Fig.13.32 Plan of *Mount Angel Library*, showing shelving areas and central sunken reading zone; Aalto, 1965-70 (Dunster, 1984:62)
Fig.13.33 Reading tables in sunken area, *Rovaniemi Library*; Aalto, 1963-8
Fig.13.34 Section through *Mount Angel Library* showing clerstory lighting and sunken reading zone; Aalto, 1965-70 (Dunster, 1984:61)
Fig.13.35 Section through *Seinäjoki Library* showing level changes and clerestory lighting; Aalto, 1963-5 (Dunster, 1984:51)
Fig.13.36 Section through *Rovaniemi Library* showing sunken readin area and clerestory lighting; Aalto, 1963-8 (Dunster, 1984:56)
Fig.13.37 Woodwind activity against sustained Pedal in trumpets and violins, *Sixth Symphony*; Sibelius, 1923 (Copenhagen:Wilhelm Hansen)
Fig.13.38 Brass attempting to establish a Pedal to counter the hectic string activity, *Tapiola*; Sibelius, 1925 (Wiesbaden: Breitkopf & Härtel)
Fig.13.39 The whole orchestra launches into the Pedal towards 'R', *Tapiola*; Sibelius, 1925 (Wiesbaden: Breitkopf & Härtel)
Fig.13.40 Model of *Baker House* showing undulating southern mass against more rectilinear rear form; Aalto, 1946-9 (M.I.T. Archive)
Fig.13.41 Detail of stair, *Villa Mairea*; Aalto, 1936-9
Fig.13.42 Design sketch of *Finlandia Hall*; Aalto, 1962-71 (Alvar Aalto Archive)
Fig.13.43 Sketch of Calascibetta, Sicily; Aalto, 1952 (Alvar Aalto Archive: Schildt, 1985a:109)
Fig.13.44 Layout of Niemelä Farm, Seurasaari Folk Museum, Helsinki (Wickberg, 1959:53)
Fig.13.45 Traditional Karelian house plan (Wickberg, 1959:56)
Fig.13.46 Open foyer space, *Finlandia Hall*; Aalto, 1962-71
Fig.13.47 Music crashing into stasis, searching for the tonic, *Seventh Symphony*; Sibelius, 1924 (Copenhagen: Wilhelm Hansen)
Fig.13.48 Music bleeding into stasis, *Seventh Symphony*; Sibelius, 1924 (Copenhagen: Wilhelm Hansen)
Fig.13.49 Security of Pedal dominates the hectic violin activity, *Seventh Symphony*; Sibelius, 1924 (Copenhagen: Wilhelm Hansen)
Fig.13.50 Deep stasis despite musical activity in search of the tonic, *Tapiola*; Sibelius, 1925 (Wiesbaden: Brietkopf & Härtel)
Fig.13.51 Brass and timpani Pedal rides the tacit gap in rushing string activity in third movement of*Sixth Symphony*; Sibelius, 1923 (Copenhagen: Wilhelm Hansen)
Fig.13.52 Striated rock
Fig.13.53 Small gaps in finale of*Sixth Symphony*; Sibelius, 1923 (Copenhagen: Wilhelm Hansen)
Fig.13.54 Section through *Tehtanpuisto Church* showing acoustic ceiling undulation against floor; Aalto, 1930 (Alvar Aalto Archive)
Fig.13.55 Section through *Viipuri Library* auditorium; Aalto, 1927-35 (Alvar Aalto Archive)
Fig.13.56 Section through the *House of Culture*, Helsinki; Aalto, 1955-8 (Alvar Aalto Archive)
Fig.13.57 Section through *Vuoksenniska Church*; Imatra; Aalto, 1956-9 (Alvar Aalto Archive)
Fig.13.58 Example of circling motion, *Seventh Symphony*; Sibelius, 1925 (Murtomäki, 1993:256)
Fig.13.59 Circling motion in Presto of *Seventh Symphony*; Sibelius, 1924 (Copenhagen: Wilhelm Hansen)
Fig.13.60 View of Lake, Hauho
Fig.13.61 Plan of the *House of Culture*, Helsinki; Aalto, 1955-8 (Alvar Aalto Archive)
Fig.13.62 View of Pedal and Wave in the massing of the *House of Culture*, Helsinki; Aalto,1955-8
Fig.13.63 View of lake and islands
Fig.13.64 Design sketch section through *Helsinki University of Technology* lecture theatre; Aalto, circa 1955 (Alvar Aalto Archive)

Fig.13.65 *Paimio Chair*, and Aalto on roof of Paimio Sanatorium; Aalto, 1932 (Schildt, 1986:86)

Fig.13.66 Plan of *Villa Mairea*; Aalto, 1936-9

Fig.13.67 Chimney breast, *Villa Mairea*; Aalto, 1936-9

Fig.13.68 *Savoy Vase*; Aalto, 1935 (Hoseli, 1980:143)

Fig.13.69 Plan of *Le Bois est en Marche*, *Finnish Pavilion*, Paris World Fair, showing the undulating pond feature; Aalto, 1936-7 (Alvar Aalto Archive)

Fig.13.70 Undulating balcony of *Tsit Tsit Pom* entry, Finnish Pavilion, Paris World Fair; Aalto, 1936 (Sschildt, 1986:132)

Fig.13.71 *Forestry Pavilion* for Lapua Agricultural Exhibition; Aalto, 1938 (Museum of Fnnish Architecture)

Fig.13.72 Plan of *Wolfsburg Cultural Centre*; Aalto, 1958-62 (Alvar Aalto Archive)

Fig.13.73 Plan of *Seinäjoki Library*; Aalto, 1963-5 (Alvar Aalto Archive)

Fig.13.74 Forest in autumn (Studio Pitkänen)

Fig.13.75 Telegram from Aalto; 1958 (M.I.T. Archive)

Fig.13.76 National Romantic Building, Katajanokka, Helsinki

Fig.13.77 Early neo-classical *Dwelling House*, Jyväskylä; Aalto, 1923 (Alvar Aalto Museum)

Fig.13.78 Design sketch of *Atrium house* for Aalto's brother; Aalto, 1925 (Alvar Aalto Archive)

Fig.13.79 Midnight sun, Kareila

Fig.13.80 Growth of a pine branch

Fig.13.81 Entrance to *Viipuri Library*; Aalto, 1927-35

Fig.13.82 Ice breaking

Fig.13.83 Male fern

Fig.13.84 Fan-shaped chair leg; Aalto, 1954

Fig.13.85 Detail of wood-slat clad columns, Villa Mairea; Aalto, 1936-9

Fig.13.86 Detail of elements comprsisng the Sibelius Monument

Fig.13.87 Ice crystals (Studio Pitkänen) (Fleig, 1978:171)

Fig.13.88 Elevation of *Rovaniemi Theatre*; Aalto, 1966-72

Fig.13.89 Chancel of *Seinäjoki Church*; Aalto, 1952-60

Fig.13.90 Detail of *Finnish Pavilion*, New York World Fair; Aalto, 1939 (Museum of Finnish Architecture)

Fig.13.91 Aerial view of *Baker House Domitory*, M.I.T (M.I.T. Archive)

Fig.13.92 Plan of first floor, *Baker House*; Aalto, 1946-9 (M.I.T. Archive)

Fig.13.93 View of bifurcating stair on north side, *Baker House*

Fig.13.94 Plan west-end alteration to *Baker House*; Aalto, November 1947 (Alvar Aalto Archive)

Fig.13.95 View of west-end of *Baker House*

Fig.13.96 Rear view of model of *Baker House*, showing intended metal cladding to north side; Aalto, 1947 (M.I.T.Archive)

Fig.13.97 Stucco finished cantilevered stair, *Baker House*

Fig.13.98 Sketch of changes to west wing, *Baker House* ; Aalto, November 1947 (M.I.T. Archive)

Fig.13.99 Pine branches

Fig.13.100 Sketch of view out from cantilevered stair, *Baker House*; Aalto, November 1947 (M.I.T. Archive)

Fig.13.101 View down cantilevered stair, *Baker House*; Aalto, 1947-9

Fig.13.102 'H' plan solution with undulation superimposed, *Baker House*; Aalto, Autumn, 1947 (Alvar Aalto Archive)

Fig.13.103 Fifth floor plan, *Baker House*; Aalto, 1946-9 (M.I.T. Archive)

Fig.13.104 Plan form of *Helsinki University of Technology TKY2 Domitories*, Otaniemi; Aalto, 1962-6

Fig.13.105 Plan form of *Neue Vahr Apartments*, Bremen; Aalto, 1958-62

Fig.13.106 Plan form of *Schönbühl Apartments*, Lucerne; Aalto, 1965-8

Fig.13.107 Plan form of *Gammelbacka Housing*, Porvoo; Aalto, 1966

Fig.13.108 Plan form of *Vuoksenniska Church;* Aalto, 1956-9

Fig.13.109 Plan form of *Wolfsburg Cultural Centre*; Aalto, 1958-62

Fig.13.110 Plan form of *Seinäjoki Library*; Aalto, 1963-5

Fig.13.111 Plan form of *Mount Angel Library*; Aalto, 1965-70

Fig.13.112 Axis from main campus to *Baker House* entrance and through to dining pavilion
Fig.13.113 Griffiths' analysis of the 'bar' element in the *Baker House* formal layout (Griffiths, 1995:127)
Fig.13.114 Design sketch of bifurcating cantilevered stair, growing from the entrance to unite the six floors of *Baker House*; Aalto, November 1947
Fig.13.115 Relections on stone outside dining pavilion, *Baker House*
Fig.14.1 Wood Experiment; Aalto, (Alvar Aalto Archive)
Fig.14.2 Design sketch of *Finlandia Hall*; Aalto, circa 1963 (Alvar Aalto Archive)
Fig.14.3 Seeming disorder of parts in the *Fourth Symphony*; Sibelius, 1911 (Wiesbaden: Breitkopf & Härtel)
Fig.14.4 Mingling in the foyer of *Finlandia Hall*; Aalto, 1962-71 (Helander, 1994:107)
Fig.14.5 Plan of *Villa Mairea*; Alto, 1936-9 (Alvar Aalto Archive)
Fig.14.6 Stair of *Villa Mairea*; Aalto, 1936-9
Fig.14.7 Plan of *Paimio Sanatorium*; Aalto, 1928-33 (Alvar Aalto Archive)
Fig.14.8 Plan of the *Acropolis*, Athens (Bannister Fletcher, 1975:196)
Fig.14.9 Plan of *Neue Vahr Apartments*, Bremen; Aalto, 1958-62 (Alvar Aalto Archive)
Fig.14.10 The 'sigh' of the Olympian trombone theme, *Seventh Symphony*; Sibelius, 1924 (Copenhagen: Wilhelm Hansen)
Fig.14.11 View of rear of the *Enzo-Gutzeit Headquaters Building*, Helsinki; Aalto, 1959-62 (Fleig, 1971:212)
Fig.14.12 View of *Neue Vahr Apartments*, Breme; Aalto, 1958-62 (Fleig, 1971:231)
Fig.14.13 Foyer of *Wolfsburg Cultural Centre*; Aalto, 1955-8 (Fleig, 1971:66)
Fig.14.14 Plan of first floor, *Villa Mairea*; Aalto, 1936-9 (Alvar Aalto Archive)
Fig.14.15 Plan of *Villa Snellman*; Asplund, 1917 (Wrede,1985:163)
Fig.14.16 Griffiths' Palazzo / Villa condition anxiety of axis (Griffiths, 1995:108)
Fig.14.17 View of the *Enzo Gutzeit Building* in from of the Orthodox Cathedral (Pitkänen, 1975:31)
Fig.14.18 View of the *House of Culture*; Aalto, 1955-8 (Fleig, 1971:188)
Fig.14.19 Design sketch of *Helsinki University of Technology Lecture Theatres*, Otaniemi; Aalto, circa 1956 (Alvar Aalto Archive)
Fig.14.20 Column at *Finlandia Hall*; Aalto, 1962-71
Fig.14.21 Design for *Jyävaskylä Church*; Aalto, 1926 (Alvar Aalto Archive)
Fig.14.22 'Tenuous whimper' at the close of the first movement, *Fourth Symphony*; Sibelius, 1911 (Wiesbaden: Breitkopf & Härtel)
Fig.14.23 Exposed granite on which the *National Pensions Institute Building* is built, Helsinki; Aalto, 1948-56 (Fleig, 1971:181)
Fig.14.24 Model of the *National Pensions Institute Building* showing its different responses to the surrounding building heights; Aalto, 1948-56 (Dunster, 1984:81)
Fig.14.25 View from living space, *Villa Mairea*; Aalto, 1936-9
Fig.14.26 West end of *Baker House* turning towards the sun; Aalto, 1946-9
Fig.14.27 Sketch of *Baker House*; Aalto, November 1947 (M.I.T.Archive)
Fig.14.28 Harbour appraoch to neo-classical Helsinki (Pitkänen, 1975:36)
Fig.14.29 Overgrown grass steps, *Säynätsalo Town Hall*; Aalto, 1949-52
Fig.14.30 skeletal form of fragments, *Seventh Symphony*; Sibelius, 1924
Fig.14.31 Elevation of *Seinäjoki Town Hall;* Aalto, 1961-5
Fig.14.32 Columns,*Seinäjoki Town Hall;* Aalto, 1961-5
Fig.14.33 Entrance canopy, *Villa Mairea*; Aalto 1936-9
Fig.14.34 View from back of sauna to forest, *Villa Mairea*; Aalto, 1936-9
Fig.14.35 View out from front door of *Villa Mairea*; Aalto, 1936-9
Fig.14.36 Birch forest ((Pitkänen, 1975:3)
Fig.14.37 Plan of the *House of Culture* ; Aalto, 1955-8 (Alvar Aalto Archive)
Fig.14.38 Aerial view of the *House of Culture*; Aalto, 1955-8 (Museum of Finnish Architecture)
Fig.14.39 Twisted pine

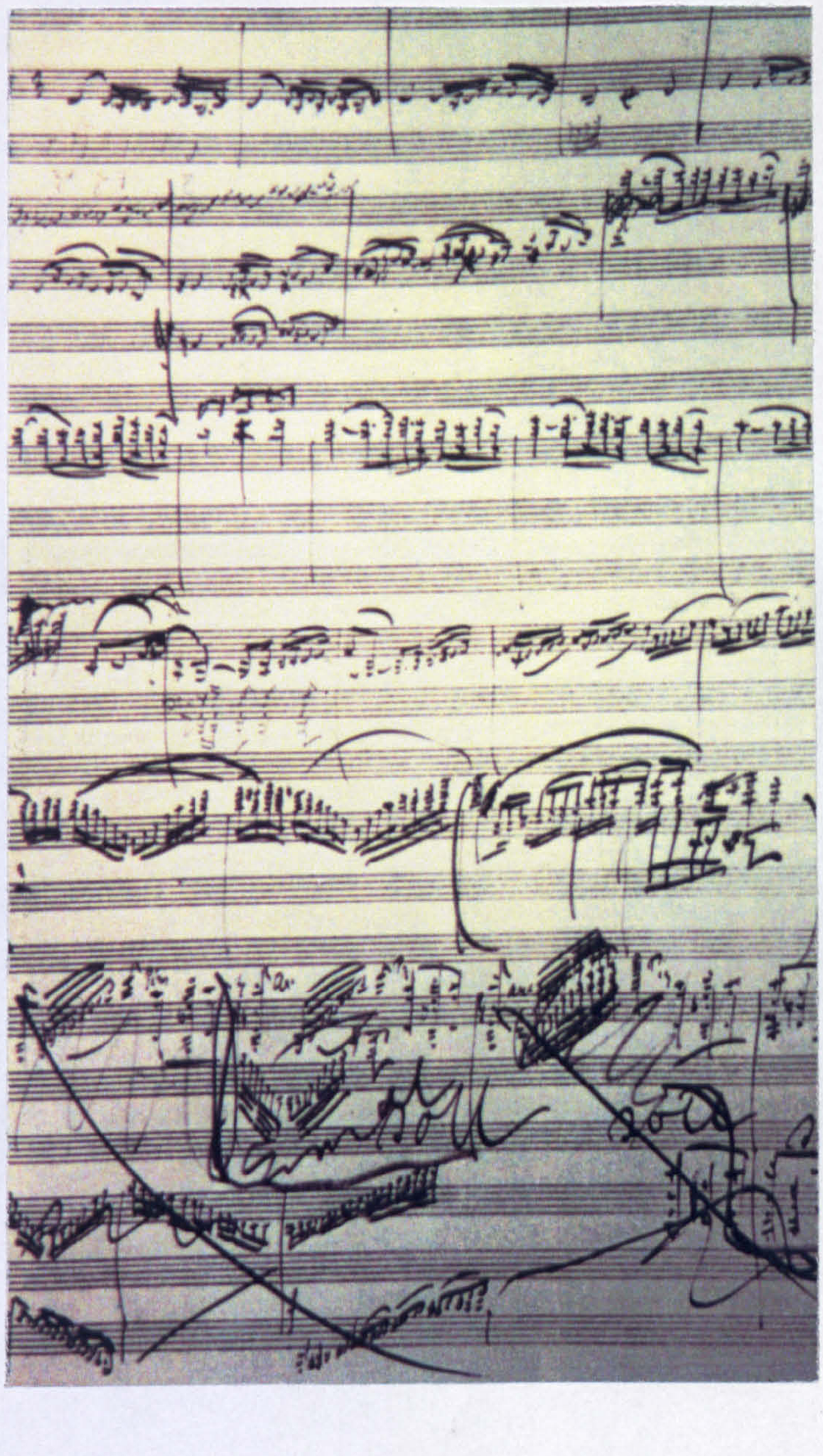
Fig.14.40 Cloud over lake and forest
Fig.14.41 Sketch plan of *Wolfsburg Cultural Centre*; Aalto, circa, 1955-8 (Alvar Aalto Archive)
Fig.14.42 *The Well Goverened City* Siena; Ambrogia Lorenzetti, 1337-9 (Girouard, 1985:106)
Fig.14.43 A Roman house, illustration from Aalto's childhood tome, *A Book of Inventions* (Schildt, 1984:195)
Fig.14.44 External blinds, *Villa Mairea*; Aalto, 1936-9
Fig.14.45 View of Assisi
Fig.14.46 Painting; Aalto, 1949 (Alvar Aalto Archive)
Fig.14.47 Painting; Aalto, 1946 (Alvar Aalto Archive)
Fig.14.48 Moment of tranition. Gate from garden to forest, *Villa Mairea*; Aalto, 1936-9
Fig.14.49 Foyer of *Seinäjoki Theatre*; Aalto, 1968-9 (designed) - 1987 (completed)
Fig.14.50 Foyer, stairs and exhibition of Aalto's wood experiments, *Seinäjoki Theatre*; Aalto, 1968-9 (designed) - 1987 (completed)
Fig.14.51 Winter light through trees
Fig.14.52 Clerestory light, *Vuoksenniska Church*; Aalto, 1956-9
Fig.14.53 Sketch of San Gimignano, Tuscany; Aalto, 1948 (Alvar Aalto Archive; Schildt, 1985a:54)
Fig.14.54 Stairs leading from foyer, *Finlandia Hall*; Aalto, 1962-71 (Fleig, 1977:207)
Fig.14.55 Detail from the Sibelius Monument
Fig.14.56 Model of auditorium of *Essen Opera House*; Aalto, 1959-61 (designed) - 1991 (Alvar Aalto Archive)
Fig.15.1 Sketch of Theatre at Delphi; Aalto, 1953 (Alvar Aalto Archive; Schildt, 1985a:22)
Fig.15.2 *A Poor Boy*; Helena Westermarcke, 1884 (Cygnaeus Gallery, Helsinki)
Fig.15.3 Birch forest, Kitee, Karelia
Fig.15.4 Bound posts of the sauna, *Villa Mairea*; Aalto, 1936-9
Fig.15.5 Forest path, near Jacobstad (Pietarsaari)
Fig.15.6 Forest at Saariselkä region (Neuvonen, 1989:201)
Fig.15.7 Birch forest (Kohonen, 1993:82)
Fig.15.8 View of the *Experimental House*, Muuratsalo; Aalto, 1953 (Alvar Aalto Museum)
Fig.15.9 Sibelius; circa 1940 (Sandberg, 1940:54)
Fig.15.10 Aalto; circa 1972 (Schildt, 1989:290)
Fig.15.11 Sunset in Lieksa, Karelia
Fig.A.0 Winter view of Helsinki Bay
Fig.A.1.1 Sketch of Lions Gate, Mycenae; Aalto, 1953 (Alvar Aalto Archive; Schildt, 1985b:38)
Fig.A.1.2 Vignola's version of the 5 Orders; circa 1563 (Summerson, 1983:16)
Fig.A.1.3 Doric temple showing exaggerated refinements (McEwan, 1993:115)
Fig.A.1.4 *Dwelling House*, Jyväskylä; Aalto, 1923 (Alvar Aalto Museum)
Fig.A.1.5 Part of Niemelä Farm, Seurasaari Folk Museum (Wickberg, 1959:55)
Fig.A.1.6 Gustavian house, Tamminiemi
Fig.A.2.1 *Defending the Sampo*; Akseli Gallen-Kallela, 1896 (Turku art Museum)
Fig.A.2.2 *Joukahainen's Revenge*; Akseli Gallen-Kallela, 1897 (Turku Art Museum)
Fig.A.3.1 Aalto in uniform; circa 1939 (Alvar Aalto Archive; Schildt, 1986:94)
Fig.A.3.2 Aalto during visit to architects in Nazi Germany (Schildt, 1989:71)
Fig.A.3.3 Planning post war reconstruction with Aino (Alvar Aalto Archive; Schildt, 1989:25)
Fig.A.3.4 Slides of Aalto's showing peasant Karelians (Alvar Aalto Archive; Schildt, 1989:44)
Fig.A.3.5 Section through typical Karelian house, drawn by Aalto for Wickberg's book on Finnish Architecture (Wickberg, 1959:56)
Fig.A.4.1 Schoenberg before 1911, with deication to Kandinsky (Hahl-Koch, 1984:fig.1)
Fig.A.4.2 Score for *Die glüchliche Hand* with textual additions, 1913 (Hahl-Koch, 1984:fig.9)
Fig.A.4.3 Sketch for costume for staging of *Die glüchliche Hand*, 1913 (Haal-Koch, 1984:fig.25)
Fig.A.5.1 Le Corbusier during presentation to CIAM aboard the Patris II, en route for the Athens Congress, 1933 (Aalto; Schildt, 1986:93)

Flg.A.5.2 *The Modulor Man*; Le Corbusier, 1945 (Raeburn, 1987:241)
Fig.A.5.3 Aalto during visit to Paris to see Le Corbusier's architecture, 1928 (Alvar Aalto Archive; Schildt, 1986:57)
Fig.A.5.4 *Unité d'habitation*, Marseilles; Le Corbusier, 1946-52 (Raeburn, 1987:fig.87)
Fig.A.6.1 Sketch of score for *Fourth Symphony;* Sibelius, 1910 (Sibelius Museum Archive)
Fig.A.6.2 *Still life with Cherries and Peaches* ; Cézanne, 1874-1866 (Harrison, M. 1988:102)
Fig.A.6.3 *Still life*; Aalto, 1918 (Alvar Aalto Archive; Schildt, 1984:1984:191)
Fig.A.7.1 Sketch plan of *Vuoksenniska Church*, Imatra; Aalto, 1955-9 (Alvar Aalto Archive)
Fig.A.7.2 Painting; Aalto, 1945 (Hoesli, 1980:65)
Fig.A.7.3 Wood experiment; Aalto, 1930-47 (Alvar Aalto Archive)
Fig.A.8.1 Map of rivers and waterways in Finland (Rikkinen, 1992:34)
Fig.A.8.2 Sunset in Kitee, Karelia
Fig.A.8.3 Forest near Jacobstad (Pietarsaari)
Fig.A.8.4 View of Kauhaneva-pojankangas (Hautala, 1995:56)
Fig.A.8.5 View of Kalalahti at Sääksmäki wher Sibelius stroled with his violin (Jala, 1952:17)
Fig.A.8.6 Baltic coast
Fig.A.8.7 Lake and forest (Raimo Ketola; Grako Oy)
Fig.A.9.1 Pine and rock
Fig.A.9.2 Ringlet butterfly on pine
Fig.A.9.3 Sunset through willow tree
Fig.A.10.1 Sketch designs; Aalto (Alvar Aalto Archive)
Fig.A.10.2 Sketch design for Finlandia Hall; Aalto, circa 1963 (Alvar Aalto Archive)
Fig.A.10.3 Interior of *Villa Kokkonen*; Aalto, 1966-9
Fig.A.10.4 Section through *Seinäjoki Theatre*; Aalto, 1968-9 (designed) -1987 (completed) (Alvar Aalto Archive)
Fig.A.11.1 Interior of *Seinäjoki Theatre*; Aalto, 1968-9 (designed) - 1987 (completed)
Fig.A.11.2 Three dimensional interpretation of Sibelius' music in the Sibelius Monument (Eila Hiltunen, 1961-7)
Fig.A.12.1 Cartoons of Sibelius (A.F.Y, 1898;Levas, 1972)
Fig.A.12.2 *A Winter scene*; Eero Järnefelt, circa 1898 (The Becker Collection)
Fig.A.13.1 Knarled pine in a forest
Fig.A.13.5 Forest in autumn (Studio Pitkänen)
Fig.A.14.1 *Sallow in Autumn*; Pekka Halonen, 1907 (Ateneum)
Fig.A.14.2 Marsh scene in winter, Otaniemi
Fig.A.15.1 Islands of the Turku archipelago (Hautala, 1995:15)
Fig.A.15.2 Sunset in Karelia
Fig.A.15.3 *Wilderness*; Pekka Halonen, 1899 (Turku Art Museum)
Fig.A.15.4 Manuscript for the finale of the *Violin Concerto*; Sibelius, 1905 (Sibelius Museum Archive)

Musical Examples on Tape

1 Fragment from the finale of *Fourth Symphony*; Sibelius, 1911
2 Rune fragments; composition in performance
3 Fragment from the first movement of the *Sixth Symphony*; Sibelius, 1923
4 Incantation noted down from Larin Paraske's singing
5 Fragment from first movement of the *Kullervo Symphony*; Sibelius, 1892
6 Fragment from *Finlandia*; Sibelius, 1899
7 Fragment from *Lemminkäinen's Return*; Sibelius, 1895, 1897, 1900
8 Fragment from *En Saga*; Sibelius, 1892, 1901
9 Fragment from *The Swan of Tuonela*; Sibelius, 1893, 1900
10 Fragment from the fourth movement of the *First Symphony*; Sibelius, 1899

11 Fragment from *Andante Festivo*; Sibelius, 1922
12 Fragment from *Tapiola*; Sibelius, 1925
13 Fragment from the finale movement of the *Sixth Symphony*; Sibelius, 1923
14 Fragment from the *Third Symphony*; Sibelius, 1904-7
15 Fragment from the first movement of the *Sixth Symphony*; Sibelius, 1923
16 Fragment from the finale of the *Third Symphony*; Sibelius, 1904-7
17 Fragment from the last movement of the *Fourth Symphony*; Sibelius, 1911
18 Fragment from the first movement of the *Fifth Symphony*; Sibelius, 1915, 1916, 1919
19 Fragment from the finale of the *Sixth Symphony*; Sibelius, 1923
20 Fragment from the finale of the *Fourth Symphony*; Sibelius, 1911
21 Fragment from *Voces Intimae*; Sibelius, 1909
22 Fragment from *Tapiola*; Sibelius, 1925
23 Fragment from the finale of the *Fourth Symphony*; Sibelius, 1911
24 Fragment from the *Oceanides*; Sibelius, 1914
25 Fragment from *Luonnotar*; Sibelius, 1913
26 Fragment from *Tapiola*; Sibelius, 1925
27 Fragment from *La Chasse, Scènes Historiques* II; Sibelius, 1912
28 Fragment from the first movement of the *Fourth Symphony*; Sibelius, 1911
29 Fragment from the *Karelia Suite*; Sibelius, 1893
30 Fragment from the finale of the *Fourth Symphony*; Sibelius, 1911
31 Fragment from the *Seventh Symphony*; Sibelius, 1924
32 Fragment from the *Swan of Tuonela, Four Legends*; Sibelius, 1893, 1897, 1900
33 Moment of organic transformation in the *Seventh Symphony*; Sibelius, 1924
34 An organically tied element from the *Seventh Symphony*; Sibelius, 1924
35 Fragment from *Tapiola*; Sibelius, 1925
36 Opening augmented fourth of the *Fourth Symphony*; Sibelius, 1911
37 "Tiny scraps" welded together in *Lemminkäinen's Return*; Sibelius, 1895, 1897, 1900
38 Tritone and fourth motifs in the *Fourth Symphony*; Sibelius, 1911
39 "Kernel motif" in the *Sixth Symphony*; Sibelius, 1923
40 Three fragments of a stepwise scalic nature in *Tapiola*; Sibelius, 1925
41 Fragment from the *Seventh Symphony*; Sibelius, 1924
42 Fragment indicating the Pedal beneath undulating strings in *Tapiola*; Sibelius, 1925
43 Woodwind activity against the sustained trumpets and violins in the *Sixth Symphony*; Sibelius, 1923
44 Attempts to establish the anchoring Pedal, *Tapiola*; Sibelius, 1925
45 Security of the Pedal dominates the hectic violin activity in the *Seventh Symphony*; Sibelius, 1924
46 Deep stasis amid musical activity in *Tapiola*; Sibelius, 1925
47 The Pedal rides the tacit gap in the third movement of the *Sixth Symphony*; Sibelius, 1923
48 Small gaps in the finale of the *Sixth Symphony*; Sibelius, 1923
49 Example of circling motion in the *Seventh Symphony*; Sibelius, 1924
50 Circling motion in the Presto of the *Sixth Symphony*; Sibelius, 1923
51 Fragment from the finale of the *Fourth Symphony*; Sibelius, 1911
52 Pendulum motion in the finale of the *Fifth Symphony*; Sibelius, 1912, 1916, 1919
53 "Ascetic, crystalline ode", *Sixth Symphony*; Sibelius, 1923
54 "An 'organic' symphony in one movement", *Seventh Symphony*; Sibelius, 1924
55 Seeming disorder in the *Fourth Symphony*; Sibelius, 1911
56 The 'sigh' of the "Hellenic" / "Olympian" trombone theme in the *Seventh Symphony*; Sibelius, 1924
57 "Tenuous whimper of a fragment" at the close of the first movement of the *Fourth Symphony*; Sibelius, 1911
58 Fragment from the close of the *Seventh Symphony*; Sibelius, 1924
59 Fragment from *Tapiola*; Sibelius, 1925



A.15.4

Fig.A.15.4 Manuscript of the *Violin Concerto*; Sibelius, 1905

