

Acculturation of the Modern: Mass Tourism, Consumer Culture and the Work of Candilis-Josic-Woods

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The canonical architectural histories of the postwar period hold that Team X sprang mainly from a so-called 'internal critique' of the modern movement. Though it can be argued that the deficiencies and limitations of the early modern movement were further developed and refined, the perspective of an 'internal critique' cannot account for the important changes that Team X evoked within postwar architectural culture.² The perspective is exemplary for a larger weakness within conceptualization of post-war architectural culture that reduces Team X to the univocal, linear and natural development of the modern movement, and to the exclusive result of internal and theoretical debates within CLAM.

In addition to these receptions this research explicitly positions the concepts and projects of Team X within the framework of new themes (practices and spaces) that the modernization project and upcoming mass consumer culture of the 1950s and 1960s brought to the fore: mass housing programs, popularization of university education, increasing automotive mobility... As an example, this text focuses on the values, aspirations, social practices and sites that mass tourism – as an important instance of consumer culture and welfare society – introduced in post-war France. Within the architectural practice and thinking of Candilis-Josic-Woods, mass tourism projects figure at the crossroads of politics, dwelling, transport and communication where 'concrete' connections appear between developments in the field of architecture and in other knowledge fields.

As a social practice that both 'houses' people and at the same time stands for escape and abundance, mass tourism maintains a complicated relation with the realm of dwelling. In the post-war period mass tourism represents both the front and back side of emerging dwelling ideals: it is both complicit and critical of them. It is precisely this janus-faced character of mass tourism that is made operational in the theories and projects of Candilis-Josic-Woods – in order to deal with the ambivalent, and by no means linear, experience of post-war French modernization.

Underlying the re-consideration of the mass tourism projects of Candilis-Josic-Woods, is the belief that the themes and projects brought to the fore by Team X deal with essential aspects of our urban condition, as it was initially outlined by the rapidly developing mechanisms of welfare state and consumer society in the immediate post-war period. Moreover, this research aims at illustrating a specific understanding of the position and function of the architect within Team X – mediating between local academical, institutional and corporate practices and at the same time contributing to an international theoretical debate on architecture and urbanism. Finally, re-anchoring the work of Candilis-Josic-Woods within the broader social and cultural framework of mass tourism, offers the possibility to clarify the meaning and span of concepts that had large resonance within post-war architectural culture.

MASS TOURISM AND THE WORK OF CANDILIS-JOSIC-WOODS

In France the development of mass tourism took largely place during the so-called 'thirty glorious years' (Les Trentes Glorieuses)³ of economic growth and the related rise of the mass consumption economy and welfare society that followed the Second World War. During these years, leisure became for the first time an important and non-neglectable social fact.⁴

The increasing social importance of leisure reflects itself clearly within the commissions of the Candilis-Josic-Woods partnership.⁵ Between the upstart of the partnership in 1956, and the decomposition of the office in 1970, about 90 projects related to leisure were elaborated.⁶ Moreover, Georges Candilis was, in 1969, appointed by the Ministry of Equipment (Ministère de l'Équipement) to plan the coast of Languedoc-Roussillon (about 180 kilometers between the Camargue region and the Spanish

border), an area that was at the time the largest tourism zone in France.

The issue of leisure was considered a theme of central importance within the office of Candilis-Josic-Woods as *Planning and Design for Leisure* published in 1971 by Candilis illustrates.⁷ The book offers a retrospective overview of projects within the realm of mass tourism by the partnership during the period 1956 to 1970. Plans and images of vacation resorts, hotels and facilities are accompanied by a critical text illustrating some of Candilis' viewpoints on the broader issue of architecture and leisure. The text relies strongly on the cultural theory of leisure of the renowned French sociologist Joffre Dumazedier⁸ and underlines the growing importance of leisure for everyday life and for urban and architectural practice in the post-war period. The opening lines of Candilis read:

"From the moment that we accept that the leisure of the masses is becoming a crucial phenomenon of contemporary civilization, we have to examine and review the evident and hidden relationships that exist between leisure and the different activities of daily life and, above all, clarify its real significance, its content its multifarious aspects and the predominant and increasing role that which it is called upon to play in our society"⁹

Within the work of Candilis-Josic-Woods tourist projects are seen as opportunities for research into the role and meaning of one of the mass practices that was considered representative of a newly emerging society of welfare and mass consumption.

The post-war research of the partnership is pursued against the background of earlier connotations and meanings that leisure acquired within the international and French architectural debate. 1937 is a pivotal moment in this sense.¹⁰ During that year, CIAM V with the title 'Logis et Loisirs' was organized in Paris and Le Corbusier's *Pavillon des Temps Nouveaux* was erected in the margins of the Paris World Fair. In France, 1937 also marks the end of the first year of the Popular Front government under Léon Blum.¹¹ This government resulted from a coalition of Communists with other leftist parties and was elected in 1936 after continuing scandals and right-wing unrest. *Prélude*, the syndicalist journal that Le Corbusier often wrote for, hailed the taking power of the Popular Front as the "beginning of the Temps Nouveaux".¹²

THE ARCHITECTURAL DEBATE ON MASS LEISURE: CIAM V — 'LOGIS ET LOISIRS'

The theme of leisure was prominently and explicitly put onto the international architectural forum in early 1937.¹³ At the beginning of that year, Le Corbusier, as president of the CIRPAC group¹⁴, decided in a meeting with Jeanneret, Perrin, Sert and Weismann to neglect the CIAM agenda that was

decided upon a year earlier in La Sarraz. The focus of the upcoming CIAM was re-directed to: "the most urgent problem of our time: the dwelling" and immediately linked to the "inseparable" issue of "leisure".¹⁵ CIAM V was held in the summer of 1937 in Paris under the motto: *Logis et Loisirs* (Housing and Leisure).

As such, the placing on the architectural agenda of the theme of leisure is not a remarkable fact. Le Corbusier and other architects had long before 1937, within and outside CIAM, been dealing with mass leisure out of hygienist and reformist perspectives.¹⁶ The specificity of CIAM V resides, however, in the fact that it connects leisure to an important change of scope. As the subtitle of the congress "Villes et Campagne" (Cities and Countryside) indicates,¹⁷ the issue of leisure is inextricably linked to a widening of focus towards territories outside CIAM's normal urban range of intervention. This is underlined by the preparatory text of the congress that states: "it is the general administration and the general exploitation of the country that is at stake".¹⁸

Within CIAM V the theme of leisure becomes strongly related to a new conception of city and country, of urban and rural, that radically departs from their traditional binary opposition.¹⁹ Throughout several texts and minutes of the congress the rural and the urban are defined as interrelated and interdependent categories. The arguments for this interdependency are not based on an abstract theoretical construct, but rather on a set of social and political intentions geared to generate a practice of mass leisure. José-Luis Sert defines in his text "extra-urban" leisure as closely linked to: "Life in the big city, loss of contact with nature (...) and finally the new organization of work (40 hours week)". His text is a plea for additional leisure zones within natural and rural settings. More importantly, however, is the fact that Sert approaches extra-urban territory as a scene upon which modern mass practices can develop. The 'rural' and the 'natural' do not figure as anti-modern, but are understood as loci for the modern practice of mass leisure and tourism. As Sert puts it: "beaches, forests, lakes, rivers, etc" will be taken "by the big masses"²⁰

PAVILLION DES TEMPS NOUVEAUX: AUTHENTIC AND MODERN MEANINGS OF THE EXTRA-URBAN

In the summer of 1937, the concept of city and countryside as interdependent loci for the modern mass practice of leisure that CIAM V installed, is visualised in the *Pavillon des Temps Nouveaux*: a tent construction erected at the Porte Maillot in the margins of the Paris World Fair.²¹ The enormous collage-like panels on dwelling and leisure (by Le Corbusier) illustrate how the countryside became constructed as urban equipment — that should be for a large part of society a leisure scenery. The panel depicts a continuous territory composed of urban and

rural elements and larded by mass leisure practices (swimming, soccer, etc).

The *Parvillon des Temps Nouveaux* illustrates how in the immediate pre-war period, within the confines of CIAM, the meaning of the countryside became radically redefined. This new definition does not replace former ones, but rather mediates between the new meaning of the countryside as locus for the modern practice of mass leisure and its age-old "authentic" load. As Shanny Peer notes, what is at stake here is that the extra-urban territory is for the first time presented: "not as residual survival of the past, but as a living source of national renewal – a way to be modern and still specifically French".²²

THE DEMOCRATIZATION OF LEISURE: LES CONGÉS PAYÉS

CIAM's particular attention to the extra-urban (rural/natural) and to the theme of leisure was not coincidental. Both were paramount points of political attention and action for the Popular Front government of Leon Blum that was in power in France since 1936. At the very beginning of its term, the Blum government had underlined the importance of leisure with the legislation of paid vacations (congés payés) which immediately unleashed a wide-ranging debate around the cultural politics of leisure and social access.²³ Le Corbusier's 1937 dictum that: "'Dwelling and Leisure' seen as an obligation of society towards everybody, becomes a direct ancillary (prolongement) of public services"²⁴ illustrates how the introduction of the 'congé payés' rapidly forged a new understanding of leisure and vacations. It challenged the prevailing notions of vacation as an elite – and generally foreign – practice and enacted a democratic model for vacations.

Under the Popular government, paid vacations came to be understood as a *right of citizenship* bound up with a modern standard of living and part of a new social contract. The result was a particular French understanding of the relationship between leisure (vacations) and politics. In the French architectural discourse, the legislation of paid vacations and the subsequent CIAM meeting and *Parvillon des Temps Nouveaux* resulted in a specific connection between the democratic and civic values of mass leisure (one of the elements in a larger state-led project of modernization) and the newly installed meaning of the extra-urban territory – as both a site for the ongoing processes of modernization and for "authenticity".

Though clearly on political and international architectural agendas, on the eve of World War II, mass vacations and leisure were not common social practices, in the sense of large numbers of people from diverse social groups going on vacation, nor were they highly visible as a subject of commercialised mass culture.

'DROIT À LA NEIGE/MER': POST-WAR MEANINGS OF MASS TOURISM BETWEEN THE WELFARE STATE AND CONSUMER SOCIETY

During the first decades after the war, the gap between the entitlement to vacations (secured in the law of 1936) and real access to vacations narrowed. Drawing from a broader economic and social base and capitalizing on expanded incomes, extensions of government paid vacations, as well as on the growth of tourism-related infrastructures, tourism and vacations grew dramatically in France during the first decades following the war. This expansion of vacationing was also influenced by better and more reasonably priced accommodations, along with greater personal mobility afforded by automobiles and cheaper air travel.²⁵

Mass tourism came to be understood as an integral part of the developing 'New France' characterized by enhanced productivity, expanding mass domestic markets and an increased velocity of trade. For the creation of this image of the 'New France', state ideologues drew largely upon a repertoire of themes – such as leisure – that was already well established before the war, investing them with surprisingly similar social and political meanings. During post-war years notions as 'Right to the Snow' (Droit à la Neige) and 'Right to the Sea' (Droit à la mer) structured the discourse on tourism as Marc Chevallier notes.²⁶ Paid vacations, along with other social policies (housing, family allocations and insurance benefits), came to be understood as benefits geared toward supporting the right of social groups to share in the general welfare and prosperity of society.²⁷ By the late 1960s, paid vacations would be an object of mass consumption, a subject of mass culture, and a right of citizenship linked to the notions of entitlement and a just standard of living within an emergent social welfare state.

Two large categories of tourist initiatives emerged and each imbued the realm of mass tourism with a specific set of meanings. Social tourism relied upon government subsidies to realize "vacations for all" through vacation resorts and group travel. Out of this perspective, vacations came to be understood as a form of democratic leisure, social consumption and group solidarity. Besides social tourism also commercial tourism was becoming big-business during the consumer-oriented economic expansion of the 1950s. The expansion of commercial tourism was fuelled by its conceptual fit with the emergent society and economy of mass consumption. Here, a proliferation of cultural representations equated vacations with desirable consumer goods, vital aspects of a new, modern standard of living, and hence the language of consumption became normative in discussions concerning vacations. The dominant meanings in consumer culture and commercial tourism converged. The tourism project provided a primer for living a modern, consumer oriented life valuing comfort, health, pleasure and self-indulgence.

TOURISM AS TESTING GROUND WITH BROADER RESONANCE

Against this background of neither stable nor fully worked out meanings of mass tourism, the Candilis-Josic-Woods partnership realises around 90 tourist projects in a time span of about 24 years. Throughout the texts that accompany the projects, there is the general assumption that tourist projects are sites of architectural experiments:

“This major phenomenon of contemporary civilization calls for research into, and the discovery of a new architecture: the architecture of leisure.”²⁸

This viewpoint was characteristic for French architectural discourse during the post-war period in which tourist resorts came to be understood, similar to the colonies (in former days), as a ‘free-places’ for the exploration of new urban and architectural concepts and ideas. It was common practice to regard tourist developments and vacation resorts – amongst others because of their non-conforming character – as laboratory situations that allowed for experiments with a relevance for the future of urbanism and architecture.²⁹ In 1969 Max Blumenthal, in a special issue of the renown periodical *Techniques et Architectures*, formulates it as such:

“new urban organizations and forms that come to the fore in tourist resorts can be considered as real laboratory experiences for future urban development and may contain important lessons, that are not necessarily coloured by strictly commercial considerations. As it is, in the near future, the length of labour will diminish considerably, and urban structures will have to be rethought.”³⁰

LEISURE FOR THE GREATEST NUMBER: THEORETICAL AND PRACTICAL PERSPECTIVES

Characteristic for the practice of Candilis-Josic-Woods is that this idea of a testing ground is interpreted as well along practical as theoretical lines.³¹ Within the theoretical approach of the partnership, tourism gets clearly linked to the ideological and political load that it acquired in the pre-war architectural debate. Thus the chapter ‘Leisure for the Greatest Number’ in Candilis’ book *Batir la vie* of 1977, mirrors the partnership’s earlier concerns with ‘Habitat for the Greatest Number’.³² Both leisure and habitat are considered as essential – and interrelated – elements of a larger political project for a society of the ‘greatest number’: “The acceptance of the prime importance of leisure in everyday existence, and its widespread and permanent presence, is bound to undermine ideas about tomorrow’s habitat. Nowadays leisure affects the greatest number, is subject to economic laws and has to be ‘organized’, so that it may be accessible to all.”³³

Besides an ideological concern, leisure was – as earlier mentioned – also an important practical issue for the partnership. The large state investments into the encouragement of mass tourism and into the widening its social access (domestic and foreign) resulted in important commissions for the newly founded office. The three leisure projects by Candilis-Josic-Woods discussed in the remainder of this text illustrate the range of these state initiatives.³⁴

The first research for the *Tourist Equipment in the Tropics*³⁵ of 1956 was part of a larger scheme that was commissioned by the ‘Ministry of Overseas France’ (Ministère de la France d’outre-mer) and included the complete tourism planning for the French overseas islands.³⁶

The second project is the design made for *Vallée de Belville winter resort* competition in 1962. This project, elaborated in collaboration with Charlotte Perriand and Jean Prouvé, is the submission for a national competition on the planning of the Belville valley in the French Alps into a ski-station for 25.000 people. At the time, the project was largely published as well in the French architectural press as within international magazines such as *World Architecture*, *Progressive Architecture* and the German periodical *Bauen und Wohnen*.³⁷

The third project is part of the earlier mentioned Planning for the coastal zone of the *Languedoc-Rousillon* commissioned by the Ministry of Equipment (Ministère de l’Équipement) in 1969. The discussed project is the Candilis-Josic-Woods was at the time the largest tourist resort in France – about 100.000 beds on a site of 800 hectares – at *Barcares-Leucatte*.³⁸

All three projects are commonly viewed as architectural exercises within a structuralist way of conceiving architecture. In the contemporary professional press they were praised because of their efforts for climatological and formal adaptation and integration. In the case of the *Tourist Equipment in the Tropics*, the climatological acculturation of modernism is underlined.³⁹ The section of the different room units allowed for the wind to flow and thus for natural ventilation. Concerning the *Belville winter resort* its remarkable inscription within the contours of the existing Alpine valley is often mentioned.

Though the importance of a structuralist approach within modern architecture and adaptation of the modern project to climate and context should not be underestimated, I argue that the most important impact and meaning of both projects lies elsewhere and can be made clear through the precise placement of the designs within the framework from which they arose: the dynamics of modernization, consumer culture and emerging French mass tourism.

THE JANUS-FACE OF MASS TOURISM

In the practice of Candilis-Josic-Woods, mass tourist projects function as exemplary attempts to deal with the – often contradictory and tenuous – architectural and urban reality that results from the new meanings and practices that the welfare state (modernization) and consumer culture introduced during the post-war period.

Therefore, the projects rely upon the janus-faced relation that mass tourism maintains with the realm of dwelling. As a social practice that both ‘houses’ people and makes them feel at home, and at the same time stands for escape and abundance of the ‘homely’, mass tourism maintains a complicated relation with the realm of dwelling. Mass tourism represents both the front and back side of emerging dwelling ideals: it is both complicit and critical of them. In the projects of Candilis-Josic-Woods, this janus-faced character of mass tourism is made operational.

As such, one can trace, throughout the tourist projects of Candilis-Josic-Woods, the disappearance of the traditional hotel room in favour of new typologies that underscore a rapidly generalizing ‘dwelling ideal’. In the early project of the *Tourist Equipment in the Tropics*, the luxurious hotel accommodations of the old tourist stations seem to be disavowed, to make place for an accommodation that is composed of entities that are amongst others labelled ‘semi-bungalow’ and ‘bungalow’. These entities are variations on the architectural type of the ‘cabin-studio’: minimalist but sufficient in the dwelling space it proposes, undone of all superfluous luxury or unnecessary decoration, offering the exact answer to the lodging needs of the tourist, but above all creating spaces of private retreat. As well, the ‘semi-bungalows’ as the ‘bungalows’ have proportionally large private interior and exterior zones for sitting and gathering. Within the representations (plans, sketches) of the different dwelling types, these zones are depicted as spaces for private interaction and relaxation addressed to the family that inhabits them.⁴⁰

The ‘dwelling ideal’ that is brought to the fore expresses what Kristin Ross has called: “the dominant social movement of the period”: a movement of retreat, or ‘repliement’ which was theorized by Henry Lefebvre and Cornelius Castoriadis under the name of ‘privatisation’.⁴¹ As Ross explains: “privatisation is certainly nothing new; its historical particularity or palpability in the late fifties and early sixties can only be seen as the *acceleration* in the process in which various spheres of life become separated from each other – the most crucial being that of domestic life from the sphere of work.”⁴² Mass Leisure as clearly (by the state) conceived in opposition to work was, as it were, foreshadowing the results of this ongoing process in the realm of domestic life. Commenting on the visions of Candilis-Josic-Woods for their *Tourist Equipment in the Tropics XXX* writes: “the architects have all the time had the primordial

worry of giving the tourist the impression of ‘being at home’ (d’être chez soi)”.⁴³ As Kristin Ross points out to be ‘at home’ came to mean in the 1950s and 60s to have an identity – based upon security and permanence.⁴⁴ In a similar way, the purpose of mass vacations came to be understood as being “re-centered” in a place.⁴⁵

In the project for *Barcares-Leucatte* this dwelling ideal is connected to the increasing dissemination of – perhaps the most culturally and economically significant consumer good of the post-war period – the automobile. By 1964, 65 percent of French vacationers travelled by car to their destination.⁴⁶ The typology of the ‘houses with boats’ at *Barcares-Leucatte* is an attempt to deal with the newly converting social meaning of car, vacation dwelling and sailing boat during the post-war period. The proposed typology is a stretched figure that seamlessly connects the domestic realm of the vacation dwelling to the circulatory systems of the cars (roads) and of the sailing boats (channels). Kristin Ross notes that: “post-1950s France-at-the-wheel enacted a revolution in attitudes towards mobility and displacement.”⁴⁷ Going on vacation in one’s car enacted a cultural convergence: both vacations and cars could signify mythic escape, personal autonomy and displacement in time and space. The typology of the ‘houses associated with boats’ underscores the meaning of car and seaside vacations as important symbols of individual liberty that were largely integrated within the middle strata of society and resulted in general patterns of expectations.

The fact that these new dwelling ideals and symbols were developed within a ‘mass’ tourist environment, offers Candilis-Josic-Woods the opportunity to question the possible generalization of this dwelling ideal and its consequences for the environment.

Out of the perspective of building production, this question is related to the general demand for the increase of production capacity of society and the question of industrialized building techniques that was from the early 1950s at the centre of French architectural debate. Though the proposed typologies differ from the earliest post-war tourist equipments – that literally mass-produced the F1 to F4 type apartments introduced by the government during the early years of reconstruction – the projects of Candilis-Josic-Woods are investigations into the possibilities of industrialized building.⁴⁸ The degree of mass production varies from single building elements in the *Tourist Equipment in the Tropics* to entire dwelling cells in the *Vallée de Belville winter resort*, but plays always a prominent role in the overall design concept.

More important, however, is the fact that the partnerships designs are investigations into the relationship between the generalization of the new dwelling ideal and the natural or rural landscape. The – in 1937 installed – double meaning of the landscape as both a site for the ongoing processes of ‘moderni-

zation' and as resource of 'authenticity' is fully explored within the project of the *Belleville ski-resort*. Here, the landscape is first and foremost approached as equipment that is available to all. Charlotte Perriand's article 'Being Conscience of our responsibilities' (Prendre Conscience de nos responsabilités) on the *Belleville ski-resort* illustrates this approach: "These alps, have in later times resembled to me a natural fact, a beautiful park...."⁴⁹ Perriand's description of nature as park illustrates how the "authentic" and natural load of landscape became connected to the democratic ideal of public space. This understanding of the landscape relies on a double move of 'naturalization' and 'museification': the landscape is conceived as an authentic and natural environment – unspoiled by the ongoing modernization, and at the same time as an object 'to be viewed'. This approach is taken up in the project of the *Belleville ski resort*. Here, the roofs of the tourist cells are – in contradiction to the traditional pitched roofs of mountain hotels – flat. This roof shape is a result of rational demands (prefabrication), but above all the expression of the democratic availability of the spectacle of mountain and sun. In this mountain resorts, tourists turns their back to the world, are aligned to the mountain, and become beneficiaries of a common view. Resort and stay are made standard, as such they allow for common visual enjoyment of a shared dwelling ideal: "simple living in freedom and harmony with nature."⁵⁰

CONNECTING DWELLING IDEALS TO DENSITIES

Although the new dwelling ideal became increasingly connected to a dispersed (suburban) form of urbanisation, the tourist projects of Candilis-Josic-Woods should be understood as attempts to reconnect with more dense 'patterns' of urbanisation. As Candilis writes in *Planning and Design for Leisure*:

"A separate home (detached house), however excellent, is no longer of interest if it can not be integrated into the fabric of a town, or if it does not contribute to the creation of any such a pattern."⁵¹

The necessity of mass tourist projects to deal with the tension between two poles proper to mass leisure – on the one hand, the democratic intention to give everybody its individual access to natural resources (snow, sea) and on the other hand, the need to fore come the disappearance of the natural resource – is taken here as an offshoot for a general research into urbanisation patterns. It is out of this perspective that the moralizing title of Charlotte Perriand's article on the *Belleville ski-resort* 'Being Conscience of our responsibilities' (Prendre Conscience de nos responsabilités) should be understood. According to Georges Candilis this requires a:

"new perspective (that) is bringing new forms of human groupings, new relationships between such a groupings

(...) which demand a fresh attitude to architecture and urbanism."⁵²

The tourist projects of Candilis-Josic-Woods are remarkable investigations within the possibility of these new kinds of groupings: they represent research into the feasibility of relating the 'privatised' dwelling ideal to density.⁵³ As multiple conceptual schemes illustrate, the general strategy that the partnership develops to obtain this goal relies on a double move of 'dissection' and 'reconnection'. In a first dissecting move, the tourist project is unravelled into its smallest composing entities: being it the single dwelling cell or even parts of it. In a second instance these different parts are combined, juxtaposed and superimposed and thus reconnected as a new urban tissue.

In the projects for the *Tourist Equipment for the Tropics* and the *Belleville ski-resort*, the reconnection is structured by a 'free-figure'. In both cases whimsical pedestrian axes are laid-out according to the topography of the landscape. These axes accumulate the typologically different dwelling cells, structure them and secure their accessibility. In the *Belleville ski-resort* the axis is connected to a larger monorail train system that joins existing villages, parking lots and other ski-stations. In both projects, the result is an interiorised urban figure that is completely directed towards the main axes.

In the project for *Barcares-Leucatte*, Candilis-Josic-Woods demonstrate two different strategies of reconnection. In the designs for the 'Ribon Houses' and the 'Puzzle Houses' the urban instrument to realize the sought-after density is an underlying grid. In the case of the 'Ribon House', this grid takes the form of an almost continuous urban tissue that is made up of parting walls at regular distance that define linear strips. The piercing of these linear strips by patios and their interruption by perpendicular parting walls defines the dwelling units and the urban tissue. In the case of the 'Puzzle Houses', a grid that alternates between dwelling zones (living room, patio) and service zones (sleeping room, bathroom, kitchen) forms the basis that allows for multiple and interwoven combinations of tourist units.

In the design for the 'Holiday Village', 'Houses with Boats' and 'Flats', the starting point for the realization of density is a specific typology for the single dwelling. In the case of the 'Houses with boats' and the 'Holiday Village', the age-old typology of the (single or double level) patio-dwelling is recuperated. A serial and additive reconnection of "family-units around a private patio"⁵⁴ results in large figures of dense urban tissue. The design for the 'Flats', relies on three typologies of patio-dwellings that are, as well in horizontal as in vertical senses, intermingled and result in dense and expressive clusters of tourist dwellings.

The strategy for dissection and reconnection of the tourist project of Candilis-Josic-Woods distances itself from the mass

plan system (plan masse) that was advocated by CIAM. The proposed solutions are critical investigations on urbanisation that take the interrelation between urban morphology and architectural typology as a starting point for the definition of a new urban tissue.

COLLECTIVE FIGURES: THE STEM

As well, the *Belleville*, *Barcares-Leucatte* and *Tourist Equipment for the Tropics* projects also represent another critical stance towards the ongoing developments of dispersal within the urban realm and its important consequences for urban public space. All three projects have a common denominator: the presence of a collective architectural figure. In the *Tourist Equipment for the Tropics* project, a continuous pedestrian spine culminates in the architectural spaces of the main building and links the different types of rooms. In the case of the *Belleville Ski resort*, the one and two story mass of the project is intersected by an inclined, mechanically assisted, pedestrian axis with the public spaces of the resort. In the *Barcares-Leucatte* project, two covered tri-dimensional public structures intersect the urban tissue, connect the lagoon to the beach and house public facilities.

These common figures express another important aspect of mass tourism, namely that the new rhythms of vacations offer new possibilities for sociability; for collectivity – as Marcel Roncayolo points out.⁵⁵ The 1950s and 1960s meaning of vacations as an escape from domestic routines includes the possibility for a different attitude towards public space. In the practice of Candilis-Josic-Woods, this possibility is taken as a starting point for the architectural definition of an alternative for the generally impoverished design and use of public space – closely related to the domestic privatisation of the middle class.

The definition of this alternative is inextricably linked to the introduction of common collective figures, which can be considered representations of what Woods would theorize in 1960 as a ‘Stem’.⁵⁶ In a recent article, Alexander Tzonis and Liane Lefaivre have pointed out that the issue of ‘Stem’ can be considered as Candilis-Josic-Woods’ most important contribution to post-war architectural thinking. The two articles that circumscribe the idea of Stem were published by Shadrach Woods in *Architectural Design* (1960) and in *Le Carré Bleu* (1962) – the influential architectural review of André Schimmerling. Though several scholars have tried to analyse and describe the concept of ‘Stem’, the precise meaning of the term remains rather vague.⁵⁷ I argue here that by looking at the stems in the three tourist projects discussed, some of its essential meaning might come to the fore.⁵⁸

It is through the stems in mass tourist projects that Candilis-Josic-Woods offer their view on post-war public space. The offshoot for this view is the partnership’s belief that within the

newly emerging reality, propelled by welfare society and mass consumption, public space can no longer be an urban figure defined by stable architectural, programmatic and social characteristics. In contrast to the Smithsons – who with their 1953 presentation in Aix-en-Provence plea to re-anchor public space within a clearly defined social matrix – Candilis-Josic-Woods envision public space within the upcoming mass society as still architecturally defined, but no longer bound to specific programmatic elements or social groups.

The three discussed projects were important instances in the subsequent research of the partnership concerning alternative meanings of private and public and their urbanistic and architectural expression within the post-war period. This research is characterized by a radical stance towards the interrelation between private and public as exemplified in an article of 1962, noting that there are: “two composing elements: the family and the city, the dwelling and the prolongements (prolongements) of the dwelling. Between the cell-unit and the city-community, there are no natural intermediate groups”⁵⁹

This statement is considered true for urban settings, but is also applicable for tourist environments where: “The holiday home, place of family liberty, thus extends into communal facilities, place of social life.”⁶⁰ In both cases:

“There are only artificial, invented and instable groups: quarters, neighbourhoods, clusters and other villages that correspond to nothing but a sociological need for classification. The organization of the city is far more simple than the image of a pyramidal hierarchy of social groups. Its is comprised in the binome of le Corbusier: “individual + collective”.⁶¹

Candilis offers an understanding of urban collectivity that radically departs from the traditional idea of a range of social entities of increasing scale level that are carefully embedded into one another. His statement seems to diverge clearly from the grid of ‘human associations’ that the Smithsons presented in 1953 at the CIAM IX at Aix-en-Provence. In this grid, the idea was forwarded – through the juxtaposition of images of a worker class neighbourhood by Nigel Henderson with their own designs – that the urban realm is to be understood and appropriated at different social scale levels that are traditionally connected to specific architectural entities (house, street, neighbourhood, city). The Smithsons aimed at incorporating the different ‘levels of human association’ within new architectural forms.

The tourist resort seems to announce a way of experiencing collectivity that differs in at least two ways. First, the new collectivity is not mediated through perennial social entities such as family, neighbourhood and town. In the post-war period the relation between the private dwelling unit and the public order of the city is no longer mediated by these

traditional categories. The realms of privacy and publicity seem to be in a much more direct way confronted with one another. Second, the disappearance of the perennial social entities involves the appearance of a new temporality within the collective realm. The collective realm is not a stable social given, but is rather subject to different time rhythms.

As Woods points out: "Today we are concerned more and more, in the face of a profound transformation in economy (from production to consumption as a goal) and in ethics (from interior moral discipline to social inter-relationship), with what we call *mobility* so as not to use a more precise term. For architects mobility has several connotations"⁶²

From this perspective, the stem cannot be a literal replacement or facsimile of the traditional street: it is not an urban figure aligned with clear architectural and programmatic elements. The "permanent, continuous, diversified and increasing presence of leisure in men's live (..) undermines the established hierarchy of values and implies the predominance of facilities in future realizations," writes Candilis.⁶³

The stem is a similar facility that is based on: "...a system of construction which accepts the diversification and spontaneous nature of these facilities, while at the same time ensuring unity to the whole."⁶⁴ It is a collective space in the form of a large infrastructure; an open organizational structure that can sustain social events and interaction.

In the project for *Barcares-Leucatte*, the partnership offered a view upon the concrete design of such a stem in the two so-called 'Meccano' axes linking the lagoon to the sea. Here, the stem seems to be no more than a three-dimensional and polyvalent structures built up out of a module that comprises of a post and two beams. The stem presents itself as a nearly dematerialised mega-structure. It is assembled like a set of meccano sticks and allows for endless variations of covered and uncovered spaces, walkways and streets.⁶⁵ As such, the stem becomes a three-dimensional grid that serves as a framework, assuring a certain urban discipline and permitting, at the same time, a supple and diversified adaptation. Candilis describes the stem at Barcares-Leucatte as a large (dematerialised) unifying structure: "a super urban furniture – (that) defines ancillary activities and provides spontaneity and mobility."⁶⁶

As such, the stem is connected to direct observation of the developments within the immediate urban environment: it acknowledges the important role of large-scale infrastructures and evolving programs within the urbanity that a society of mass consumption produces:

"The temporal validity of the home is the life of the family (...), that of the stem varies with its social and economical milieu. (...) It is felt that stem will change constantly to reflect the mobility of the society."⁶⁷

However, though recognizing the developments within the urban realm, the stem also distances itself from them, as its access is clearly secured within the rights of citizenship. The 'right to the snow' or 'right to the sea' secure that the stem remains a true public space: a space accessible to all closely linked to a representation of citizenship.

NICHES: THE ROLE OF SMALL OPEN SPACE

It is only from the perspective of this new idea of a large infrastructural urban space – the 'stem' – and its related new meanings and practices of collectivity that another aspect within the tourist projects of Candilis-Josic-Woods can be understood: the emergence of small open spaces or 'niches'. Though I argued earlier that within the tourist projects of Candilis-Josic-Woods the relation between the individual and the collective is a direct one, these niches seem to place themselves in-between both realms.

Within the different dwelling types of the *Tourist Equipment in the Tropics*, *Belleville ski-resort* and *Barcares-Leucatte*, small open spaces are a re-appearing feature. In the *Tourist Equipment in the Tropics*, they take in the 'bungalow' and 'semi-bungalow' types the figure of interior patios that open up to the landscape and around which the different rooms are disposed. In the case of *Belleville ski-resort*, the small open space takes the form of an outdoor room connected through a large pivoting wall to the indoor dwelling space. In the case of the 'Houses associated with boats' sector of the *Barcares-Leucatte* project, this open space is conceived as an interior void, that is – besides the parting walls – the only defining element of the different dwelling types. In the other sectors of the same project it becomes an open-air 'terrace-veranda' that is conceived as an extension of the dwelling space.

In all cases, these open spaces have something of an unclear or dubious character: in the sense that they are both strongly related to the private realm of the tourist dwelling and at the same time in close connection to larger collective infrastructural and natural scales. The 'Houses associated with boats' sector of the Barcares-Leucatte project exemplifies this. The interior void of the houses relates, as a light well, to the different levels of tourist dwelling space. At the same time, it is on the lowest level related to the public spaces of the resort, to the car – and thus to the large infrastructure of highways and roads – and to the scale level of the sailing boats – and thus to the large scale of channels, marina and sea.

Throughout the work of Candilis-Josic-Woods, the relation between the private and the collective has always been a paramount theme.⁶⁸ Within their projects there is a permanent questioning of the relation between the small human scale and the large scale of the processes, techniques and infrastructure of modernization. Moreover, there is an attempt to reconnect

different scale levels that seem to be disconnected through the processes of modernization. The small open spaces within the tourist projects are elements where connections between these different scales can come to the fore. As Candilis writes, they serve: "...as a link between the dwelling proper (designed for rest and simplified family life) and the natural environment (i.e., the sea, the sun, the beach)."⁶⁰

The small open spaces in tourist projects are places where the relationship between the small scale of the dwelling and the large infrastructural scale of the tourist developments and the landscape can be mediated. These are places with a large degree of freedom both inside and outside the controlled domestic and collective realms where the tourist can develop its own identity. Within the increasingly controlled realms of publicity and domesticity these are 'niches' that offer place for personal expression.

In the view of Candilis-Josic-Woods, this strategy of the small open space does not limit itself to tourist developments, but is a way of dealing with a more general confrontation of different scale levels characteristic to modernization:

"the idea of the patio dwelling or of the garden terrace dwelling is at present used within certain vacation developments. The thirty years that separate us from the year 2000 will be needed before this 'way of living' (mode d'habitat) will join the city..."⁶¹

CONCLUDING REMARKS

In the post-war period, modern architecture definitively loses its most important frame of reference: the social, cultural and physical reality of the traditional city. After the second World War, the rapidly developing mechanisms of welfare state and consumer society draw the initial lines of a new urban condition that becomes increasingly generalized in the course of the 20th century. The projects of Candilis-Josic-Woods, can be considered as a critique of certain aspects of this newly emerging urban condition. This critique does not present itself in opposition to the new urban condition, but is rather nested at the very centre of it—to unfold from there as a careful investigation.

As an integral and essential aspect of the new urban condition, the practice of mass tourism is considered one of the ideal platforms for this investigation. The janus-faced identity of mass tourism, as a practice that both provides a 'home' to the masses and represents escape from the 'homely', is made operational as a field of tension wherein the investigation can unfold. Within this field of tension the tourist projects of Candilis-Josic-Woods investigate the possibilities of reconnecting a new dwelling ideal of 'privatisation' and 'escape' to the dense and ecological characteristics of collective urban patterns.

Moreover, the mass tourism projects are researches into the prospects of introducing new figures of 'centrality' within the emerging urban condition. Concepts as the 'stem' define this 'centrality' in close relation to the temporalities that welfare state and consumer society introduce during the post-war period.

Finally, the projects are investigations into the possibilities of reconnecting the different scale levels and realms. The 'niches' within the mass tourism projects are attempts to re-introduce a realm that mediates between private and public, between the scale of persons and that of modern infrastructure.

Research into density, centrality and 'niches' in the work of Candilis-Josic-Woods can be regarded as an attempt to maintain the cultural continuities of the city while addressing new emerging scales of operation and new dwelling ideals. In this sense, despite all their contradictions, or perhaps because of them, these mass tourism projects may hold clues to the challenges of our contemporary urban condition.

NOTES

¹ See for an analysis of Team X along this line amongst others Kenneth Frampton, *Modern Architecture. A Critical History*, London, Thames and Hudson, 1980.

² This is the thesis of Sarah Williams Goldhagen and Rejean Legault (eds.), *Anxious Modernisms*, Cambridge (Mass.), The MIT Press, 2001.

³ Les Trentes Glorieuses refers to the period of economical growth between 1946 and 1975. On the notion of the the 'Trente Glorieuses' as a single era, see Jean Fourastié, *Les Trentes Glorieuses, ou la révolution invisible de 1946 à 1975*, Paris, Hachette Littérature, (1979), 1998.

⁴ See for instance Marc Boyer, *Que sais-je. Histoire du tourisme de masse*, Paris, PUF, 1999.

⁵ The Candilis-Josic-Woods partnership was formed in 1955 by Georges Candilis (Azerbaijan, 1913), Alexis Josic (Serbia, 1921) and Shadrach Woods (New York, 1923). Candilis, who was of Greek origin, graduated in architecture (1936) from the Institute of Technology in Athens and worked as an architect for the Ministry of Aviation, Athens (1937-40). He emigrated to France in 1945 and worked briefly for André Lurçat and then for Le Corbusier (1948-50), where he was involved in the construction of the Unité d'habitation (1945-52), Marseille, and where he met Woods, who studied engineering at New York University (1940-42) and literature at the University of Dublin (1945-8). In 1951 Candilis and Woods, with the engineer Henri Piot, were asked to head ATBAT-Afrique, the Moroccan office of ATBAT, the Atelier des Bâtitteurs, a multi-disciplinary organization founded on Le Corbusier's initiative in 1947 and headed by the engineer Vladimir Bodiansky. In 1955 they start together with Alexis Josic their own office in Paris.

⁶ Georges Candilis, *Planning and Design for Leisure*, Stuttgart, Karl Kramer Verlag, 1972.

⁷ Georges Candilis, *Planning and Design for Leisure*, Stuttgart, Karl Kramer Verlag, 1972.

⁸ Especially on Joffre Dumazedier, *Toward a Society of Leisure*, New York, The Free Press, 1967.

⁹ Georges Candilis, *Planning and Design for Leisure*, Stuttgart, Karl Kramer Verlag, 1972.

¹⁰ Recent scholarship has underlined that in many respects, not least in the domain of cultural policy, the Fourth Republic has its beginnings in the era of the Popular Front. See for instance: Herrick Chapman, 'Modernity and

- National Identity in Postwar France', in: *French Historical Studies*, vol 22, 2, 1999, pp.291-314.
- ¹¹ For an introduction to the Popular Front and Leon Blum see: Jean Lacouture, *Léon Blum*, Paris, Seuil, 1977 and René Girault, *Léon Blum: socialiste Européen*, Brussels, Complexe, 1995.
- ¹² Mary McLeod, *Urbanism and Utopia*, op cit. Eric Mumford, *The CIAM Discourse on Urbanism*, Cambridge (Mass.), MIT Press, 2000, p.104.
- ¹³ The issue of leisure is obviously already a longtime issue in the discourse on modern architecture – especially within hygienist and reform perspectives. See for instance Charter of Athens and the four functions of
- ¹⁴ CIRPAC[Comité International pour la Résolution des Problèmes de l'Architecture Contemporaine], Elected executive organ of CIAM (Congrès Internationaux d'Architecture Moderne), which was founded in 1928 at La Sarraz, Switzerland, on the initiative and leadership of Le Corbusier and Sigfried Giedion to coordinate the international forces of modern architecture.
- ¹⁵ See *Logis et loisirs: 5e congrès CIAM, Paris, 1937, 1938*, reprint 1980, p.6 and Eric Mumford, *The CIAM Discourse on Urbanism*, Cambridge (Mass.), MIT Press, 2000, p.110.
- ¹⁶ On the role of mass leisure in the city of Frankfurt immediately after World War I see: Susan R. Henderson, 'A Setting for Mass Culture: Life and Leisure in the Nidda Valley', in: *Planning Perspectives*, nr.10, 1995, pp.199-222.
- ¹⁷ The Italian group presents the Plan for the Aosta Valley (a complete region to be constructed for tourism). Giedion stresses the regional approach of the problem.
- ¹⁸ *Logis et loisirs: 5e congrès CIAM, Paris, 1937, 1938*, reprint 1980, p.6 in *Italie* in the text
- ¹⁹ Re-edited as *Logis et loisirs: 5e congrès CIAM, Paris, 1937, 1938*, reprint 1980
- ²⁰ Sert in *Logis et loisirs: 5e congrès CIAM, Paris, 1937, 1938*, reprint 1980
- ²¹ Jean-Louis Cohen, 'Droite-Gauche: "invite à l'action"', in Jacques Lucan, *Le Corbusier. Une encyclopédie*, Paris, Centre Pompidou, 1987, pp.309-313.
- ²² See Shanny Peet, *France on Display: Peasants, Provincials and Folklore in the 1937 Paris' World's Fair*, New York, 1998, p. 97.
- ²³ see Lydia Elhadad, Olivier Querouel, 'L'aparation des Congés Payés', in: *Temps Libre* 1, 1980, p. 80-91. These authors put it as follows: "There has been a long tradition in France (...) of being the country which enunciates universal rights: rights of man, right of liberty and equality, right to education, right of sanctuary. Even today, France is probably the only country in the world in which leisure has this character."
- ²⁴ Le Corbusier, 'Solution: de Principe', in: *Logis et loisirs: 5e congrès CIAM, Paris, 1937, 1938*, reprint 1980, p.18.
- ²⁵ See for instance Joffre Dumazedier, Maurice Imbert, *Espace et Loisir dan la Société Française d'Hier et de Demain*, Paris, 1967.
- ²⁶ Marc Chevallier, 'Paroles de Modernité. Pour une relecture culturelle de la station de sports d'hiver moderne', in: *Revue de Géographie Alpine*, n. 3, 1996, p.33.
- ²⁷ See for instance John S. Amber (ed.), *The French Welfare State: Surviving Social and Ideological Change*, New York, 1991.
- ²⁸ Georges Candilis, *Planning and Design for Leisure*, Stuttgart, Karl Kramer Verlag, 1972, p.12.
- ²⁹ Jean Weiler, 'Recherche et expériences pour une architectre de vacances', in: *Technique et Architecture*, n.4, 1969, p.62.
- ³⁰ Max Blumenthal, 'Stations touristiques', in: *Techniques et Architectures*, n.4, 1969, pp.52-53.
- ³¹ When Jurgen Joedicke writes in 1968 his seminal book *Candilis-Josic-Woods. A decade of Architecture and Urban Design*, he distinguishes between four categories of practice within the office: studies, realizations, competitions and documents. This last category illustrates the theoretical component within the office as it was also reflected within international architectural magazines.
- ³² See for instance Georges Candilis, *Bâtir la Vie*, Paris, Stock, 1977.
- ³³ Georges Candilis, *Planning and Design for Leisure*, Stuttgart, Karl Kramer Verlag, 1972., p.141.
- ³⁴ See for instance the description of the project in: XXX, *Aesthetics and Technology of Preassembly. The Future of Urban Environment*, in *Progressive Architecture*, October, 1964, PP. 162-179.
- ³⁵ Published as *N'Antilles Françaises: Etude d'équipement Touristique*, in: *Architecture D'aujourd'hui*, nr. 86, 1959, pp. 66-67.
- ³⁶ See Georges Candilis, *Bâtir la Vie*, Paris, Stock, 1977; pp.209-210.
- ³⁷ The Belleville ski resort design was published amongst others in the following magazines *World Architecture One*, ed Studio Vista, London, 1964, p.155, *Architecture d'aujourd'hui*, n.115, 1961, p.8, *Progressive Architecture*, p. 225
- ³⁸ The project was presented by Candilis in several lectures all over France lecture: see lecture text 'Loisir' given atXXX, 15.1.1973.
- ³⁹ See for instance *N'Antilles Françaises: Etude d'équipement Touristique*, in: *Architecture D'aujourd'hui*, nr. 86, 1959, pp. 66-67.
- ⁴⁰ See Ellen Furlough, 'Making Mass Vacations: Tourism and Consumer Culture in France, 1930s to 1970s', in: *Comparative Studies of Society and History*, vol. 40, 1998, no. 2 (April), pp. 247-286.
- ⁴¹ The concept of privatisation was amongst others developed in the work of Arnold Gehlen and Jurgen Habermas. See Peter and Birgitte Berger, *Sociology: A biographical Approach*, Harmondsworth, Penguin Books, 1976, p.272.
- ⁴² Kristin Ross, *Fast cars. Clean Bodies: Decolonization and the Reordering of French Culture*, Cambridge (Mass.), MIT Press, 1995, p. 106
- ⁴³ In Gabriel Feld (et al.), *Free University Berlin: Candilis, Josic-Woods, Schiedhelm*, London, AA Publications,1999, p.67.
- ⁴⁴ Kristin Ross, *Fast cars. Clean Bodies: Decolonization and the Reordering of French Culture*, Cambridge (Mass.), MIT Press, 1995, p.107.
- ⁴⁵ Urbain, *Sur la Plage*, p.15
- ⁴⁶ Of the remainder, 25 percent traveled by train and 10 percent by bus, air, or other means, see: Marc Boyer, *Le Tourisme*, Paris, Seuil, 1972, pp.45-51 and Marc Boyer, *Que sais-je. Histoire du tourisme de masse*, Paris, PUF, 1999.
- ⁴⁷ Kristin Ross, *Fast cars. Clean Bodies: Decolonization and the Reordering of French Culture*, Cambridge (Mass.), MIT Press, 1995, p.72.
- ⁴⁸ See Max Blumenthal, 'Stations touristiques', in: *Techniques et Architectures*, n.4, 1969, pp.52-53
- ⁴⁹ Charlotte Perriand, 'Prendre Conscience de nos responsabilités', in: *Aménagement et Nature*, 3, 1966, pp.10-11.
- ⁵⁰ Georges Candilis, *Planning and Design for Leisure*, Stuttgart, Karl Kramer Verlag, 1972., p.83.
- ⁵¹ Georges Candilis, *Planning and Design for Leisure*, Stuttgart, Karl Kramer Verlag, 1972., p.20.
- ⁵² Georges Candilis, *Planning and Design for Leisure*, Stuttgart, Karl Kramer Verlag, 1972., p.12.
- ⁵³ The investigation of the particularity of these groupings is the subject of further research within my doctoral thesis.
- ⁵⁴ Georges Candilis, *Planning and Design for Leisure*, Stuttgart, Karl Kramer Verlag, 1972., p.30.
- ⁵⁵ Marcel Boneayolo, 'Changements dans les Pratiques Sociales', in: Jacques Brun, Guy Burgel, Jean-Claude Chamboredon, *Histoire de Le France urbaine. 5: La ville aujourd'hui: croissance urbaine et crise du citoyen*, Paris Seuil, 1985, pp.473-529.
- ⁵⁶ In the overview of their work the partnership names the mechanically-assisted pedestrian axis of the Belleville ski-resort as the prime example of a stem. See Jurgen Joedicke (ed.), *Candilis-Josic-Woods: A Decade of Architecture and Urban Design*, Stuttgart, Karl Kramer Verlag, 1968, p.200.
- ⁵⁷ See for instance Liane Leflaive and Alexander Tzonis text in: Gabriel Feld (et al.), *Free University Berlin: Candilis, Josic-Woods, Schiedhelm*, London, AA Publications,1999
- ⁵⁸ Though at first sight this might seem a transposition of concerns and concepts (stem) generally related to the urban thinking of Candilis-Josic-Woods to the realm of leisure, the perception of tourist designs as part of a larger investigation into the contemporary urban realm justifies this migration. Moreover within Jurgen Joedicke (ed.), *Candilis-Josic-Woods: A Decade of Architecture and Urban Design*, Stuttgart, Karl Kramer Verlag, 1968 the architects label the spine of the Belleville projects as the first 'stem'.
- ⁵⁹ Georges Candilis, Alexis Josic, Shadrach Woods, 'Candilis, Josic et Woods. Recherches d'architecture', in: *Architecture d'aujourd'hui*, 115, 1962, p. 14.
- ⁶⁰ Georges Candilis, *Planning and Design for Leisure*, Stuttgart, Karl Kramer Verlag, 1972., p.113.

⁶¹ Georges Candilis, Alexis Josic, Shadrach Woods, 'Candilis, Josic et Woods. Recherches d'architecture', in: *Architecture d'aujourd'hui*, 115, 1962, p. 14.

⁶² Shadrach Woods, 'Stem' in: *Architectural Design*, May 1960, p.181.

⁶³ Georges Candilis, *Planning and Design for Leisure*, Stuttgart, Karl Kramer Verlag, 1972., p. 12.

⁶⁴ Georges Candilis, *Planning and Design for Leisure*, Stuttgart, Karl Kramer Verlag, 1972., p.113.

⁶⁵ Georges Candilis, *Planning and Design for Leisure*, Stuttgart, Karl Kramer Verlag, 1972., p.114.

⁶⁶ Georges Candilis, *Planning and Design for Leisure*, Stuttgart, Karl Kramer Verlag, 1972., p.116

⁶⁷ Shadrach Woods, 'Stem' in: *Architectural Design*, May 1960, p.181.

⁶⁸ See for instance Jürgen Joedicke (ed.), *Candilis-Josic-Woods: A Decade of Architecture and Urban Design*, Stuttgart, Karl Kramer Verlag, 1968 that investigates this relation.

⁶⁹ Georges Candilis, *Planning and Design for Leisure*, Stuttgart, Karl Kramer Verlag, 1972., p.57.

⁷⁰ Georges Candilis, unpublished text 'Toutes les femmes doivent être architectes chez elles', 1970 (IFA318/07)