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Roofs and Grids in Postwar Japanese Architecture: Excision, Sublation, and Layering of the Symbolic

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The role and significance of tradition in modern architectural practices was the subject of much public debate in Japan during the post–World War II period. An analysis of built work of the 1950s and 60s reveals, however, a much more complex set of responses than what these discussions might suggest. This paper uses the conceptual categories of roof and grid to uncover the radical divergences in attitude towards tradition in the works of Kenzō Tange, Seiichi Shirai, and Tōgo Murano as these architects negotiated a transition away from earlier mimetic modes of representation towards design methodologies less hampered by formal exigencies. Through the study of several buildings I show how roof and grid figure in distinct ways at the various levels of iconicity, symbolism, and ornamentation depending on the disciplinary vision of each of the three architects. The analysis reveals fundamental differences in the conception of architectural experience while at the same time underscoring a shared acknowledgment of the historical nature of culture and a shared desire to transcend the duality between modernity and tradition itself.

Keywords: Kenzō Tange; Seiichi Shirai; Tōgo Murano; modern architecture; Japan

One of the core issues confronting architects in Japan since the Meiji era has been the role and meaning of Japanese building tradition and its representations in Western and modern architecture (Jacquet 2019). This subject was taken up in a particularly intense and public way in the mid-1950s as part of a broader set of intellectual currents that followed the withdrawal of American troops in 1952. The latter event was accompanied by the lifting of the remaining pieces of wartime media censorship that had been kept in place as a check on ultranationalist elements, ushering in a period of self-reflection that produced numerous publications on the nature of Japanese culture and history. For architects of the time, many of whom had taken part in wartime nationalist propaganda, such as the competition for a memorial hall for the Greater East Asia Co-Prosperity Sphere, it became a goal to reorient the profession in ways that would serve a newly established democratic society, an issue that the critic Ryūichi Hamaguchi had addressed in his widely read book *Hyūmanizumu no kenchiku* (1947). With this came the question of whether one could or should reassert Japan-ness and of what forms this might even possibly take in view of an imperative to avoid unpalatable nationalist associations.

In the mid-1950s a vigorous discussion that became known as the 'tradition debate' played out in the pages of *Shinkenchiku* and other journals, an episode that was masterminded by the critic Noboru Kawazoe and that included contributions by many architects, notably Kenzō Tange and Seiichi Shirai (see Kawazoe 2009). One of the novel ways in which the debate came to be framed was in terms of a dichotomy, originally introduced by the artist Tarō Okamoto in 1952 (see Okamoto 2009) and reinterpreted in architectural terms by Shirai in 1956 (see Shirai 2010: 107–112), that counterposed a Japanese version of primitivism based on the aesthetic value of Jōmon earthenware against the formal and serene aesthetics associated with the later Yayoi era. The exchange of ideas around the Jōmon–Yayoi dichotomy subsided without any conclusive directives, yet it had a profound effect on subsequent architectural discourse (see Kajiya 2015; Lin 2010; Reynold 2015; Tange and Fujimori 2002).

While the tradition debate represents an important document of the thinking of the time, the architecture itself from this period reveals a much more complex engagement with cultural heritage and identity through the often disparate ways that it approached the formal, the symbolic, and the sensory. I offer here an analysis that foregrounds these physical and experiential aspects in a reading of key buildings from the 1950s, '60s, and '70s by three architects: Kenzō Tange (1913–2005), a highly influential public figure who brought international recognition to Japanese architecture, Seiichi Shirai (1905–1983), who cultivated a singular and hermetic practice, and Tōgo Murano (1891–1984), another nonconformist who built a successful career largely

on commercial commissions and, unlike Tange and Shirai, was not publicly invested in the tradition debate. Each came through the war and immediate pre-war periods with vastly different experiences, in part due to generational gaps. Tange, the youngest of the three, first made his mark through his proposal for the Greater East Asia Co-Prosperity Sphere Memorial Hall competition in 1942, which he prepared when he was still a graduate student at Tokyo Imperial University. Shirai, who attended lectures in philosophy and art history in Germany in the early 1930s and was involved in leftist activities at the time, initially made only a tentative entrance into the profession with a number of residential projects for relatives and wealthy clients during the period from 1935 to 1945. Murano, meanwhile, had already established his own firm in Osaka in 1929 and started to receive large commercial commissions in the early 1930s, but he struggled to obtain work during the war, owing, according to his own account, to the dismissiveness within the military of anything beyond basic functionality (Hasegawa 1976: 88–89). While these wartime circumstances obviously had an impact on the professional trajectory of each, and the tradition debate itself can be seen as an effort of recovery in reaction to this period, the question of how tradition came to register in later projects is ultimately keyed to fundamental differences in the ways in which the nature and goals of architectural practice were conceived. In this sense, Tange, Shirai, and Murano can be seen as representatives of three different poles that conditioned a striking diversity of architectural attitudes towards modernity, identity, and tradition.

These attitudes and the discrepancies between them find what is perhaps their most forceful and vivid expressions through the conceptual categories of roof and grid. Beyond their denotative meanings — one as a covering structure and the other as an orthogonal lattice organization in two or three dimensions — the roof and grid naturally bear potent symbolic capacities in their connection to geographical, historical, and cultural conditions and often become intertwined in contentious ways with the questions of identity and tradition. This is particularly so for the roof, as seen in the various controversies that have erupted in the global history of modern architecture, whether in the debates about the Neues Bauen in Weimar Germany (Lane 1985), or in reactions to the grafting of traditional-style roofs onto reinforced concrete structures as in the Teikan (or imperial crown) style that proliferated in 1930s Japan as a response to military and government demands to incorporate ‘Japanese taste’ (Fujimori 1993), or in the ‘big roof style’ that became popular in 1950s China under the influence of Soviet architectural theory and the watch of the newly established Chinese Communist Party (Rowe and Kuan 2002: 87–107). Within Japan the grid has also been enmeshed with ideas of tradition and modernity, evolving simultaneously into a symbol of the country’s premodern building practices and an embodiment of a modern aesthetic

sensibility that, encouraged by an economy of standardization, repetition, and deornamentation, became increasingly visible with the emergence of the International Style in the 1930s.[1]

With the end of the war, the roof receded into the background as a point of contention due to taboos around nationalist imagery, even while the problem of reconciling historical Japanese building typologies with modern architecture persisted, as evinced by the tradition debate. Consequently, the roof and grid as a dichotomy became less overtly visible, but they continued to interact, as we shall see, in a sophisticated manner that goes far beyond a simple representation of antagonism between tradition and modernity. In Tange's work, this takes the form of a clever perceptual schema of elimination and reconstitution alternating between the two categories. For Shirai, the roof and grid are not so much signs to be read as raw design material to be manipulated and ultimately transfigured, with their treatment remaining surprisingly synchronized across the architect's career in a process of evolutionary transformation from perturbation to outright elimination to final resurrection in radically reconceived form. In Murano's work, the manipulations of the pair may appear to be rather singular and project specific but nevertheless can be subsumed, as I argue, under the category-collapsing ethos of decorative layering. My aim is not to propose a coherent theoretical diagramming of the coupling of roof and grid as a way to illuminate these differences or to suggest a conscious coordinated manipulation of the two categories but rather to reveal, through one obviously limited but nevertheless telling lens, the fundamental discrepancies and incommensurabilities in the ways that tradition is engaged through what may be construed as a common desire to reimagine or even overcome the categorical pairing itself.

Kenzō Tange

In an effort to create an architecture suitable for a postwar democratic Japan, Tange pursued the idea of incorporating historical forms into otherwise modernist buildings but was faced with the challenge of how to avoid triggering the kinds of associations with nationalist propaganda that were on display in his earlier unrealized competition entries. His first realized project, the Hiroshima Peace Memorial Park (1949–1955), was intended to symbolize reconstruction and recovery from the war and underwent multiple revisions that transformed the stark modernism of the initial design into one that evoked aspects of the country's cultural history (Cho 2012). The main structure, the Hiroshima National Peace Memorial Hall, exhibits many Corbusian features — flat roof, pilotis, reinforced concrete, brise-soleil — but at the same time has been compared to various historical buildings in its proportion, massing, and plan (Iwata 1955).[2] Likewise, Tange's 1957 Tokyo Metropolitan Government Building (**Figure 1**), a

steel structure with pilotis and glass curtain walls, is described by Kawazoe as having retained on its facade a vestige of *kiwari*, a premodern module system of measuring wood components (Kawazoe 1976: 53; see Ōmori 1998 for discussions on *kiwari*), while the 1958 Kagawa Prefectural Government Office bluntly mimics the joinery of traditional orthogonal timber construction through its concrete form.

Figure 1: Kenzō Tange, metropolitan government building, Tokyo, 1957. Photo by Bigjap, 1979, https://commons.wikimedia.org/wiki/File:TANGE-old-Tokyo-city-hall-1957.jpg. Desaturated from original.

Tange presented the latter two works at the 1959 International Congress of Modern Architecture in Otterlo as illustrations of his theoretical stance, which rejected the overt display of traditional idioms while insisting on a spiritual continuity between tradition and modern architecture. In response to Ernesto Rogers' praise for his projects as having given 'roots' to modernity, Tange replied:

> I cannot accept the concept of total regionalism. So-called regionalism is always nothing more than the decorative use of traditional elements. This kind of regionalism is always looking backwards. The popular tendency of using regional characteristics for decorating the facades of buildings must be rejected. The same should be said of tradition. In my thinking tradition can be developed through challenging its own shortcomings and pursuing the meaning of continuum within it. Superficial admiration or blind following is rather dangerous. (Newman 1961: 182)

How do the above projects validate this statement? One could argue, for example, that the skeuomorph of wooden joinery, although not decorative in an appliqué ornamental sense, is nevertheless designed to elicit a certain nostalgia. Such inconsistencies between Tange's

rhetoric and his built work do not seem, however, to have generated any controversy within the architectural community in Japan, at least not in public discourse. In any case, his success with these early projects cannot be separated from the framing of public debate around the Jōmon–Yayoi thesis, which legitimized the reintroduction of national identity as a central cultural theme in the postwar period.

More obvious but also more fundamental as a harbinger of later developments was the resetting of the locus of representation, away from the roof and onto the grid, as a kind of antidote to both the Teikan style officially promoted in the 1930s (Isozaki 2006: 8–21; Miyauchi 1981; Yatsuka 2005), whose roofs were typically modelled after castles, and Tange's own Greater East Asia Co-Prosperity Sphere Memorial Hall proposal (Cho 2012; Isozaki 2006: 101–115; Reynolds 2001: 323–324), whose monumentalization of shrine architecture was intended as a radical alternative to Teikan pastiche that could serve to express nationalist convictions and imperialist ambitions. While the Hiroshima Peace Memorial Hall, Tokyo Metropolitan Government Building, and Kagawa Prefectural Government Office exhibit different degrees of insistence on tradition, they all convey an abstracted idea of Japanese form by exploiting the compositional and conceptual framework of the grid with no iconographic recourse to the roof, which has been conspicuously purged. A similar erasure is at work in the photographs of the Katsura Imperial Villa from the 1950s that were taken by Yasuhiro Ishimoto and then strategically cropped by Tange to deemphasize or even eliminate the roof (Isozaki 2006: 251–254, 263–267; Nakamori 2010; Ishimoto, Gropius, and Tange 1960).

In a dramatic inversion of these excisions, Tange's first gymnasium for the Yoyogi National Stadium (1964) does away with rectilinear volume and consists entirely of a roof form in suspension (**Figure 2**). Designed for an Olympic games that served to showcase Japan as a peaceful and economically dynamic modern nation, the gymnasium came into being primarily as a solution to problems of structure, construction, and urban planning (see, for example, Toyokawa 2019). At the same time, it bears marks from the tradition debate both in its overall shape, which is suggestive of a pit dwelling from the Jōmon era, and, more explicitly, in the decorative chigi finials capping the juncture of its roof surfaces, which point to the Ise Shrine, said to have been established in the Yayoi era. Loaded as it is with this symbolic content, the structure nevertheless shares the predictive delineatory function of the grid through a simple but striking geometry that, although nonrectilinear, allows one to instantly imagine the whole building from a single snapshot view, producing a kind of perceptual flatness that empties experience of its time element. It is this immediacy of the gymnasium's form as a mental construct that resonates with the reality-organizing function of the grid. The mechanism by which tradition and modernity are synthesized in the Yoyogi gymnasium thus remains

homologous to that used in the Hiroshima Peace Memorial Hall, Tokyo Metropolitan Government Building, and Kagawa Prefectural Government Office through a simple reversal of terms. In all of these cases either the roof or grid is formally eliminated while the symbolic or experiential content of the eliminated part survives by being projected onto other features of the building.

Figure 2: Kenzō Tange, first gymnasium, Yoyogi National Stadium, Tokyo, 1964. Photo by Joe Jones, 2005, https://www.flickr.com/photos/redjoe/17584321/in/album-1310912.

This oscillation between modernity and tradition, based as it is on a subtractive approach to representation, appears to undermine Tange's own precept about not decorating facades with traditional elements. Within this very contravention lies the ingenuity of his architecture, which avoids offering a simplistic bivalent representation produced by juxtaposition. The sidestepping of blatant imitation does not, however, preclude accusations of kitsch and may even amplify this reaction through the effect by which a 'remainder' remains invisible to a system but is integral to its functioning (Krauss 1994: 141). Tange's solutions to these problems were, to be sure, only one facet of an ambitious and multipronged architectural program that came to address larger-scale economic and infrastructural issues and that earned him significant recognition and success in Japan and abroad. While serving the goal of communicating to a broad public audience, they also ultimately remained constrained by a mode of representation that did not allow much room for critical engagement or development, as can be gleaned from his surprisingly consistent use of the same technique throughout his career. Examples range from the cenotaph designed in 1952 for Hiroshima Peace Memorial Park, which was modelled after the roof of a haniwa terracotta house, and the shell-like roof of Ehime Kenmin Kaikan (1952), to St. Mary's Cathedral (1964), which

is somewhat akin to the all-roof design of the contemporaneous Yoyogi gymnasium, to the 1991 New Metropolitan Government Building (**Figure 3**), which evokes a French Gothic cathedral and at the same time resonates, according to Tange, with the spirit of the electronic age in the computer-chip-like grid pattern of its facade, a pattern that was in fact inspired by a drawing of the ceiling of a traditional house in Nara (Tange and Fujimori 2002: 438, 442–443; Kenzo Tange Associates 1991: 31).[3] The successes and limitations of this essentially inert representational calculus as a source of invention stand in marked contrast to the restlessly dialectical evolution of Shirai's practice, the appreciation of whose narrative arc will require us to be much more attentive to various scales of engagement within and across different projects.

Figure 3: Kenzō Tange, New Metropolitan Government Building, Tokyo, 1991. Photo by Kakidai, 2012, https://commons.wikimedia.org/wiki/File:Tokyo_Metropolitan_Government_Building_2012_%E2%85%A1.JPG. Desaturated from original.

Seiichi Shirai

Like Tange, Shirai believed in the existence of an authentic Japanese culture and sought to give expression to Japanese identity. Shirai strove, however, to generate form that did not directly evoke indigenous historical models and to create new spatial conditions that appealed to primal instinct but without recourse to reason or context. This aspiration was communicated in a 1952 lecture on flower arrangement in which he describes the 'unique god-given ability' of the Japanese people to harmonize simple beauty and identified rational thought as an underlying characteristic of the Western architectural tradition that distinguishes it from that of Japan (see Shirai 2010: 78). The idea of a reinvigorating domestic alternative to 'rational' Western architecture was given more concrete form, without the explicit nationalistic fervour, in his 1956 essay 'Jōmon teki narumono' (Jōmon-like things), the text that thrust Shirai into the tradition debate (2010: 108; see Kajiya 2015 for more discussion). As a protest against narrowly constructed ideas of Japan-ness derived from 'the shoin architecture of the city-dwelling nobles and the folk architecture of merchants and peasants', both of which he saw as nourishing the Japonica movement at the time,[4] he proposed another kind of model which would be abstractly expressive of the spirit of the prehistoric Jōmon era and which was exemplified by a rural administrator's residence in Nirayama that belonged to a typology that had not been part of the official canon of tradition. In a creative act, Shirai asserts, one should not assemble symbolic appearances from a menu of preexisting forms and patterns but should rather strive to harness the 'a priori potential that is inherent in each human being and history' (2010: 111). That a view towards a global culture should moreover play a role in this process is suggested in a 1958 essay on the competition for the National Theatre of Japan, in which Shirai speaks of the Sydney Opera House by Jørn Utzon as embodying the tradition both of the architect's country and of Western rationalist thinking despite the striking novelty of its architectural form, with its sail-like figuration suggestive of both the sea-bound sensibility of Denmark and of Sumerian culture (2010: 53–54). While self-contradictory in many respects, this style of thinking would remain constant throughout Shirai's career and would even be channelled in concrete programmatic ways into his architecture (Iisaka 2019).

Here again the roof and grid together furnish a lens through which manifestations of the architect's thought can be discerned. As the architect Morihiko Yasuhara observes, in Shirai's initial postwar works he would often 'cut' the corner of a rectangular room in an otherwise orthogonal plan so as to soften the felt presence of orthogonal form. Yasuhara understands this operation both as a generator of movement that is intended to create an expansive feeling in small interior spaces and as 'a protest against the

uniform space that has conquered the world'. Although this diagonal path recalls the 'flying geese formation' found in traditional Japanese architecture, Yasuhara also argues that Shirai is distancing himself from traditionalists by not fully committing himself to the zig-zag pattern (2005: 146–149).

During the same period, Shirai was exploring the communicative potential of the roof in institutional projects such as the 1951 Akinomiya Village Hall, the 1956 Matsuida Town Hall (**Figure 4**), and the 1958 Buddhist temple Zenshōji (**Figure 5**). However different the original intent may have been, these early works came to be known for the overspreading presence of their wide and gently pitched roofs as an expression of the kind of primitive strength that Shirai associated with the Jōmon era.[5] The architectural critic and historian Takashi Hasegawa argues that these roofs, in accordance with the traditional Tsumairi typology, combine with a positioning of the entrance on the gable side to create the strong sense of frontality that he identifies as a central theme in Shirai's vision of the role and purpose of architecture, a theme that, as he points out, continues even into later projects that did away with the roof as a positive visual feature (1974: 170–171).[6] While the gabled roof may have represented an effective strategy to heighten the building's charisma, what one really experiences in these works is an endeavour to fashion a more dynamic architectural theatre through the interaction between built form and the moving subject, an effect that at times overwhelms the roof's static presence and that would be significantly elaborated in Shirai's practice from the 1960s onwards (Iisaka 2019).

Figure 4: Seiichi Shirai, Matsuida Town Hall, Gunma, 1956. Photo by Maki Iisaka.

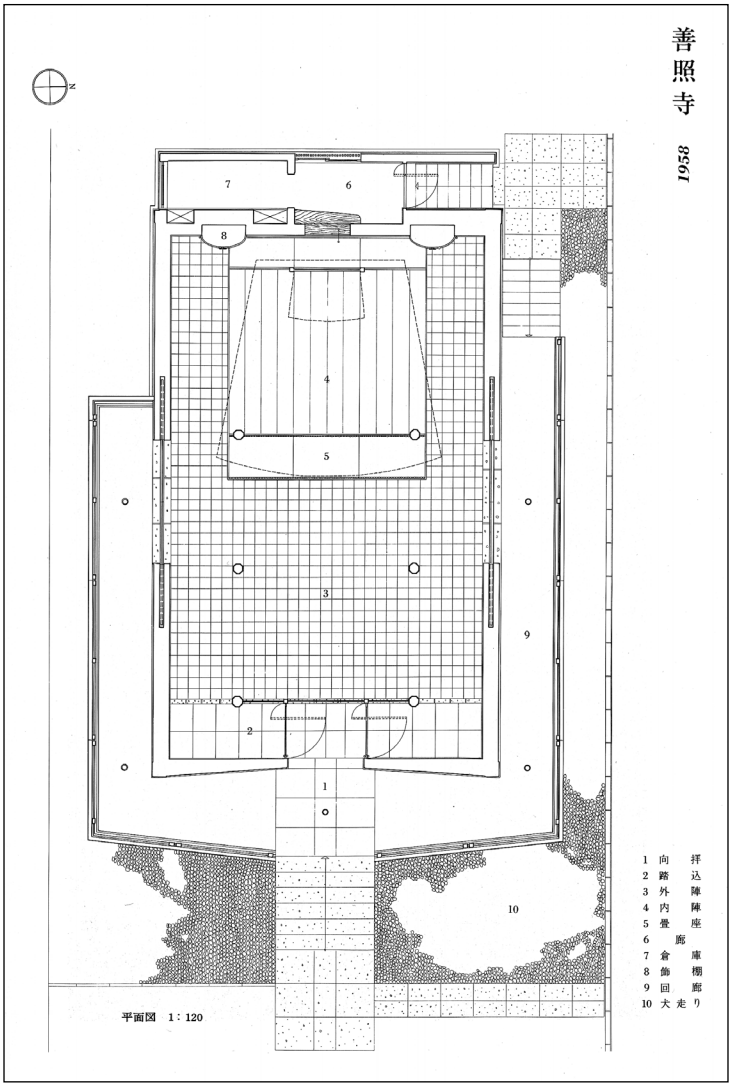

Figure 5: Seiichi Shirai, plan of Zenshōji, Tokyo, 1958 (Kawazoe 1978: 258).

The main ingredients that precipitate this dynamic in the Akinomiya, Matsuida, and Zenshōji projects are concave, convex, and other distortions of an otherwise orthogonal geometry, manoeuvres which usher in a vocabulary of form that would be more forcefully exhibited in the boomerang-shaped entrance hall of the 1955 Temple of Atomic Catastrophes proposal (**Figure 6**). The slight bulge in the balcony of the Akinomiya Village Hall can be seen as a first announcement of this formal programmatic. In the subsequent Matsuida town hall, the scale moves from small gesture to bold effect: the entire stretch of the upper-floor balcony that envelops and dominates the facade is warped inward so as to accentuate the natural distortion of one's peripheral vision. Although the frontality remains emphatic and essentially symmetric, it is now tempered by the siting

of the structure, which is set back from the public road on a slight upward slope and is accessed through a U-shaped driveway that compels an oblique view of the facade. From this dynamic perspective, the roof appears to recede while the long horizontal band of perforated concrete panels that line the balcony impresses in its arcing thrust, evoking the idea of speed. The Zenshōji temple in Asakusa employs a similar strategy of convex distortion in the facade: the white wall of the exterior, although appearing square from a stationary frontal perspective, is angled inward so as to exaggerate the peripheral sensation of the facade's lateral depth as one approaches the entrance from the landing of the central staircase. Frontality is nevertheless reasserted here in the perfect elevational symmetry and the positioning of the approach path directly along the central axis.

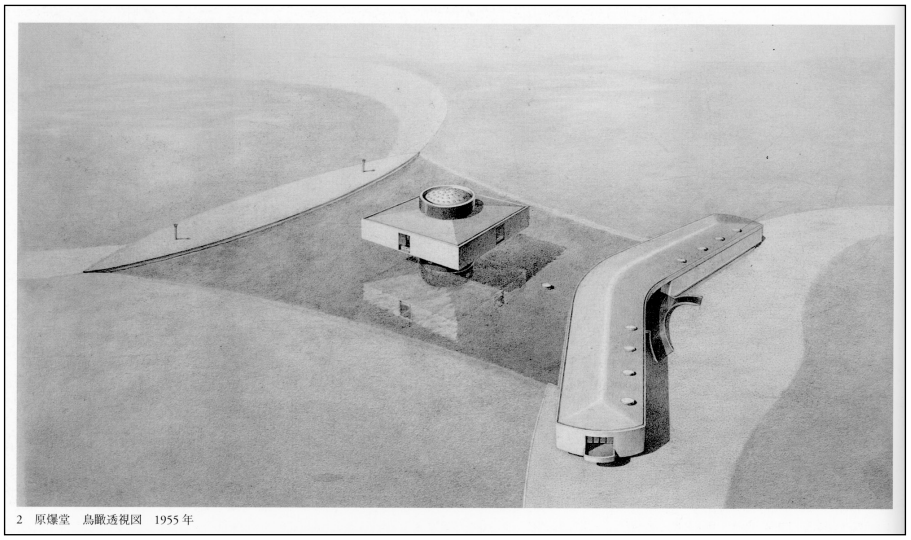

Figure 6: Seiichi Shirai, Temple of Atomic Catastrophes, 1955 (Tokyo zōkei daigaku 2010: 6). Desaturated from original.

It is in the 1959 project Shidōsha, a social facility for a brewing company in Yuzawa, that the priority of dynamic experience over frontal orientation becomes definitively established.[7] Here the roof itself is divested of its former symbolic charge. In the case of the main two-storey volume it has been reduced to a horizontal cap rounded downward along its edge, as if the corner-softening tactic of Shirai's plans had now been translated into the elevation. It also appears, in a reconceptualized way, in the form of a thin wedge-shaped canopy interlocking the main volume and its outriding one-storey companion (**Figure 7**). The latter gesture, which serves to guide the visitor's line of vision towards the entrance, can be seen as a response to the problem of how the building should address the narrow side street on which it is tightly sited. Indeed the forced perspective of the canopy wedge that greets the visitor arriving from the larger prefectural road serves to dramatize the sense of depth, much like the concavity in Zenshōji and the Matsuida Town Hall.

Figure 7: Seiichi Shirai, Shidōsha, Yuzawa, 1959. Photo by Maki Iisaka.

The progressive absorption of the iconic function of the roof into a larger dynamic of form and space has reached here an inflection point, one that would usher in a new phase of symbolic reprogramming in Shirai's work. The key projects witnessing this development are those for the Shinwa Bank that largely preoccupied Shirai in the 1960s, two of them branches in Tokyo and Nagasaki and the other a two-phase scheme for the headquarters in Sasebo, all of them evocative to some degree of the unbuilt Temple of Atomic Catastrophes. What sets the temple apart from the other works of Shirai from the 1950s is a tectonic reduction of the massing to a starker geometry in which the roof barely survives in the vestigial form of an almost imperceptibly shallow pyramidal cap. While the Shinwa Bank projects share in this de-iconization of the roof through its suppression as a visual articulation, what has become more broadly significant here, subsuming this suppression as part of its logic, is the idea of distorting the rectilinear toward the creation of organic form through which the symbolic may re-emerge, as in the gendered presence of the sibling buildings of the Sasebo headquarters (**Figure 8**), one of whose interior spaces has been described as womb-like (Hasegawa 1974: 176; Hariu 1969: 29).

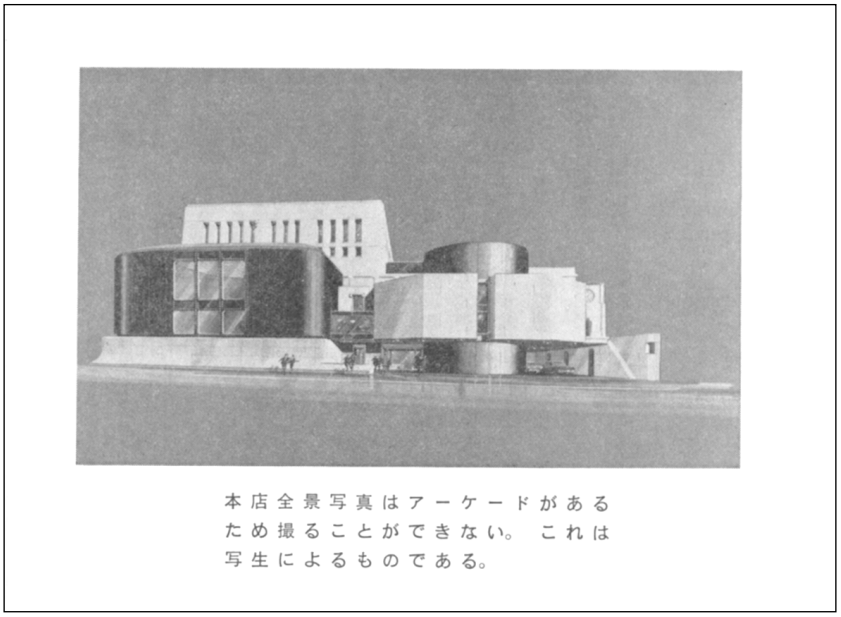

Figure 8: Drawing of Shinwa Bank headquarters, phase 1 and 2, Sasebo, 1967 and 1970 (*Shinwaginkō sanjūnen* 1972: 100).

This dissolution of both roof and grid in favour of a conception of form rooted in biological metaphor, coupled with an increasing interest in architecture as a dynamic structuring of experience, reached its apogee in Shirai's last body of institutional projects from the 1970s to the early 1980s, in which the drive towards anthropomorphic form becomes additionally charged with an overt eroticism that infuses almost every aspect of the design, from the graphic to the material (see Iisaka 2019 for a discussion of eroticism in Shirai's work). Significantly, the roof is re-established in these works as an active architectural element which, although no longer endowed with the customary symbolic value, forges a complex relationship between the building and the observer in strikingly inventive ways.

In the Shoto Museum of Art (1980), the horizontal pattern of the stone cladding on the concave facade interferes with the stripe patterns on the flat roof canopy so as to produce a gestalt in which the overhang appears convex (**Figure 9**). In the Santa Kiara Building at Ibaraki Christian University (1974), the roof is put to two different uses, first in the deceptive geometry of the entrance canopy which, as one of the architect's drawings illustrates, seems intended to create a cubist-like effect of multiple perspectives, and second as part of the disjunction of perceptual scales between the diminutive monumentality of the northern chapel, which appears as a unitary hull-like mass, and the oversized domesticity of the southern wing, which is distinguished by articulated overhangs (**Figure 10**).

Figure 9: Seiichi Shirai, Shoto Museum of Art, 1980. Photo by Maki Iisaka.

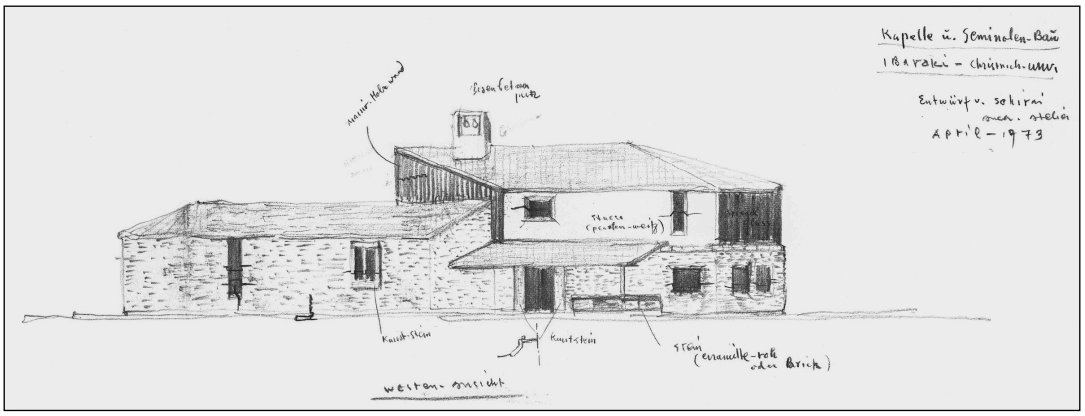

Figure 10: Seiichi Shirai, sketch of Santa Kiara building, Ibaraki Christian University, Ibaraki, 1974 (Shirai Seiichi Kenkyūjo 1992: III 15). © Shirai Seiichi Kenkyūjo.

In the 1975 computer tower comprising the Shinwa Bank's later third phase, the perversely small roof that perches on top amplifies the soaring sensation, while its sharp edges accentuate the carnal roundness of the shaft. The roof of the NOA office building (1974), meanwhile, has been visually suppressed in support of the building's form as a giant primordial sculpture. This indexing of absence resurfaces in the Shizuoka City Serizawa Keisuke Art Museum (1981) as a positive but spectral gesture in the form of a long stone perimeter wall, completely unarticulated along the top, whose gently gabled profile on the western side serves as an abstract signifier of 'roof' that helps to harmonize the museum with the adjacent residential neighbourhood (**Figure 11**). Rather than isolated formal events, one can understand these ploys being as part of the broader

conceptual architectonic that traces its roots back to the experiments with curved and angled distortions in early works and that evolved into a complex choreography of scale, texture, symbolism, and material (Iisaka 2019).

Figure 11: Seiichi Shirai, Shizuoka City Serizawa Keisuke Art Museum, 1981, outer wall. Photo by Maki Iisaka.

Through all of this, the grid remains repressed as a tool for structuring form and space, although it does continue to surface in various minor iconographic ways. Occasionally it is used in an ornamental manner that evokes certain elements of traditional Japanese architecture, and in any case it rarely appears as a pure abstraction. The rectangular modularity of the facade panels of the first phase of the Shinwa Bank headquarters is fastidiously adulterated, for example, through minuscule staggerings and differentiations in line weight that suggests a subtle weaving of patterns, echoing a similar effect illustrated in a drawing for an interior ceiling of the second phase that recalls a teahouse lattice window (*shitaji mado*) (**Figure 12**). These isolated manifestations take on the same value as other cultural references in Shirai's buildings, such as the Greek columns, Latin texts, arches, and fireplaces that evoke premodern European architecture. While the meaning and sources of these quotations ultimately remain ambiguous (for a discussion in the case of texts, see Iisaka 2019), their global inspiration is clear and speaks to Shirai's stated desire to participate in the development of tradition beyond the scope of Japanese cultural practices.

It is in the NOA building and the Shoto Museum that the dissolution of the grid became essentially complete. In plan, the Shoto Museum assumes the form of a womb in graphically suggestive detail (**Figure 13**). In the NOA building, the anti-orthogonality is more aggregative, and translates to its exterior demeanour as an urban landmark, which, despite the vulgar priapism and indomitable frontality of its soaring elliptical tower, is

in fact difficult to synthesize from partial views. This rejection of grid-like regularity also extends down to finer scales of architectural detail, notably in the random lighting patterns that one can find in the chapel of the Santa Kiara building and in the NOA building's vehicular entrance.

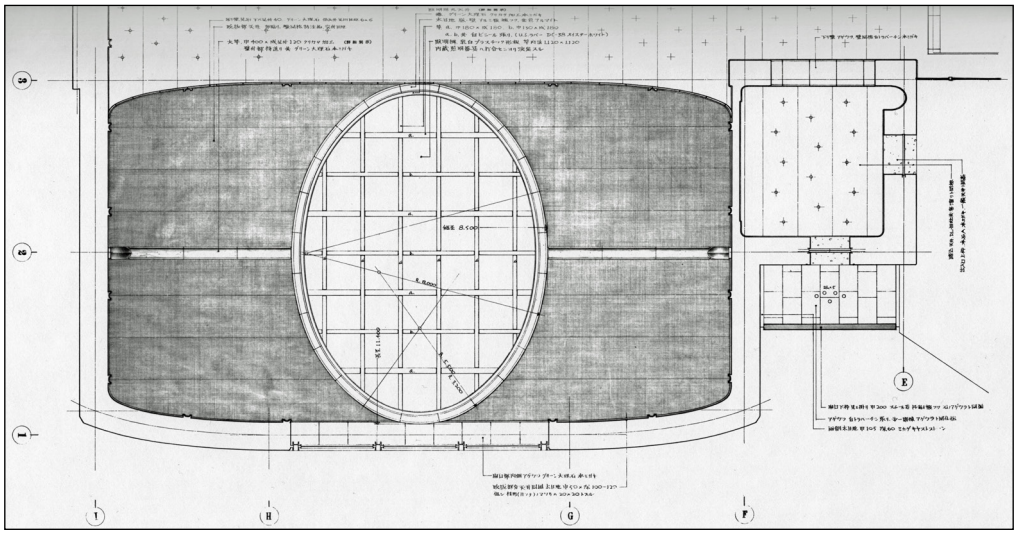

Figure 12: Seiichi Shirai, plan of Shinwa Bank headquarters, phase 2, Sasebo, 1970, detail (Shirai Seiichi Kenkyūjo 1987: 201) © Shirai Seiichi Kenkyūjo.

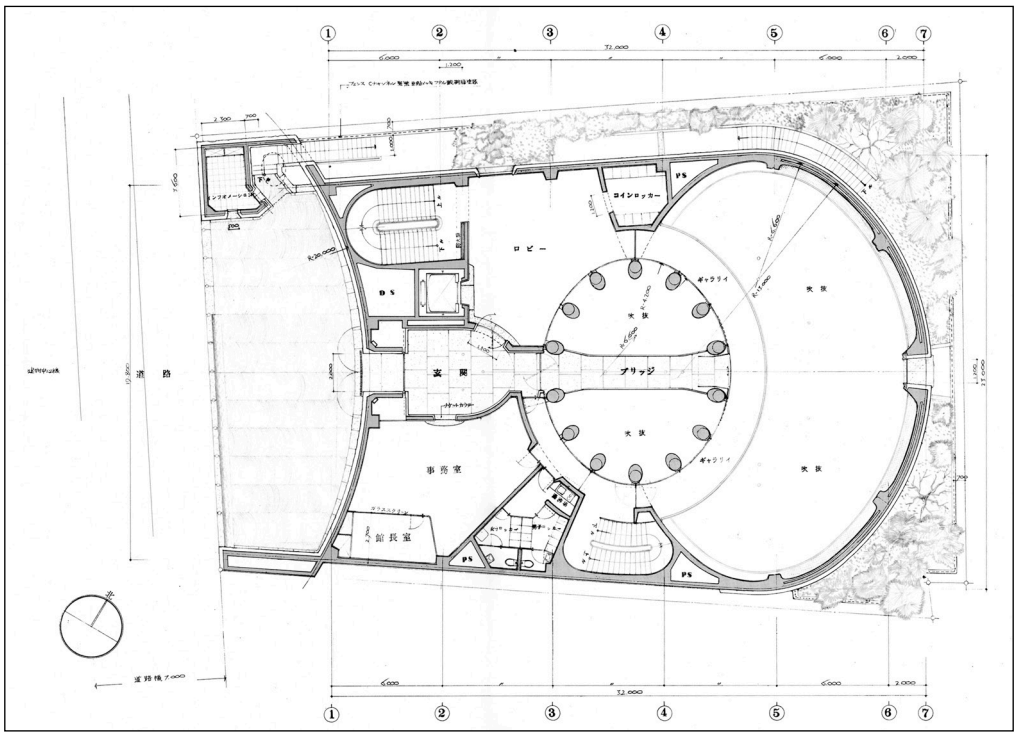

Figure 13: Seiichi Shirai, Shoto Museum of Art, plan of ground floor, 1980 (Shirai Seiiti Institute 1988: 256). © Shirai Seiichi Kenkyūjo.

Despite the priority given to a certain kind of symbolic gestalt in Shirai's conception of the NOA building as a *dōsojin* (a type of deity associated with birth and procreation), the grid still makes an appearance here, in the modular bronze cladding that wraps around the shaft. Far from proclaiming the triumph of modernity as a signifier of structure and clarity, however, it has been enlisted as one of many ingredients in the orchestration of a perceptual and phenomenological drama. Together with the smooth blackened bronze of the cladding, the horizontal ribbon window that delicately divides the shaft into two parts, and the subtly serifed golden dimensional lettering of the moniker NOA affixed just above this window, the gridding of the surface serves to convolute the apparent scale of the building from one of towering monolith to that of a precious piece of jewellery.

In the Serizawa Keisuke Museum, on the other hand, the grid has been reduced to a scaleless fragment of a Cartesian coordinate system, to two bare axes traced out in stone paving that set up a certain hierarchy among the architectural features of the main exhibition room, which include window and entryway arches, a monopteros offering visual access to adjacent rooms, an oversized fireplace, and a single column marking the origin of the coordinate system itself (**Figure 14**). Acting as a device that exaggerates the freeness with which architectural elements have been positioned with respect to each other, the grid survives here in its fundamentally modern function as a heuristic basis for analysis, transcending the rigid Cartesian system of numerical coordination in a way that points more towards the topological.

Figure 14: Seiichi Shirai, Shizuoka City Serizawa Keisuke Art Museum, Shizuoka, 1981 (En'ya 1981: 26). Photo by Osamu Murai.

With the successive dissolution and repurposing of both the grid and roof, the potential for iconic communication has become disinvested from the roof and reinvested in the entire building, which is now to be read, at least in extreme cases like the NOA building and the Shoto Museum, as an organic entity that departs from conventional modes of architectural expression. This transformation can be seen as registering Shirai's stated desire to do away with existing forms in an effort to harness the 'primitive force' he thought was latent in the spirit of the Japanese people, all as part of a broader program to engender a uniquely Japanese architecture. The roof and grid have become concerted instruments in the construction of an experiential theatre that prizes the visceral, a kind of phenomenology that was ironically bolstered by the various local and often ambiguous vestiges of the symbolic Shirai drew from global sources (in columns, arches, inscriptions, etc.) that continued to populate Shirai's architecture to the end. Their metamorphosis indexes a vision of architecture that has wielded the intractable problem of tradition and modernity towards singularly self-reflexive disciplinary ends, hermetic yet rich in its own evolutionary logic.

Tōgo Murano

Against both Tange's inventive cycling of the roof and grid motifs through boldly communicative form and Shirai's almost Hegelian development of these two themes, one finds at another extreme a very different trajectory in the architecture of Murano, which was vast in output and distinguished by a great versatility and resourcefulness in style, program, and scale. Included among his works are residential buildings, churches, college campuses, art museums, office buildings, city halls, theatres, department stores, and hotels, as well as renovations of modern and premodern buildings and a significant number of designs belonging to traditional Japanese typologies like the tearoom. The nature of his practice can be explained in part by his education at Waseda University, whose program, unlike that of Tokyo Imperial University, was intended to train architects who would serve the private sector. Under the influence of such figures as Kōichi Satō, Wajirō Kon, and Isoo Abe, Murano came to understand architecture as a humanistic enterprise in which one should strive to fulfill the demands of the client but at the same time attend to the broader social function of the discipline, with less concern for theory than for the relationship between humans and buildings. As part of this ethic Murano frequently experimented with new forms, at times by means of a complete invention and at other times through the grafting and modification of existing models, drawing inspiration globally but always avoiding literal interpretations when having to negotiate formal and material precedents.

Animated by an extreme sensitivity to the communicative potential of the formal qualities of objects, Murano's architecture is specially calculated to furnish delight and surprise through inventive and evocatively allusive forms and materials. In this sense

it resonates with the Japanese tradition of *kazari*, a cultural practice of decorating and arranging exterior appearances for their effects as a spectacle framed or modulated at certain specific scales, as manifest in artifacts from screen paintings and banner designs to armour and clothing (Rousmaniere 2002 ; Tamamushi 2005; Tsuji 2013). The outward demeanour of Murano's buildings, their individual architectural elements, and the artworks they often include as part of their conception all function like *kazari* in their articulation of space, promoting a more personal and playful mode of engagement than one based on overt symbolic representation or simple cognitive function. Both roof and grid were important ingredients in this decorative practice.

In the 1931 Morigo office building (**Figure 15**) one can already detect the decorative and material impulses that would shape later projects, for example in the use of salt-glazed tiles whose rustiness recalled for Murano the smoke and metal from the time he worked at a steel mill in Yawata as a young man (Murano 2008: 552). What is remarkable about the building is its formal starkness as an object in the urban landscape, its grid of shallow windows asserting itself with a strict yet elegant rigour, both as an abstraction of a Beaux-Arts inheritance and as an expression of the architect's sympathy for the modernist movement.

Figure 15: Tōgo Murano, Morigo building, Tokyo, 1931 (Nishimura 2002: 64).

During his travel to the United States and Europe in 1930, Murano came to conceive of window design as an important architectural problem. He returned from this trip convinced that a flatter facade was better suited to an urban environment, for otherwise 'the elevation would crumble' when seen obliquely (Murano 2008: 312). Murano accordingly fitted Morigo's windows with slender Duralumin sashes, said to have been the first aluminium window frames made in Japan (Manabe 1996: 32). In an interview later in his career, Murano explained that 'the way in which the glass and the wall touch each other, their relation to the sash, how the edges of the windows are treated' are important architectural details because of the psychological effects they have on the beholder, and the Morigo building can be seen as an early instance of his effort towards less confrontational material treatments whose aim was to encourage a more harmonious coexistence among people (2008: 300, 313). Given the combination of window detailing, unusual use and quality of tile, and overall form, the building must have stood out so much that it was noticed by chance by the architect Bruno Taut, who had no prior knowledge of it and ended up including it in his reportage for the magazine *Fujin no tomo* (Buruno tauto shi 1933).

The idea of the grid as support for an experiential dynamic is elaborated in a particularly rich way in the Chiyoda Life Insurance Company headquarters (1966), a self-contained campus on a hilly site in suburban Tokyo for which Murano was reportedly given free rein. The two main volumes on the northern and eastern sides carry an aluminum exoskeleton whose bold lattice pattern is strikingly legible from a distance and elicits a comparison with the exterior screens of a traditional merchant house. Less overt is the carefully calculated use of the grid in the plan to establish the promenade that guides company guests into the depth of the complex. This procession begins at the aerodynamically shaped steel porte-cochère of the executive wing at the western end of the site and continues through a generously sized foyer that has been sumptuously decorated with marble slabs and various sculptural objects, including acrylic light-sculptures along the western wall, a figurative bronze sculpture by Emilio Greco, and a pair of large stained glass pieces by the artist Tōshichi Iwata, all of which serve to pull the visitor towards the threshold into the main building (**Figure 16**). This threshold is interrupted by a column that appears to stand alone, sentinel-like, but is in fact part of the grid of structural columns that coordinates the interior of the main building and its everyday functions. What ultimately draws the visitor away from the column, like a gravitational field, is a climatic free-floating staircase (**Figures 17** and **18**), elegantly ornamented and ascending in a sensuous curve among several columns (see also Meguroku 2015: 5–6).

Figure 16: Tōgo Murano, lobby of Chiyoda Life Insurance Company headquarters, Tokyo, 1966 (Murano 1984: 118). Desaturated from original.

Figure 17: Tōgo Murano, staircase hall of Chiyoda Life Insurance Company headquarters, Tokyo, 1966 (Murano 1984: 119).

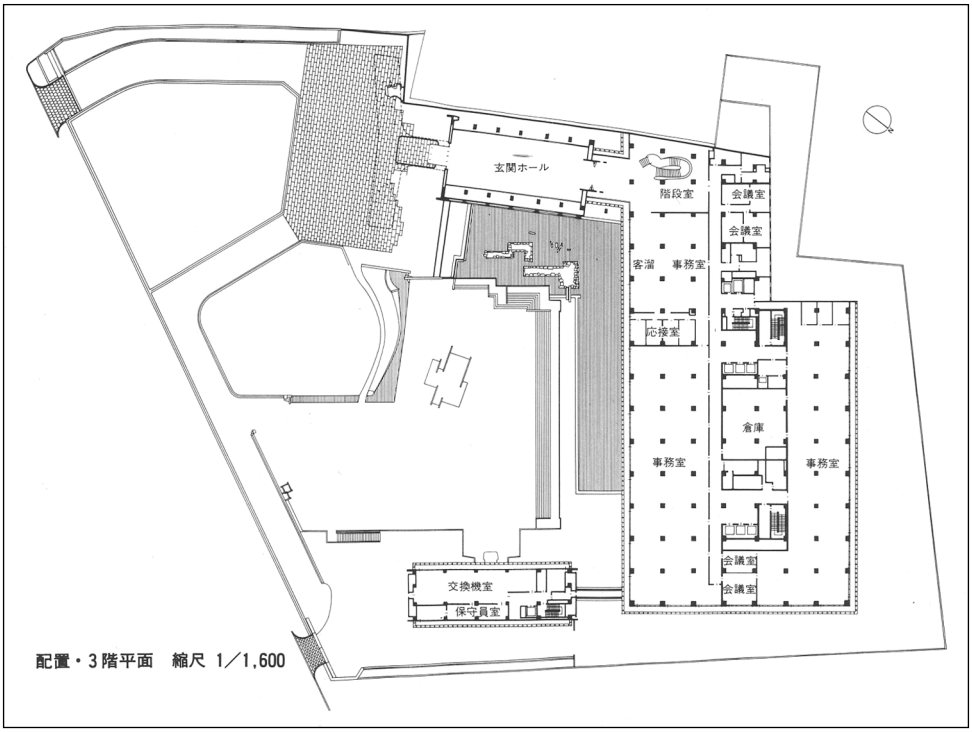

Figure 18: Tōgo Murano, third-floor plan for Chiyoda Life Insurance Company headquarters, Tokyo, 1966 (Murano 1984: 112).

This elaboration of ornament and grid as a means to precipitate movement and modulate the experience and perception of space has a correlate, at a larger contextual scale, in Murano's treatment of the pitched roof. Murano often strove to impart a friendly and even playful disposition to the roof through such features as delicate curves, gently inclined gables, and the layering of fine lines, meant to be enjoyed from different vantage points. These formal qualities naturally harmonized with buildings of a more strictly traditional nature, which Murano himself also designed in great number in reinforced concrete, and integrating these qualities into a Western-style modernism was an abiding goal in Murano's architectural program. In a 1942 interview with the art critic Takaho Itagaki, Murano stated, 'As a design principle I would always furnish a roof and avoid a flat roof in a provincial architecture that expects the atmosphere of traditional Kyoto. But this is not the kind of roof that imitates traditional religious architecture' (Hasegawa 2001: 7). An early example is the 1935 German Cultural Institute in Kyoto, in which Murano sought to reconcile the pitching of the roof, as mandated in his view by the historical surroundings, with the underlying rectangular volume of the building, whose fenestration was arrayed with a grid-like regularity. With its shallow slope and deep eaves, the ribbed copper roof was in fact barely visible from the street (Hasegawa 2001: 9; Wafū kenchikusha 2001: 23).

Soon after, Murano began to place smaller structures on top of a larger edifice in order to modulate the skyline, as in the fifth wing of the Miyako Hotel from 1936, and to create multiple roof lines arranged in a rhythmical asymmetry, as was done in the same hotel wing as well as in the neighbouring low-slung Japanese-style Kasuien erected in 1959 as an annex to the hotel (for other examples, see Hasegawa 2001). In these projects the roof served to bridge Murano's enthusiasm for modernism and his desire to engage with the cultural landscape as an embodiment of history and tradition, all the while providing a canvas for the expression of his aesthetic sensibilities and his attitudes concerning the role of architecture in society.

One project in which these tensions play out in a particularly illuminating although very unexpected way is the 1958 New Kabukiza theatre in Osaka (**Figure 19**). Asked by his client for something in the bold and colourful 16th-century Momoyama style at a time of declining interest in kabuki theatre, Murano rejected the formula established by Shin'ichiro Okada's 1925 Tokyo Kabuki theatre and came up instead with a freer and less convention-bound interpretation of the two roof motifs of *chidori hafu* and *kara hafu* popular in the Azuchi-Momoyama period (1568–1600), operating in the belief that 'a real tradition is when a past style is abstracted and becomes the subject of creative activity within oneself' (2008: 361, 641).[8] While a masterly triangular *chidori hafu* modelled after the Nijō castle crowns the steel-framed reinforced concrete structure, the recessed position and gentle slope of the gable, along with the slight bending of the hip towards the rake, deprive the roof of its usual majestic authority. The building's charisma emanates instead from the fleshy lines of the *kara hafu* that undulate continuously on each floor across the entire length of the facade, a span of over 60 metres.

Figure 19: Tōgo Murano, New Kabukiza theatre, Osaka, 1958. Photo by the Maki Iisaka.

At the time of its opening, the theatre received praise in some quarters for its inventiveness but was also harshly criticized for its apparent pandering to commercialism. According to Kawazoe, the impression was that 'commercial capital performed a large-scale rhapsody' that resulted in 'much more chaos in the city' (1958: 19). In summing up the building's reception, Hasegawa describes the building as 'an explosive like a hand grenade thrown into the architectural community in Japan in the late 1950s', 'made ludicrous to the extent that it cannot be judged through common sense', something 'one should not look at' (2011: 222). The critic Reyner Banham later claimed, in his explanation of why the theatre appeared improper to Western eyes, that the composition of the facade combines the modern and the traditional in a simultaneous and equal way (1985: 21).

Murano was himself aware of the potential cheapening effect of his aim to connect with consumers (2008: 579), but for him the issue was not the mere coexistence of the modern and the traditional but how these could be synthesized at the level of surface treatment. He compared the New Kabukiza theatre to the Kudan Kaikan building (formerly known as Gunjin kaikan, or soldier's memorial hall) from the 1930s to ultimately express his sympathy with the thinking behind the politically charged Teikan style even while being critical of its execution (2008: 641–642). This approach made it possible to balance the tension between the economy of construction demanded by the owner of the company — the theatre was built in an exceptionally short span of ten months — and the programmatic imperative to communicate with the masses. To address the latter he worked obsessively with a full-scale model of a *kara hafu* roof in order to achieve the desired shape and colour (Kakeyama 1986; Kanbe 2004: 96; Murano 2008: 641–642). The outcome was not so much a decorated shed with applied signage as a structure with a three-dimensional presence whose facade seduced the passerby with its complex shadows, materiality, and symbolic form.[9] If the facade appeared to celebrate the commercialization of society, its dignified and solid mien prevented it from descending into kitsch.

The cleverness of Murano's response to the client's demand was the use of the *kara hafu* motif to achieve a dialectical fusion of roof and grid that nods to modernist aesthetics in a jesting but sincere manner. While the symbolic function of the *kara hafu* roof is strained by the repetitions and layerings, it is the continuous *kara hafu* lines themselves that anchor the grid structure through a curvilinear form which, perhaps due to its affinity with the art nouveau he encountered in his youth, Murano found to be just as modern (2008: 361). As a substrate in the facade's textile-like geometry, the grid reads here as a pure Cartesian coordinatization that in itself is divorced from the history of Japanese building culture and conforms to a modern architectural paradigm. It is tradition, represented by the roof in its connection to the past, that conditions the grid's materialization as a legible but abstract entity, one that may in fact recede into subconsciousness. Through this inversion of the primacy of the grid as an emblem of modernity, Murano acknowledges the immanent relevance of historical form in contemporary Japan.

Respectful of clients, context, and local construction systems, Murano was at times cast in the postwar period as a reactionary circumscribed by his nostalgia for historical styles. In truth, Murano audaciously strove to break free from conformity in the service of specific environments and contemporary needs through a production of different symbolic and perceptual effects that were not necessarily dictated by some universal principle. He was extremely sensitive to certain kinds of detail and relied on his intuition and cultural awareness to choreograph the interaction between building and user. It was precisely a commitment to engage the public that conditioned his innovative reworkings of roof and grid as part of a performative decorative ethos, one that had the effect of diffusing and even eradicating the symbolic tension between the two terms.

Conclusion

With Tange crafting a popular image of Japan through a logic of excision and symbolic reinvestment that seems to operate above history, Shirai carving out a hermetic approach that sought to participate in an evolutionary tradition-advancing process through such means as the sublation of the symbolic, and Murano deftly combining a commitment to clients and consumers in the mold of a *kazari* practice, these three figures exhibited a remarkable diversity in attitude towards history within a shared period of reconstruction, technological progress, and rapid economic expansion. In Tange's case, the pitched roof and orthogonal grid communicate in direct iconic ways that shrewdly balance an apparent contradiction between universalist ambitions and regionalist inflections and serve to project a bold vision of modern architecture in Japan to a broad public. Over the course of Shirai's work, the roof undergoes a dramatic transformation from static image to an essential participant in a conception of architecture centred around perception and the body, while the grid functions to coordinate a metamorphosis into anthropomorphism and also reemerges in other visual and visceral forms reflecting an expanded notion of tradition, revealing a logic that both illuminates and underscores the esotericism of Shirai's program. Murano's handling of roof and grid varied even more widely, to the point of an apparent high-entropy ad-hoc-ness, from simple Teikan-style juxtapositions and the overlaying of traditional and modern readings to inventive compositional fusions of a more radical nature, all of which nevertheless cohere in a decorative attitude designed to speak to the public in conjunction with programmatic exigencies of a commercial nature. Although these strategies drew on different forms and ideas of architectural experience, they all accorded equal weight to roof and grid, not only in their acknowledgment of the historical nature of culture but also ultimately in their individual attempts to transcend the categories of modernity and tradition themselves.

Notes

Unless otherwise noted, all quotes from a Japanese source are translated by me.

[1] The grid pattern is pervasive in the formal vocabulary of premodern Japan, appearing in *shōji* screens, *shitomi* louvers, and ceiling structures while also serving as a modular coordinates for structural columns and tamami mats, with intimate connections to climate, customs, and other aspects of general building practice. For an overview of this vocabulary in the context of Japanese houses, see Nakagawa (2005).

[2] Tomoo Iwata is the pen name for Noboru Kawazoe.

[3] Fujimori describes a eureka moment when Tange saw the ceiling patterns that one of his staff had copied at various scales and pasted onto the model. The symbolic content here is quite literally grafted onto the form, and assumes a fortuitous bivalence, however tenuous in its legibility.

[4] Japonica refers to design products inspired by Japanese folk art that were developed for the export market in the 1950s. See Emoto 2020 for more discussion of Japonica in architecture.

[5] The Akinomiya project, for example, was modelled on a local *minka* farmhouse and was designed primarily with function in mind in its service to a snow-bound community (Shirai 2010: 11–12).

[6] Tsumairi is a shrine or temple typology in which the entrance is placed at one of the gable ends.

[7] *Shidōsha* was formerly known as *Yuzawa shuzō kaikan*.

[8] *Kara hafu* is a type of undulating gable while *chidori hafu* is a triangular gable that sits directly on the slope of a larger roof surface. Both roof types are found in temples and castles in Japan, such as at the Nijō Castle, whose *Karamon* gate has a *kara hafu* and whose southeast corner tower a *chidori hafu*. Murano's willingness to adopt a traditional roof form contrasts with Shirai's attitude. In criticizing the competition for the National Theatre, Shirai wrote in 1962 that 'since this is an institution for cultivating national sentiment, it would not be necessary to aim for a so-called traditional form like that of a dynastic or Momoyama style. I wish for a kind of form-making that confronts the will of the period at the moment. "Kara hafu" and "shitomi" shutters are graceful. "Renji" windows, "namako" walls, and such are beautiful. But we must sublate the kind of standard that affirms the possibility of eternal regenerations of tradition and a development of Japanese form-making by means of a deformation of such things' (Shirai 2010: 62).

[9] The facade of the New Kabukiza theatre exterior has been salvaged and incorporated into the hotel high-rise by Kengo Kuma that was recently erected as a replacement on the same site.

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Competing Interests

The authors have no competing interests to declare.

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