Urban-Kitchen. Ergonomics and Sustainability to the Social Complexity

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ABSTRACT

In the use of office or residential space it is crucial to understand how they affect the socio-cultural and demographic changes, and how an ergonomic and sustainable design (ergosostenibile - ergosustainable) meet and conform to the needs of individuals while respecting the environment. In residential space such symbolic transformations can be observed in the kitchen, "laboratory" of choice to observe the evolution of design determined by structure and family relations from the nineteenth century to the twenty-first century. There were significant changes as a result of demographic changes and socio-economic factors. By late modernity, the family meets the individualistic needs and disruptive redeveloping the internal and external relations, and the kitchen loses its rigid definition between backstage and frontstage to reconfigure itself according to new setups. It remains the center of domesticity but new experiences to meet the new requirements when the kitchen becomes a place of socializing and sharing outside the family. This study seeks through the analysis of the changes that have occurred since the nineteenth century to the twenty-first century. An innovative experiences to be understood as a space-kitchen ergosustainable (ergonomic and sustainable) can meet the needs of economic and socio-cultural, present and future, moving towards the urban kitchen: a kitchen as a space to be shared, projected as a part of communal area.
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INTRODUCTION

"… you can't escape architecture. Each one of us moves continuously through constructed spaces, be they internal or urban. Conscious or unaware, they generate in us wellbeing or uneasiness, tranquility or unrest, harmony or disharmony ..." (Margarete Schütte Lihotzky)

Living is in essence a socio-economic phenomenon related to the inhabitant's historical culture that contemporaneously conditions him and moulds upon the need of the different categories of inhabitants. As indicated by Signorelli "to have a home is one of the universal characteristics of the human species" and, moreover, "the human refuge is never a den, its function is not exclusively that of a shelter" (Signorelli, 1996).

The home, or the housing system, may therefore be duly applied the definition of the total social phenomenon as it integrates technical and empirical knowledge, the relation with the surrounding environment, the social structure (kinships, hierarchies), rules and regulations concerning the use of resources (materials and non-materials), symbolic

horizons and group rites (Mauss, 1965). Even though expression of psychological dynamics, the organization of the spaces and the order given to objects also assume historical valences linked to the technological developments of specific cultural phases. One can through the different habitats construe any changes in the material order of the home such as the allotment of the spaces, the choice of furniture and their arrangement and likewise browse through the routine activities reflecting and detailing the cultural transformations within the society. For reasons of mainly contextual historical nature, classic sociology took greater interest in the study of the city and urbanization and only a marginal glance at living. Also in terms of eating habits, the social sciences have not produced much and what little we find is quite recent, with the exception of some anthropologists who what's more have privileged issues such as social groups, companionship, rites and customs, sacrifice; perhaps because culinary habits, food and the relevant eating environments are so intrinsic to life's routine to be deemed banally important and since food and the kitchen have always been considered at the center of domestic life and as such linked with a double thread to the classical role of women (hence either belittled or deliberately set aside) and far from the public spheres (deemed a male prerogative).

EVOLUTION OF THE KITCHEN ENVIRONMENT

The kitchen within the living unit: social-economic changes, women's role and health conditions

The kitchen environment has evolved in parallel to the methods of preparation, conservation and consumption of food and all these have changed as a whole parallely to the culture of the relevant society. At the end of the 19th century, the household kitchen underwent a radical change in terms of its overall design, the furniture and fittings; modifications determined by the great social changes occurring in such period triggered by the economic transformations. In the Anglo-Saxon countries, the middle class women started to take care of the household chores once delegated to servants who by then preferred factory employment. The women and men, the working class preferred the factories due to wage issues and, even though amongst the great social contradictions, this was the first step in the conquest for greater independence. The fight for equal wages with men, better working conditions and the reduction of working hours developed within the factories and became linked to those for the right to vote carried out by the middle and high class women. The middle class was little inclined to entrust household chores to immigrants for fear of diseases and contemporaneously the sanitary requirements grew acutely thanks to more extensive medical information. The awareness of hygienic-sanitary issues spread out subsequently to the promotion of information on the advantages to health offered by the cleanliness of the kitchen environment and the application of food conversation rules. Doctors promoted healthy homes with clean kitchens as a means to prevent the propagation of diseases. The evolution and transformation of the women's role due to social and cultural changes and the ever stressing sanitary requirements stimulated the industries and designers to improve the design of kitchens. Several factors that contributed to the development of the pathogenous conditions were then eliminated or modified and interventions made on the scarce ventilation of the environments, piping, toxic materials (i.e. arsenic was one of the typical pollutants in the households at the time). Walls, floors, sinks received coatings made of washable materials, moldings and decorations breeding-grounds for dust and germs with simplified contours and lines (Moody and Vineyard, 2008).

In the meantime, Tayloristic theories were propagated and the step from methods to improve the efficiency of industrial production to the scientific organization of households is short. Beecher and Stowe wrote a household manual already in 1869, The American Woman's Home, that foresaw the abolition of servants for social reasons and hence the need to reorganize the home. Beecher analysed the work processes in the kitchen with the scope of modifying the design so that one person only could use it comfortably. A living standard and small, simple and compact structures did necessarily underlie the organizing principles in America. The idea was to create a rational environment in which household work be reorganized within small spaces, where everything was within reach in order to speed up operations and lighten the work. In 1909, Frederick supplied an organization application of such principles through the analysis of useless movements in the various household activities in the Journal of Home Economics, Baltimore, and later in The Ladies Home Journal, Philadelphia. A new science is born: household engineering. These theories spread everywhere even though decades will be necessary in some countries. In fact, it was only in 1928 that the *Accame* of Turin published *The Woman and the House: Taylorism in the domestic life. A*

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book dedicated to all women of Italy to ease their household work.

It is worthwhile noting that generally the scope of such texts was to educate the housewife that absolute did not imply or grant any liberation from their traditional social role in the exclusive care of the family. Beecher maintained that domestic economy was a part of the feminist movements and as such intended to restore dignity of labor to domestic activities qualifying them as specialist activities performed by a professional: the housewife. Her vision of the domestic context did in some ways represent the common viewpoint and was explicitly pro-gender: the creation of the family world was up to women, far from the city work stresses and public life. Hers was one of the first examples of kitchen device compacting aiming to simplify the sequence of the various activities, following an organizational model inspired by mass production and work rationalization also at the origin of the so called American kitchens. Her feminism had a domestic nature, contrary to the social kind upheld by the militants of the temperance as Frances Willard that material by those who supported salaries for domestic work, as Melusina Fay Peirce. Beecher suggested to her readers that they should find salvation in the perfection of their family life. As the author of a Treaty of Domestic Economy for Use by Young Women and Schools (1842) and co-author of The Home of the American Woman (1869), she urged women to take responsibility for the suburban home and the family that she defined "the home-church of Jesus Christ". She asked them to stay at home, to master efficient organization of the home and garden project, as well as spiritual support for large families.

Beecher used the well designed ship kitchens as a model for the adequate arrangement of things in the domestic kitchen. She assigned specific functions to different parts of the kitchen and was the first person to demand the organization of kitchens according to ergonomic principles; great care to the functional division of space with respect to the processes. She identified three basic work phases: storage and conservation, clearing-up, cooking and service. She separated the cooking area from the rest of the environment through an ample glass sliding door to avoid spreading cooking vapors; brings the dining room closer to the kitchen to decrease the distance covered. Another innovation by Beecher consists in fitting her housing model with mechanical inventions apt to facilitate domestic work and make the home healthier and more hygienic. She invented furniture to contain specific objects, mechanizes the cooking function through linking the gas cooker with the chimney flue to evacuate fumes, designs a central heating system with floor cooling, brings hot and cold water through centralized pipes into the environments, provides water draining through pipes.

At the dawn of the research on the management, the pioneers of domestic economy studies were mainly American women who also took an interest in the ergonomics of the kitchen. In this period and up until the first half of the twentieth century, the kitchen was the place where to prepare and sometimes have a meal and it is for this reason that, as highlighted by Douglas, that this space "takes the shape of a space in which the boundaries between pure and impure continuously redefined, access therein is reserved to family members or in particular cases to relatives and intimate friends or, rather, those to whom we may reveal - without feeling any shame – a certain level of disorder" (Douglas 1975). The concepts of pure, impure, disorder and order are the essence to the formation of the modern idea of contamination and dirt. Avoiding dirtiness is a question of hygiene and aesthetics and is a concept dominated by the knowledge of the transmission of diseases by pathogenic organisms. However, Douglas recalls that "should we be able to abstract pathogenicity from our concept of dirtiness, we would be left with our old definition of dirtiness as something out of place". The "dirt" continues the anthropologist " is a sub-product of a systematic classification of things, just as tidiness includes the refusal of alien elements … and it is in this sense that dirt, tidiness lead to the field of symbolism and anticipate a connection with the symbolic systems of purity". That said, we can foresee the complexity of this space and its transformations; the importance of the order and internal organization of the work, the concept of private and the conception of the kitchen as a family home and the slow changes determined by the socio-demographic changes.

In her capacity as a Taylorist economist, Frederick performed between 1915 – 1922 a precise analysis of the work carried out in the kitchen. She referred to professional kitchen used in trains; she was fascinated by the logistics involved in the preparation of 100 meals per day in a kitchen no larger than a few square meters. She wanted to apply Taylorist principles to domestic life. Also this author considered domestic work as a profession and added that it is important to give women self security and awareness. She is famous for her "with string" studies through which she measured the distances that a housewife covered in a day. This resulted in grouping pieces of furniture into functional units. The book issued by Frederick in 1915, Household Engineering: Scientific Management in the Home" was translated into German in 1922 and became +a source of reference for architects. The model proposed

therein was propagated in Germany mainly by Meyer who highlighted the ergonomic elements. Also in this case, we encounter a gender-related vision of the kitchen environment and an attempt to improve the quality of life and work of women. In fact, she wrote "to lighten a woman's work load is the central objective of the research on the habitation and it is inconceivable that a home not take that into account" and added "aesthetics can start once practical demands have been satisfied".

Modern kitchen models with work surfaces, cookers and sinks arranged to gain space and diminish movements started to appear in the 1920's, e.g. that on show in the Bauhaus model house at Horn in 1923. The Frankfurt kitchen designed in 1926/27 by Schütte-Lihotzky became a prototype for the entire future production. During that period, Schütte-Lihotzky and Ema Meyer concentrate on the functional division of the domestic space and the quality of the aesthetics, on the tasks and physical actions necessary to perform the kitchen activities. Schütte-Lihotzky focused her interest on the social dimension, for her profession equaled a mission, a social engagement addressed to the poor people and disadvantaged categories. She was convinced that the care of the home should be organized ideally through the knowledge and experience of women, the female participation dimension should have been seriously taken into account. As previously indicated, Meyer had a predilection for the ergonomic aspects, from the height of the work surfaces to their correct lighting, from pauses to correct posture.

THE COMMUNITY DIMENSION OF A KITCHEN

From Shakers to the epoch of the NEP

In reality, it was already some decades before that the American communities, such as the Shakers, had introduced a modern kitchen into their communities. These were modeled on means of transport such as a restaurant wagon or a ship kitchen. The 17th and 18th centuries witnessed the foundation in America of the first socialist based organized communities of European immigrants. Generally, they were persecuted in their homelands on the grounds of different religious orthodoxy. Also other communes arose enlivened by specific intent of social and pedagogical reform. Between 1800 and 1900 in America, there were over one hundred such realities inhabited by some 100.000 persons. Although their objectives differed, they all shared the fundamental principles of: equality between all men and women, including the abolition of slavery, abolition of private property, rejection of traditional, religious and social norms; rejection of war and violence. Marx and Engels defined these realities irrelevant and in fact they did not directly change the American society, but did however trigger and influence the birth of the feminist and civil rights movements and, in view of our study, the organization of work and the modernization of furniture and inhabited spaces (Ungers and Ungers, 1972).

The Shakers' belief presupposed purity of the soul and community of goods, gender equality and celibacy. In principle, the community had to be self-sufficient, they believed in the high quality of craftsmanship as a means to reach perfection, but favored technological innovations and precociously introduced some industrial manufacturing procedures based on the principles of work division. They conceived a series of simple and essential fittings and furnishings which were functional and designed to satisfy even the end user anthropometrical differences. The models were conceived according to an economic principle based on saving and functionality. Moreover, these associative-type forms of living proposed a different way of conceiving the home as some activities were collectivized, e.g. the preparation of meals and their consumption.

"These were not closed, middle class villas, but houses adapted to the new social ties without individual kitchens, without the ancient segregation" stated Keržencev in 1921 alongside other sociologists interested in architecture. The contests and designs of the period tended in that direction. Lunačarskij, ideologist of the revolution and writer, theorized within the elimination of domestic life the opportunity to reach a form of daily socialization leading to a total liberation; "large houses" in which kitchens and bathrooms, for adults and children were collective and "organized according to the most updated scientific means".

This was the epoch of the New Economic Policy (NEP), the central nucleus of the '20s when the first years of statism dissolve and start tending towards the reinstatement of private property in some economic sectors.

The realization of the Moskovskij-Narvskij quarter in Leningrad was the first concrete case of worker control applied to design. The period is 1924-26 and, given the clear quality and significant constituent level of such interventions, the natural collective solution to some of the greater functional problems, e.g. provisioning, food, education, parks and gardens, it is an excellent example of positive control. The design was the fruit of a participative process involving the working class in the discussions on the organization of the residential environment. Such meetings gave substance to the collective forms of living management, also determining the quantity and relations between the individual and collective spaces, the most economic and worker life style adequate realization always according to socialist principles.

"one must exploit the workmanship of the materials and the surface colors as far as possible, considering the psychophysical characteristics of the colors influencing the user .. The individual design method must give way to the group design method .. Besides the designers, also other experts must collaborate directly in the design works such as experts of the different customs, doctors, painters, sociologists, pedagogues and generally whoever may have a specific relation to the organization of the living quarters .. The customers' participation is equally necessary, i.e. the public opinion, in the debates on the problems both in the initial design formulation phase as well as the subsequent phases (discussion of the alternatives during design and valuation of the final project)" (Caldymov, 1931 - Doma-kommuny, Materialy konkursov). For Caldymov, the design phase implements the data acquired through economic analysis and the demands, the technical quality of the buildings and in relation to the living environment, without neglecting the aesthetic-visual organization.

Through these projects, the Bolshevik devolution attempts to consolidate and erect the new communist society and to break the previous institutional order. The main motivations underlying the structuring of such housing typology are:

- The redefinition of the women's' and families' roles in order to attain the foundations of a new society free from any form of capitalist oppression;

- The conservation of material resources (food, power, water, etc.) during a great economic crisis;

- The conservation of human resources (freeing women from an unproductive work that is assigned to wage-earning professionals), and

- The creation of a sense of community and the pursuit of consent.

As known, the redefinition of the women's role had already penetrated Marx's way of thinking and is resumed by the First International revolutionaries. In 1921, Alexandra Kollontaï wrote "Mandatory work for all is a very important component of the new method of production and we have already demonstrated how the women's condition has already changed deeply thanks to mandatory work .. During the past four years, our workers' republic has eradicated the very roots of the secular enslavement of women". The revolutionaries, including Lenin, all agreed that women must be freed from domestic slavery. For Lenin, domestic work was a "mean, debilitating, confusing and depressing unproductive activity" (Kollontaï 1919 - University of Sverdlov Conference). Naturally, this applied only to individual domestic work and not the collectivized activities that had to be carried out by cooks and professional cleaning women. After the introduction of common housing, with collective kitchen, Kollontaï hoped to separate marriage and household chores, starting from the kitchen, founding the family on community bases, cancelling the bourgeoisie norms of behavior. Moreover, and this is the third point, freeing women from the burden household chores frees productive resources, giving women more time for work, rest, maternity and a richer and more satisfactory and family life. These interventions that should have addressed the needs of working women derived from the work by Zhenodtel under the guidance of Armand who had during several meetings asked numerous working women what they deemed necessary to have and what they needed (amongst those indicated: canteens, kindergartens, schools, laundromats, home cleaning). Some two million women workers and peasants were mobilized in this participated planning that reached its culmination between 1920 and 1921. The sharing of food (public canteens already existed since 1918 for workers, adolescents and children who did not live in collective houses) and generally collective habitation had, as affirmed by Kollontaï, the role of supplanting the family economy, to elaborate the future economic policy of the country and to face the crisis through shared kitchens considered a "rational and economic installation requiring less fatigue, less fuel and less foodstuffs". She adds, referring to the community housing, that "whoever hopes to inhabit a community house, moreover .. as the national

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economy general crisis is felt, as fuel diminishes and there is the risk of water rationing, the number of people getting together in a community house increases". During the same conference, she highlights how some women choose this living modality because they become aware that it is only in this way that they may evade the slavery of household chores, become productive citizens and have their own spare time. " It is obviously not for the principle or by conviction (as the Fourierists in the first half of the 19th century ..) but simply because it is so much easier and more comfortable to live in a common house rather than in a private house. The communes obtain sufficient wood and electricity; in the majority of them, there is a communitarian kitchen and a water distiller".

In a period of civil war and great economic depression, the Soviet Union was reduced to hunger, aid to the people in the form of refectories and communitarian housing and sharing many aspects of living, meals in particular, was important to obtain consensus and to exert social control. In any case, some highly consistent structural-design housing projects were realized during those years in the Soviet Union. Subsequently to the economic crisis, investments were diverted to other sectors and the buildings constructed did not aggregate the richness of the previously conceived typological solutions. Furthermore, Stalin's bureaucracy marked the definite separation from the workers' social movement that had produced the revolution and the attempt, in good and bad, to create a social laboratory to achieve the new communist order. These experiments were deserted, including the women's' liberation policy and the change of family and many of the advantages obtained by and promised to women were reversed. The period of the NEP ended.

In spite of this, the vision of the future society produced by the Russian Revolution was so stimulating that the debate on the collective forms of life remained open. Of that first experience, many of the ideas, aspirations and ambitions survive first in almost contemporaneous experiences above all in Austria and Germany and later with different methods and typologies from the European and Latin American left wing parties through the youth social and environmental movements.

Comedores popular and obreros, comedores solidarios and supportive community experience

The comedores made in Cuba after the Castro revolution are the first experiences of collective kitchens setting the pro- Soviet. In this case lacks the broad initial, present in the first phase of the Soviet revolution and there is a real attempt to change the family and / or the female role. The main problem that these facilities had to meet the economic crisis was determined by the blockade of trade with foreign countries and the willingness of the regime to impose a rationing of food resources and more. Comedores were the structures outside homes, initially set up as a restaurant and later abandoned the smaller tables to move to large tables, the kitchen was separate and not in the view. The shared kitchen was, in the intentions of the regime, to create a sense of community, that breaks the isolation of the individual and in general takes him to live in harmony with others, the goal is to mitigate the competitive harm considered typical of capitalism.

More interesting from our point of view are the experiences that developed in the 70s in Chile and other South American states such as Peru or Argentina. In Chile in the years following the coup of Pinochet, in proletariat neighborhoods such as the barrio of Victoria, women rallied in front of the dreadful impoverishment of families joining forces to do the shopping, cooking and sewing together, with the sole purpose of survival and the restoration of the community. In this experience, as was indicated by the name given, comedores solidario, the appearance of solidarity prevails - Community. Sharing of domestic life, and especially the process of preparation / consumption of food was mainly implemented by the women of the neighborhood as a form of survival and resistance / support of the community of Vecinos . On the basis of these experiences, present today in many parts of Latin America, there is a strong sense of belonging to the community that pushes women in particular to support each other. It should be clear by now that the community spirit we mean the propensity of the individual to be rooted in a more or less deep, within social networks, in this case the neighborhood with which it is in contact. Similar experiences are still present in many of these countries. Today in Europe we find them in Spain, particularly in Barcelona, and Greece, countries where there have always been forms, although different, of neighborhood solidarity. A Besòs one of the poorest neighborhoods in the comedor solidario Barcelona was founded by the association that brings together the people of the barrio in a room made available by the City equipped with two long tables, a small kitchen and a pantry for storage of donated food. The community, for the most part made up of the unemployed, it is organized to prepare and share food together and provide free meals to those who need them the most.

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The creation of this type of social movement can be analyzed as a set of trends and movements in space, social and cultural dynamism, but also as a network of processes of self-organization and self-construction of life, of new links of solidarity, new links social microcommunities in training or development.

Starting in the 70s in many European countries and in North America similar experiences occured, based on participation and sharing, spread from or by the feminist movement as a support for employed females (but in this case it was often the only shared meal preparation and consumption) or the youth movement and employees in offices (where he cooked for all occupants, but these experiences ended with the end of occupation), and here we find many of the themes present in the Russian revolution. In fact, in most countries these experiences ended early, with the end of the youth movement and in some cases even earlier, for socio-cultural reasons. An example may be that of Italy where we find canteens but not shared kitchens, in most cases, and this mainly because of the importance of the meal as a representation of social position.

Demographic dynamics, needs of a new architectural and urban socio-cultural practices

From 1950 onwards, the improvements in quality of life due to the economic boom completely transformed the profile of the people of the West (one may think of the anthropometric characteristics by age group) and its demographic behaviour. It also changes the ratio of the population with respect to the area and you switch from predominantly rural to urban concentration or more often urban transport. Improving the quality of life leads to an enlargement of the privacy, you lose meeting places, weaken the social networks of the neighborhood. The economic boom and the slow process of Americanization of consumption (moving from the consumption of kinds of subsistence and necessities to other items such as furniture, car, television, appliances, etc.) alter the relationship between individual and society, affecting the way of conceiving the time and space of everyday life. Slowly changes the female role in society and strengthens the social category and consumption of the youth. New technologies give ladies better tools, which are able to liberate from fatigue and the effective image of the housewife fulfilled its role and made part of the ideas of some of the 8th century authors cited. At the change of the economic and social change also living standards that conform to the ground level. Picture emerges of private family life that has systematic schedules. There is a redefinition of the places of the house and the kitchen oscillates between a maximum compression (the kitchen) that together can hide it as a place of work to make room for the living-dining area and a maximum aperture that puts at the center of this room family life (the kitchen in the living room). There is therefore an increase in the importance of the room to the kitchen due to the increase in the housing market and the progressive narrowing of the houses that gave more inspiration in the kitchen to the need to incorporate other activities such as eating the food, receive guests, work , study and relax, returning to a conception of this room as the center of the house; remains a conception of the environment meets the anthropological and social roles of the inhabitants, even distributing them in separate areas, on a continuum whose opposite poles representation vs. sociability and intimacy and service, although with the passing of time the contours of the two poles are fading and are redefined.

As of the end of the sixties the development of the economic, political, educational, health and ways of production and consumption, give the house a postmodern character. The components and symbolic functions of the house, they become increasingly apparent and sought after, as well as expression of psychological needs and belonging. The domestic spaces are changing, with the transformation of social life the house reflects the modern concept of democracy, self-determination and development of individuality understood as an integral part of everyday life. Putnam noted as "just supports modern materials are assumed to be guaranteed, the home becomes the domain of the supreme individuality and, consequently, of the endless negotiations" (Putnam, 2000). The living room, which had been conceived as a private room in the ceremonies of the extended family or to receive guests, it becomes more and more an informal space adapted to receive a plurality of activities: entertainment, work, socializing. New values are assigned to the kitchen, living room and kitchen are no longer strictly separated and you lose the rigid demarcation between frontstage and backstage that had characterized them, reconfiguring according to new structures, such as the living kitchen. The kitchen, as a result of technical and social transformations that are beginning to configure ceases to be a place dedicated to private, is no longer the realm of the woman because the roles within the family have become more fluid and smaller spaces. The food preparation is no longer considered a private job as dirty/messy but instead becomes open to conviviality, visible to the outside of the family circle, often eat meals and conviviality are present together in the same room. This space has the value social relevance before the dining room, living room and even before, it must be visible and place of receiving, as it helps to represent the

social prestige of its residents. This explains the greater attention of the mass media and the sale of furniture companies getting richer, technological, expensive as well as functional, where everything is in order and a sense of safety and cleanliness.

In addition, the generation born in the 70s and later have a greater interest in sustainability, eco-friendly materials and processes with low emission of pollutants (Savut and Alexander, 2008). This type of consumer is willing to pay more for environmentally friendly products and to create conditions for a healthier home (Baker-Laporte et al, 2001; Polonsky et al, 1999).

As already mentioned several times the kitchen is one of the most symbolic space that adapts to the family life cycle, today less linear and definitive, and socio/demographic.

Today we have an increase in the global population and continues the trend of the dominance of the urban population compared to the population living in rural areas. From the reports State of the World 's Cities public that the UN since 2001 we briefly report that the world's urban population since 2008 has surpassed the rural population, it is increasingly multicultural and deepening the economic gaps. According to Eurostat, in 2050 the elderly population could triple in the meantime in 2010 we arrived at about one-third of sixty who live alone, mostly women and dependents. Increase migration flows, changes the composition and timing of family life, there is a simultaneous increase in the number of households and a decrease in their average size. Increase the single-component families regardless of age, multiply extended (Baldini and Federici, 2008).

From these new realities are born new requirements, such as, for example, the design of kitchens that can be used even by elderly and disabled. The presence of foreign caregivers and babysitters changes the role and use of the kitchen that will turn back again for reasons other than the prerogative of service people. Change as we reported the timing of the families and the timing of consumption and preparation of meals, which are often eaten at different times and in different places by members of the same family (or inhabitants of the house). The increase in population in the world according to many scholars leads to a greater use of resources that by their nature are limited and more pollution of the planet. In other words, since the 70s has focused the attention of a small band of experts on population and environmental issues, and these issues have involved a slowly increasing the public, bringing in evidence as the improvements in the level and quality of life determined by the science / Technology had a cost in terms of impairment of the planet and the extinction of many animal species, of resources, industrial pollution and the increase of diseases determined by the welfare and pollution. It spreads a greater sensitivity towards the use of renewable energy, to control indoor pollution, a kitchen is required by the high technical standards / ergonomic (safety, comfort, hygiene, etc. ..) and the new civil service (which is open to guests and at the same time the center of the house), but that are sustainable , both for users and for the environment in general.

Because of the social and cultural changes from Canada to Australia, via Europe, multiply experiences of participation and sharing, spread new, or revised, social practices that transform the food and its preparation by the time of the meeting of the family at the time of encounter and knowledge of the neighborhood, from single units to urban spaces. From the garden to the collective kitchens cooking, solar cooking from the cohousing, and related practices, such as urban gardens, with different motivations emerge from difficult situations to support integration between groups of native residents and aliens. In the cities, the units are always smaller, and, therefore, a part of residents, for various reasons and causes, pressed to use urban spaces and common concrete and innovative forms of organization of social life that can provide answers to requests emerging social and housing. Therefore necessary to initiate policies, processes and design aimed at sustainability and equity, the only way to achieve harmonious city and get welfare for citizens, thanks to a better quality of life.

The urban action in the common space of a quarter of the ATR in Terni allows us to state that even in areas not inclined, like the Italian one, there is an ongoing interest in shared experiences and community. In a public space, including social housing in the twentieth century for the employees of the local steel mills, currently live together in these structures two opposing communities for cultural reasons, the Italian families and those of immigrants. The public space is abandoned and is a source of the conflicts between communities that do not know each other and through the involvement of the inhabitants of the district was created in 2012 a cooking garden, an domestic area in a public space where you can share culinary experiences and more. A project temporary, but far-reaching.

SHARING AND SUSTAINABILITY

The environmental movement was born towards the end of the 60's, a crisis of legitimacy for modern symbolic universe, caused by the increasing evidence of its environmental unsustainability, elaboration of criticism and alternatives to its institutional pillars, conducted in the scientific and political field, the visibility offered by the media system to environmental issues over the past thirty years, the role of sensitization and mobilization took place from the bottom by associations and grassroots committees (Touraine, 1978). When we speak of environmentalist movements or movements for the green one can no longer speak of a social movement in the classic sense of term, given the diverse and complex cultural-political composition of the members of the movement, and of diversity, multiplicity of present belonging and identity. Nevertheless, the concept of social movement (in the definition of Touraine) used here is ideal-typical. According Antimo Farro "environmentalism incorporates themes and content addressed by conservationists and green political parties, interpreting them in a different cultural setting" and composite. The environmental movements are therefore not, wanting to bring it closer to other social movements similar ideal-typical level of employees or students, but rather that of pacifist and feminist, more complex and cross-cutting. Its social bases are not in suburban areas, but in the middle-class intellectual and the object of contention is not the appropriation of resources by a class, but the balance of self management, which results in a critique of lifestyles, modes of consumption goods, the alternative with which to overcome the crisis of non-renewable resources. In this social movement there is an enhancement of the individual as a subject , and in this sense the choice to embrace lifestyles where there is sharing of housing or food (preparation and consumption) has a value different than we have so far presented, starting from the importance attributed to the subject / individual and a choice between cohabitation and designed for individuals similar values , education and social level. In recent years, within this composite movement groups have rediscovered collaborative kitchen. Groups who mainly live in a rural setting, farmhouses and cottages as a conscious lifestyle choice . Even in urban areas there has been a rediscovery of the benefits of cooking in the community. For example, in the USA communal kitchens where foods are purchased from local farmers and then distributed among the participating members without the sharing of a meal.

Collective kitchens, Cohousing and eco-villages: the new practices of conviviality

Over the past 20-30 years have been developed mainly in Canada, Australia, New Zealand group collective kitchens. These vary widely in scope and structure, however, are fundamentally born as support services to the elderly. Over time from a simple distribution service of prepared meals, to meet the physical challenges of older people involved, you are transformed into real shared kitchens where the elderly if they so wish may participate in the preparation of the meal and not just consume it in conviviality. This change has allowed us to meet the primary objectives (from the reduction of accidents in the home to improve health through proper nutrition) and to improve mental health through increased human contact and a newfound sociality.

The term cohousing refers to a particular form of voluntary neighbourhood which exist in a private homes with common facilities. The common areas are managed collectively in order to save money and protect the environment. Unlike the case of the former Soviet collective and common 70s here we have a cohabitation structured on the basis of a certain homophily between residents and protect the privacy of each along with the satisfaction of social needs. The cohousers contribute alternately useful services not paid in cash but returned in the form of other services for the entire community, from child care to the weekly shopping to cooking, the care of the maintenance of green buildings. Not always, however, cohousing is a choice. Sometimes older people, young people or families with limited means, in a period of drastic reduction of welfare, accepted forms of cohabitation to save money, and provide social services, things previously delivered to the families of origin or services offered by the municipality. In many cases, especially for the elderly, forced bundling these choices have proven to be the better than the services offered by the local authority and the possibility of sharing food and kitchen as well as having reduced accidents at home has improved by decreasing the typical social isolation of older people. When the cohousing is a choice it is good to wealthy individuals and social backgrounds who want to save money, preserve resources of time and environmental conditions. This in spite of the general trend logs detected by Gazzolla (2004) from the 80s and in urban areas at a progressive impoverishment of the investment of individual or collective actions to be carried out in clichés / shared to the benefit of greater enjoyment private interior spaces because of a growing feeling of insecurity. Historically, it is important to note that this form of collective living, spreads in the 70s in the Scandinavian countries where a change was taking place in the household (dissolution of the traditional family and increase in single-parent families) associated with increased job insecurity. This raises not so much within the environmental

movement but as a response to the specific needs of the north-western societies in which the assertion of individualism has led to the gradual dissolution of the traditional family networks. In a second cohousing spreads in the United States and Australia where it fits in the process of suburbanization and construction of residences in which prevails among the residents, and the homophily closed to the outside in an attempt to create a safe and supervised space in which the residents create a community of equal, mutual aid and solidarity. Today we find experiences of cohousing in the rest of Europe as a concrete alternative to the conventional family model and linked to environmental sustainability issues, while the cultural debate has received in France and Italy, in the last five years, a significant media feedback.

Other socio-economic fertile laboratories, whose fundamental value is ecology flanked by cooperation and solidarity are ecovillages (a term coined in 1991 by Robert and Diane Gilman in their book Eco-village and Sustainable Communities). In this case we have communities that choose based on your specific choice of values to adopt a sustainable lifestyle, eco-friendly and in total harmony with nature. The pecuriality is the fact that these communities tend to be self-sufficient, sustainable, and to satisfy their internal needs food, work, education / training where possible and leisure management. Those who choose to live within these comunities of alternative fusion, on the basis of shared values, the following principles geared towards environmental sustainability, and it is in this context that we must read the creation of shared kitchens. These types of houses are spreading everywhere and are generally connected to each other thanks to international networks for the exchange of information and experiences. Green architecture, renewable energy and use of recyclable materials, characterize the design of these mishmashes, but also new technologies in order to improve sustainability.

Sustainability of the housing of the collective dimension

In recent decades, alternative technological solutions for the kitchen equipment have been created, based on traditional techniques and principles of sustainability; initially designed for use in underdeveloped countries, no electricity, such as the refrigerator, which is based on the principle of evaporation of water or ovens, solar cookers and barbecues. In 1970, Adnan Tarcici, UN delegate with environmental interests concerned by an excess of resources that involves cooking food, designed and built the first foldable solar cooker. Currently there are communities of "solar cookers" whose primary purpose is the promotion of solar technologies in unprivileged areas without electricity and to improve the conditions of life. Solar Cookers International is a network of local and international volunteers and inventors either in the snow or in the deserts strives to find the most suitable models of solar cookers accoring to the peculiarities of the locale. The goal is to cook any kind of food thanks to the energy of the sun with ovens eco-friendly and sustainable materials. In western countries these "experiences" are spreading through industrial districts based on utilizing local products and waste, provided healthy, for the construction of kitchen equipment. For example, in line with this philosophy, Sardinia (Italy) organizes the Solar Cooking Show, laboratories of construction of solar ovens and solar cooking in urban public spaces.

To the interest in traditional kitchens but with low emission of pollutants in housing units, built with green materials and the installation of energy-efficient appliances and reduced impoverishment of resources, we can support the rise of heterogeneous collective experiences (different purposes that satisfy the manner of implementation ranging from shared kitchens to use of indoor public spaces) in which sustainability is often the guideline project.

Towards a design ergosustainable

A new vision of design that is based on the fusion of the principles of ergonomics and sustainability can create spaces that can move relative to the individual and collective needs. The ergonomics, created to adapt the function to men, has extended its fields of investigation and action: critical analyses and designs solutions for systems, which built environments (work and daily life, external or internal), tools, interfaces that adapt to humans considering the diversity and multiplicity of needs, and encouraging their physical and mental wellbeing and improvement of the Quality of Life. Sustainable development, as defined by the Brundtland Report of 1987 and its subsequent amendments, "is development that meets the needs of the present without compromising the ability of future generations to meet their own needs, improve the quality of life, without exceeding the capacity load ecosystem of support, from which it depends". Therefore important for both disciplines, improving the quality of life. Sustainability and ergonomics come together to pursue a common goal: the pursuit of well-being in harmony. A design can be defined as ergosustainable, which aims to create systems: affordable, accessible, comfortable, safe,

pleasant, healthy, low consumption, easy to maintain. The ergonomic approach and sustainable plans to "look at the world from a different perspective, a different logic and methods of cognition and verification". Modern disciplines from the ancient and deep roots that require a multi- disciplinary vision and operability.

CONCLUSIONS

The urban kitchen and the role of ergonomists

Over time, in distant places and with different types of needs and satisfactions , the collective model of the house, or part of it , presents itself as an alternative to social groups cross the contradictions of traditional living . The changed relationship between resources and population, the conditions of urban life and changes in the traditional family with the new forms of associational life require a different way of conceiving in the house and the city. We live constantly between an individual dimension, of intimacy of a family, and a collective community. These two spheres are joined in the kitchen (preparation / consumption), the individual and the collective here intersect in different ways and according to time and space, with a greater or lesser size of the Community. It represents the dual environment par excellence, uniqueness and plurality, interior and exterior, family and community here cohabit the ancestral need of refuge and research of intimacy with the natural need for sociability and desire for community.

The analysis of the demographic and socio-cultural framework outlined above compares to architectural-urban evolution emerges in the importance of a new social design that creates a space -kitchen that meets these different needs moving towards the urban kitchen: kitchen sharing housing unit that is projected in public areas.

A century ago, the design of the home environment must meet the needs of traditional families, culturally homogeneous, with distinct roles and precise in which the mother/wife was carrying out household chores. The network of parental support, on average, encompassed individuals who for various reasons were unable or alone.

Today we have to intercept the needs alternatives precisely because of the social function of design and ergonomics, integrating sustainable instances of using low-cost technologies, equipment and containers that use alternative methods of conservation and ecological. Propose new forms of urban- kitchen to be included in the internal and external common areas of condominiums and urban areas, turning them into areas of support and integration, recovering and enhancing the function of their initial meeting spaces and participation. The methods of ergonomics allow you to define the project, adapting to both the individual and to the community. Watch the new scenarios, analyse the heterogeneous instances derived from the current mode of social interaction and changing lifestyles, identify the different risks that threaten the health and safety of individuals in these alternative environments, and consequently rethinking the spaces through new models based on different conceptual categories that are the creators and promoters of greater social integration and well-being of the individual and of the community in respect of the natural environment.

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