HOSPITAL DESIGN AND CULTURAL DIVERSITY

S. Surrenti

Department of Public Health, University of Florence, Viale Morgagni, 48, 50134 Firenze, Italy, silvia.surrenti@unifi.it

In recent years social scientists and architects have increasingly taken into consideration the hospital design to better meet people's health and recovery expectations. Literature has shown that a “healing” hospital atmosphere shortens patients' length of recovery enhancing operators' work performance. And that a "user-friendly" layout, grasping social and cultural needs of the users, can be a useful tool to improve social and health outcomes.

As the cultural diversity of nations continues to grow, a second central issue has come to be considered: that of addressing people's lifestyles in the design of any public building to better meet users' cultural needs. Accommodation of cultural heritage in health care settings is becoming a new strategy that requires attention to both spatial organisation and the physical environment in order to support culturally based activities and rituals. Empirical research aims at identifying the main qualities required by a hospital setting to ensure equity of access at the point of cultural and social needs. To bring people’s lifestyles and cultural needs into the heart of the planning process is an important step to enable hospital design to produce adaptable and versatile solutions to deal with cultural diversity. The research has been carried out in Florence, maternity wards, by a qualitative study of patients’ behaviour based on grounded observation.

Keywords: hospital built environment, healing environment, patient-friendly, social interaction, patients’ perception, multiculturalism.

Historically intended as environments to assist the needy and, later, to heal the sick, hospitals were built with a main function: that of taking in the diseased, confining them within the boundaries of their structure. Modelled on the organizational principles of medical science, healthcare environments have always been culturally "transparent", reflecting the power of the evolution of medical science and the historically variable doctor-patient relationship. From an architectural point of view, although in the past hospital design concentrated on the subject to be treated, the architect never considered him to be problematic, being culturally equivalent to the project designer himself. But by

virtue of the greater attention that so-called humanization[1] processes pay to the person and his individualities[2], rather than only concentrate on the sickness condition, hospital architecture can no longer ignore the cultural specificities of people's lifestyles and cultural users' health needs. The users, differentiated by geographical origin and lifestyles, are no longer prepared to waive recognition of their subjectivity, which they expect to see represented in the design on small and large scale. In this respect, the multicultural nature of contemporary urban life stimulate considerations on themes concerning the design of public buildings in general, and of healthcare environments as places open to all in the specific. Lifestyles and cultures, in fact, as a combination of practices and representations give meaning to the environment and to the activities which take place within it. The culture of belonging, for instance, subjectivises and determines the hospitalization experience. At the same time, differences in treatment methods and disease representations have made the treatment relationship considerably more complex than in the past, and even problematic. For all these reasons, the awareness of the habits of “others” and empathy with people's experiences should improve the hospitalization pathway.

To design a culturally sensitive setting the cultural "congruence" of the built environment with social behaviour should be taken into consideration. Healthcare contexts should be more and more aware that the built space has the power to *represent* people 's lifestyles, as well as to *communicate* at a *symbolic* and *sensitive* level of people interaction. Anderson, in *The American Journal of Preventive Medicine* (2003), in considering culture as an integrated set of behaviour models in which communicative aspects, values and rituals acquire a determinant value, points out that a hospital environment attentive to the users' cultural co-ordinates is one that takes into account its *intercultural* dimension. This is a place that responds to the needs of those to whom the project is addressed also from a *symbolic* and *ritual* point of view. These dimensions will go towards integrating the functional aspect of healthcare structures. As pinpointed by the research work undertaken by the Centre for Evidence in Ethnicity Health & Diversity, nowadays culture can be used to improve health and wellbeing and, therefore, as a development channel in the treatment context, or turn into a barrier that obstructs the exchange and development of new

[1] In Italy, <<Art. 14 of legislative decree no. 502 of 30 December 1992 introduces the principle of the continuous adjustment of structures and services to the needs of users and establishes a specific system of indicators to evaluate the qualitative dimension of services regarding the personalization and *humanization* of assistance, the right to hotel services as well as to the progress of disease prevention activities >> in http://www.aosp.bo.it, visited in January 2009.

[2] Among the factors which have prompted healthcare structures to start humanization projects should be recalled the increased participation in treatment processes by citizens and healthcare operators, on the one hand, and the greater attention paid to planning and evaluating services by administrations, on the other.

knowledge and attitudes (Mary Seacole Research Centre/PRASADA and the Centre for Evidence in Ethnicity Health & Diversity, 2004). The studies promoted by the European Commission (*Migrant Friendly Hospital*) on the evolution of the role of hospitals in contemporary society have moved precisely in this direction. The results show that the organizational and architectural reconstruction of these environments is one of the possible solutions to the problems of interfacing the health system. In the Italian context, the former Minister of Health, Prof. Veronesi, has set up a committee on hospital design chaired by architects Renzo Piano and Lamberto Rossi, for the purpose of creating environments that are responsive to the necessities of those who live in and use healthcare facilities. While AIA Architecture (www. aia.architecture.org, 2008) emphasizes that, today, through the design of public buildings, it is essential to provide a planning solution to the needs of a *multicultural* population. So that the research for correspondence between environmental reactivity and the users' cultural expectations is of fundamental importance to the quality perception of the place. To the extent that, based on the latest trends in humanization pathways, it is considered essential for these spaces to be accessible to any cultural group and be based on people's needs.

In addition, the adaptability of built space to the cultural and symbolic needs of the users can enable control of social criticality. The "sense of the place" in improving relations between individuals and enhancing the treatment function has become an issue for reflection in treatment contexts. In Maternity wards, foreign women regard as problematical the separation from their home country's health system and the forced adjustment to a new type of built space. Their uneasiness intensifies in the labour and delivery rooms. Different practices and different religious beliefs may interfere and be in conflict with the work of healthcare professionals. For example, while childbirth is an event that takes place under medical supervision in western countries, for other cultures it is a time to be shared with relatives. Anderson (2003) stresses that a healthcare setting which is competent from a cultural viewpoint should contrive to create what he defines as a combination of *culturally connoted settings*. In other words, it should elaborate environmental-settings organized on the basis of a diversified combination of beliefs, so as to differentiate the concepts of illness, treatment and wellbeing from a cultural point of view[3]. The interest in what can be termed as the "cultural sensitivity" of the environment originates from the intent to enhance healthcare places with a *relational* type of spatial dimension. In other words, it originates from the intention to enhance the environmental setting with a *communicative* capacity aimed at facilitating the relational needs of users

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[3] Among the most frequently found cultural criticalities in hospital settings is the increasingly present refusal by Muslim women to be examined by male healthcare professionals and the request for their husband to be present while being examined. Or, in the case of other cultural groups, the possibility of decisions concerning treatment being taken by the family group rather than by the patient concerned.

having different lifestyles. This can take place through the organization of environments which create a "sense" to treatment, birth and death events as well as environments which exchange "sense" with those to whom the project is addressed. It is in fact now recognized that a hospital which is mindful of the needs of those on the receiving and of a carefully organized and well-designed project provides a contribution to the wellbeing of individuals. Architectural literature in psychological vein has, to date, dealt with a specific field of analysis mainly concerning the study of the environment's therapeutic qualities. It is known, for example, that a welcoming environment lessens a patient's stress and anxiety, that landscape views cut down recovery time, reducing the use of analgesics, and that a good design facilitates social interaction, limiting pathological behaviour. (Dilani, 2004; Lawson and Phiri, 2000). Social sciences, on the other hand, have led to considering the users' *perceptions* and *social characteristics*, together with ways of using the environment, as the most important indicators in design organization attentive to users' needs. Nevertheless, despite the progress made by research and above all in the Italian context, a theoretical delay has been seen in social analysis of the built environment. Research directed at analysing the cultural and symbolic dimension of users' needs still appears to be insufficient. The way in which the cultural differences of those who live in or make use of a certain healthcare environment – and consequently cultural differences in the perception and use of built space –is the field of analysis for empirical research. The aim was to reflect on how an environment can guarantee forms that take into account the desires, symbolic representations and, in general, the social and psychological processes typical of a certain population which in certain cases is also multicultural. The perceptive gap between evaluation of the built environment by the experts and that of the inhabitants unfortunately depends on the complex relationship between the category of *habitability* and that of cultural *identity*. By way of example, the misunderstandings arising between the needs of those to whom the design is addressed and the creativity and aspirations of the designer usually prevail over the design results on account of incorrectly exchanged information and symbolic mediations misunderstood by the actors involved in the design dialogue (Signorelli, 1989). A problem area for which the new designer cannot ignore an evaluation of the impact on his work - particularly at a time when architecture is beginning to consider cultural diversity either as a problem or a *resource*.

The influence of cultural variables on the organizational co-ordinates of built space is borne out in the idea of *social milieu*, in other words, in the environment's symbolic characteristics, linked to sociological variables such as *identity*, *status*, the *role* covered by the people and their *lifestyles*. If a relationship exists between design practice and treatment practice, it depends on

the therapeutic functions entrusted to the environment and the symbolic dimensions with which particular segments of users are represented and welcome. What are the factors that influence environmental experience during recovery? These factors are identified as follows.

Place experiences in a health environment: empirical research

Empirical research has concentrated on the importance of social science expertise as a contribution to the thematic organization of architectural design. Four-month background research was organized in hospitalization environments in the maternity-baby ward of Careggi, University hospital agency. The study took place through participant observation in the field and conversational interviews. It identified the cultural ways in which users perceive and use the environment. The results of the research led to the elaboration of a set of design recommendations which are useful for guaranteeing the socio-cultural needs of users. More specifically, research results concern observations on the needs of women in-patients.

The aim of this empirical research is to detect environmental criticalities in relation to the behaviour of the social actors in the ward. It is hypothesized that a user-friendly design improves intercultural relations, reducing socio-cultural micro-conflicts. In this case, the environmental setting should act as a cultural mediator and vehicle for transmitting meanings that are full of social and relational content. The maternity ward, built in the 1940's, is planned for redevelopment. The results of the research may prove useful in studying the new hospital.

When the cultural heritage of those who live in a certain environment are not respected, critical situations or latent dissatisfaction may arise which, in the long term, lead to stress and anxiety or what in other terms has been seen as a state of mental discomfort induced by insufficient cultural responses (Gesler, 1990). The results of research show that the hospital environment and health needs take on different meanings depending on the users' cultural provenance. Cultural provenance influences the way in which public or private spaces are experienced, in the same way as the ritual of birth or death, but even of dressing, washing and eating. An environment, therefore, is also a place that is shaped by the *ritual* aspects of human behaviour. For instance, studies (Douglas, 2005; Gesler, 1990) have shown that "Americans"[4] prefer single patient rooms, while

[4] For the sake of simplification I use the generic connotative terms of Italian, Chinese, etc. Nowadays, it is difficult to find Chinese-types, etc. (intended as pure representatives of the culture of provenance) since cultural stratification of individuals is truly complex from a social point of view.

the "British" prefer spacious, shared environments. For other cultural groups the amount of space between beds is important; the "Asians", for example, are usually accompanied by a larger family group than western families. By the same token, for "Africans" it is important to be able to accommodate some of their family members for the night, as I was told when I interviewed Noemi, who explained that in her country, Nigeria, the mother looks after and sleeps by the side of the woman who has just given birth. These necessities related to cultural rituals may, in structures that are badly organized from an environmental and logistic point of view, give rise to friction among patients and medical staff and possibly even lead to breaking hospital rules. Devised on the basis of behaviour ritualities, the healthcare facility acquires the capacity to *communicate* with different user segments. In fact, among the environmental attributes necessary to organize a space that is responsive to the users' cultural co-ordinates, Gesler (1990) stresses the importance of the *symbolic* and *social* dimension. These are necessary to characterize the identity of the place and are also important for the purposes of hospital design. In a design perspective, the following symbolic aspects of built space should be taken into account. They can be grouped together as[5]:

- Space as a thematic environment of *meaning* and *communication* - through which the place achieves a certain level of communicability and sharing of meanings with those who use it.

- Space as a thematic environment of *behaviour* – in which people relate to each other on the basis of their habits, cultural customs and lifestyles.

- Space as a *sensorial* (senso-type) environment – the characteristics of which are expressed through visual, olfactory and tactile attributes and whose appeal is influenced by the taste of the culture of provenance.

Social and cultural "habitus" as well as users' expectations influence both people's ways of making use of the place and of perceiving the quality of the environment. For this reason, evidence-based knowledge about how design impacts the behaviour perception and outcomes of building users are necessary to improve hospital design.

[5] These categories have been inspired by the studies of A. Rapoport, 2004.

Method and practice

Field analysis has tended to represent environments based on their *vocationality,* grouping them into two representative categories: on the one side *private* spaces, indicating the level of personalization and privacy perceived by patients; on the other, *public* space, indicating the presence of services and the possibilities of socialization provided by the structure. Reference was then made to the idea of *ritual* as a sociological concept defining the cultural characteristics of health needs. Rituality enables the individual to organize his/her behaviour within a frame of values, on the basis of which public and private relations are regulated. In the case of the birth-event, occurring in the department under study, research has shown that it is the symbolic importance of the ritual that determines the meaning and nature of social behaviour. In the same way, it was observed that privacy levels change from one culture to another, since the concept is correlated to the social rituals of provenance and to the individuals' sensoriality, like sight and hearing (which are in turn influenced by the culture of provenance). Perception of the atmosphere experienced in a "care setting" is correlated to the capacity to recognize our identity: who we are, how we feel, how we relate to others and how we experience a certain event also depends on the symbolic meanings communicated by the "environmental setting".

The above typology has been enhanced by a further two dimensions which characterize the organization of space. Based on field observations, besides private and public space, another two spatial categories have been identified: the degree of *institutionalization* of environments and the level of *flexibility* of structures, interpreted as dimensions which measure the adaptability of structures to the needs of users. These two categories have been chosen based on the idea that to be user-friendly an environment must appear to users to have a level of flexibility. In this way the environment is perceived not only as a place of identification but also one of socio-cultural differentiation, and as a means of behaviour opportunities. Results show that the greatest behavioural criticalities emerge precisely in the way people use private and public environments. And that, conversely, an environment which is more flexible, or indeed in a position to interpret the different cultural meanings of privacy and socialization, may serve as a means of communication and of facilitating social relations. Rapoport (2004) indicated that an optimal level of congruency between social behaviour and built space depends on the capacity of the environment to recall the user to the symbolic order of his reference culture. Today, this congruency is difficult to realize because of the wide variety of cultures that frequent the same environment and the possible cultural combinations to which people decide to adhere.

<u>Place experience</u>

<u>Place vocationality</u>

- *Private* environments (need for privacy and personalization levels)
- *Public* environments (need for socialization)
- The *boundary*, as a symbolic spatial line, indicating diverse cultural sensitivity to the need for privacy and socialization

<u>Environmental reactivity</u>

- Environmental *institutionalization* versus structure *flexibility*

The levels of environmental socialization and those of privacy and personalization appear to be the most problematic environmental vocationalities, above all where multicultural users are concerned. The following themes have been identified as the most problematical areas: ritualities concerning meals, religion, supportive social networks.

Initial results: design attentive to the users' social needs

Social actors involved: patients-users, medical staff, care-givers, visitors-relatives.

Place vocationality

The ritual, physical-symbolic and communicative aspects of places. Relationship between *public space* (need for socialization) and *private spaces* (need for privacy). A *mobile boundary* line has been utilized as a virtual interpretative lent to see how borders and their flexibility could be of help to mediate social relations.

Privacy levels and organization of private space (need for privacy)

In all user areas, the environment appears to have a very low level of privacy. Care-givers refer to the necessity to organize a system of curtains to increase the level of intimacy during visits and at baby-care times. The patients interviewed, particularly Italian women, complained of the lack of privacy. Ilaria e Chiara, two Italian women, complained that a "Chinese" woman in their room ate food brought from home by her relatives, in the company of members of the family gathered around and sitting on the bed. The unpleasant smell of the food and overcrowding in the room irritated the other mothers; in the same way

that there may be a feeling of embarrassment for a collective ritual that takes place in the presence of strangers. The same feeling of embarrassment was perceived by an Italian patient during a Muslim woman's prayer session. Conversely, Noemi, a Nigerian patient readily accepted the fact that she had to pray with other women because of the lack of suitable socialization space and because the extended social network is not always easily accepted. Probably because these women complain of the strict visiting rules imposed by the care-givers. For other two Nigerian patients, Charlotte and Elenie, in fact, the socializing aspect of hospital rooms is considered positive, in view of the impossibility of accommodating family members overnight so to feel the presence of a supportive social environment. Depending on the patient's culture, levels of privacy and socialization are seen in different ways.

A greater level of privacy in hospital rooms would lead to a reduction in cultural micro-conflicts which may induce moments of stress and intolerance. Various patients interviewed asked for common areas to be made available so that their families could come for lunch or dinner; in other cases, personal space was requested in order to spend time with the new-born baby and family or visitors as well as private space to dedicate to prayers. In other cases, larger lockers were requested for clothes and a private area for dressing/undressing, and in some cases also during medical examinations. Medical staff would like a private rest room area where they could also change their clothes and semi-public areas where they could meet up with colleagues, in addition to a dining area. For their babies, patients request a semi-private area in which to take the baby during visits.

Organization of public space (need for socialization)

Patients-users request a leisure area where they can watch television, read or carry out other recreation activities as well as meet their visitors. From observation, it was seen that an attempt had been made to create a reading area, which in fact was reduced to the organization of a library which housed books left by previous patients. Greater attention should be paid to the environment's relational aspects. All user categories require a pleasant outlook and access to outside, to terraces and gardens. In some cases even to areas where they can buy their immediate necessities or to a well-organized bar where they can sit and buy newspapers and other items. The lack of public areas in many cases necessarily obliges patients to rest, so submitting them to prolonged boring periods with no incentives, particularly during the evening. The environment is in fact perceived by patients as a boring and mind-numbing place. The lack of a waiting room for visits and a room where relatives can wait during childbirth was observed.

Medical staff require rooms for research and where they can meet up and spaces to use at lunch and dinner times. Care-givers require areas where they can meet up and eat meals. Some patients stressed the need for areas, other than bedrooms, where they could eat meals and accommodate relatives for lunch or dinner. In those cases where meals are necessarily served in bed, requests were made for the design of bed tables (and furnishings in general) to take into account the needs of “non-sick” patients.

Personalization of the environment

Completely lacking: environments are standardized. To improve the level of personalization, reference is made to the possibility of displaying photographs in the rooms, to well-organized lockers, spaces in which to keep souvenirs and gifts, design elements and furnishings similar to a domestic or hotel setting. In general, the environment is not considered homely or friendly. Some patients do not like the present depersonalizing lighting system. The *personalization* of an environment succeeds in delimiting space according to one’s taste and distinguishes that space as one’s own, linked to one’s individuality and privacy, in other words, to the distinctive power of one’s subjectivity or personality, avoiding a "medicalized" environment.

Reassuring aspects

Perceived by patients as a safe environment from the medical point of view. However, devoid of elements of familiarity and without environment-friendly aspects, the environment appears to be medical safe.

Environmental stress

For medical staff and care-givers the environment appears more stressful during the early morning. Patients find it stressful during visiting hours, when it is also perceived as stressful for babies.

Theoretical observations

Dependence on the level of environmental quality and the users’ state of wellbeing is assumed from the degree of satisfaction of specific individual and collective needs, assessed as socio-cultural needs. In other words, symbolic

needs, induced by the culture of provenance, determined by the individuals' cultural heritage, desires, perception of the environment, and role-related necessities. The first critical situation identified is correlated to the different way that different cultures perceive the public and private dimension. At the same time the lack of suitable socialization spaces and public spaces within the department gives rise to contradiction in the use of hospitalization spaces. The latter are in fact used as public environments, thus limiting the privacy of patients who in most cases already find themselves having to share private spaces, since the rooms are generally occupied by three, four or even five beds. The lack of private environments (privacy) and socialization areas (public environments) impacts the work of medical and para-medical staff who, under stressful working conditions, do not have enough space to operate. A different perception of the relationship between the need for privacy and the need to socialize was, however, observed based on the cultural diversity of the in-patients. Field observations have moreover shown that in-patients produce their own social space, due to an environmental organization that fails to take into account the needs of those to whom the project is addressed.

Thus the second environmental criticality was identified as the relationship between the degree of *institutionalization* and *flexibility* of the healthcare facility. Hospital wards are virtually inflexible for all user categories and consequently poorly adaptable to the diverse necessities and personalization of the environment. To this should be added the fact that the environment has a low identity level, with little attention paid to the organization of pathways. Furthermore the cultural differences among users give rise to misunderstandings and difficulties in the management of treatment pathways and hospitalization. The construction of a place vocationality therefore appears important for the purposes of hospitalization organization, in terms of well-being and user satisfaction.

Research has also brought to light the following weak points: women do not accept that maternity ward visiting times should be the same as those for other hospital departments, there is a lack of attention to the healthy woman with baby and, consequently, architecture devoted to the celebration of birth. In addition, visits take place inside hospitalization areas, and therefore suitable (and therefore more flexible) furnishings would be of help.

The need for privacy is an important factor for Italian women (although not for all), foreign women are well-disposed towards a public environment (possibly due to the lack of a permanent presence to keep them company) (rooms with two beds are tolerated, while those with 4 or 5 beds are crowded and stressful). The women I interviewed expressed concern regarding the place where they eat and the food supplied and over the area where visitors and new-born babies can meet

up. In my research, all the women were concerned that their babies were exposed to rooms overcrowded with visitors.

Environmental reactivity

Institutionality versus *structure flexibility*

For all users the structure is virtually inflexible. Through participant observation, social production of available space was noted in response to insufficient spatial organization. For example, due to the lack of seating in the department corridor/waiting areas, patients stood around in the corridors, or dragged chairs from the rooms into the corridor or leaned against the walls or radiators. In the absence of a room where patients can meet their relations and friends, visitors sit on or stand around the beds. Due to the lack of environmental flexibility, hospitalization areas are used to all effects as public or semi-public spaces, with little privacy and little chance of making the environment flexible for personal requirements.

Experiential space

The second macro-criticality is grouped under the category of experiential space. In other words, subjective perception of the environment (emotional-affective aspects). In most cases patients perceive the hospitalization environment as boring and without stimulation, especially during the evening. Even though, in some cases, it emerged that an environment which is not excessively stimulating is desirable, since childbirth is in any case a tiring experience. Some patients also emphasized the lack of accesses to the outside and external views (underlining the constraints of the environment and the facility's hospital connotations), overcrowding during visiting hours and the fact of being considered, to all intents and purposes, as patients, despite the exceptionality of the birth event. In most cases, however, a state of "adaptation to the environment" was seen, in which patients feel satisfied with the environment, even though they do not live in objectively favourable conditions. This phenomenon occurs because the environment is perceived as "safe" from a medical and welfare viewpoint - an expression of faith in the professional capacities of medical staff and care-givers.

Sociology has for some time concentrated on evaluating the impact of the built environment on social behaviour and the wellbeing of those to whom the project is addressed, and how it also produces culture. In the words of Douglas (2004), if the hospitals of the late 1800's represented the generosity and kind

heartedness of their benefactors, forgetting the importance and the role of the patient in favour of functionality and order, the hospitals of today tend to forget the cultural diversity and cultural complexity which makes up our society, at best enclosing it in the prevailing culture. Empirical research has endeavoured to make the individual's method of action and interaction with the environment emerge, in a hypothetical culturally complex context. Secondly, it has endeavoured to emphasize the importance of the cultural dimension in the interaction between man and environment, as a new contribution to the humanization of hospitals. The user segments are generally identified as sectors of the population which, on account of the particularity of their condition, require specific attention (babies, the elderly, parturients, the chronically sick, the disabled etc.) or foreigners and migrants – in other words, users differ in culture and geographical provenance - and, finally, those who although belonging to the same culture, adopt different alternative life-styles.

In addition, in terms of the "identity of the place", in design process the following are considered important:

- Level of meaning and environmental communicability.
- Space as a sensorial environment: users' "senso-type" (taste, colours, sounds, heat levels), where sensitivity varies depending on the culture of provenance.
- Design for specific purposes, as for example the birth event, according to a user-centred design perspective. The culture of provenance determines, for example, the rituality and meaning of childbirth.
- Consider maternity facilities, but also other departments, as places for meeting and socializing.
- The possibility of furnishing environments, avoiding their "medicalization".

(In the case of the treatment pathway: concentrate attention on the trans-cultural aspects of reception, communication, linguistic mediation and treatment pathways centred on the person).

From a sociological viewpoint, in the design process the following are considered important:

- Knowledge of users' cultural habits since they affect the ways of using the environment (culture, ritualities, lifestyles, identity). Culture acts as a bridge linking the individuals' ways of communicating to their lifestyles. Culture in fact shapes practices and representations of daily life. In a healthcare setting,

it influences experiences and representations of the hospitalization experience. Culture = framework of values, production of meaning.

- Identification of users' role, sex, age, culture and lifestyles since the above dimensions vary according to necessities and expectations.
- To bear in mind that in a multicultural context there may be culturally hybrid behaviours and that migrants adhere and adjust to the host culture in varying degrees of proximity.
- To individuate the ways of using the built environment, through social behaviour observation techniques.
- To develop place vocationality based on user requirements.

In short, the users' *intercultural* and *life styled* nature of contemporary society make it necessary to:

- Increase the level of environmental *communicability* (so that the place acquires meaning also for non-western users) both in terms of personalization of space and levels of socialization. Evaluate environmental reactivity to different religions, to meal rituals, colours used, spaciousness between beds in hospital rooms, bearing in mind, for example, that Asians visit the patient in groups and require privacy for their personal hygiene. Well-dimensioned and well-organized environments may help to make the presence of their partner or relations more effective.
- Reduce stress elements, which may be caused by cultural tensions (low level of assistance, lack of services, needs ignored) and solved by extending the framework of services and personalization of assistance and hospitalization (in relation to cultural specificities, emotional, psychological and informative support). In the case of maternity, the cultural identity and the needs of immigrant women differ from western women on account of their ritualities, traditions and sensitivity. The discomfort experienced by immigrant women originates from traumas that derives from the separation from their families, to which must be added difficulties caused by the wrench from their home country traditions and health service as well as difficulties encountered in social placement and in the language of the host country. For this reason, immigrant women need to familiarize with a new system of values and ritualities and are called on to learn new behavioural parameters and adjust to new social rules and life-styles, besides adjusting to new spatial healthcare environments. The cultural differences between women and healthcare operators due to the diversity of practices, attitudes and beliefs, are intensified, for example, during labour and childbirth. With the consequence that religious precepts often interfere with the work of the medical staff or with the customs of parturients at functional level in the use of the

environment. It is therefore important to pay attention to the organization of reception areas by designing facilities that respect environmental levels of privacy and socialization.
- Create the use of culturally and symbolically connoted environmental settings as, for example, with movable wall systems, for use especially in the case of religious rituals.

Conclusions

In this regard, research has identified the "reflective designer" as the professional figure who cares of the cultural context of those to whom the project is addressed. Reflective research aims at providing the built environment with the cultural, symbolic and psychological variables generally used in the field of social science studies. In this year of research, "reflective design" has been pinpointed as the design process stage in which the architect, after a period of reflection on the purpose of his work and the peculiarities of the users to whom the project is addressed, decides to enhance the traditional design structure with new interpretative instruments. Within this design framework, attention to the cultural aspect of the user – built space relationship has brought to light how the latter is called on to interpret habitative functions and complex cultural habits, due to the different symbolic universes of users. From this perspective the concept of culture – together with underlying complex social dynamics – has assumed a central role in the design of environments responsive to the needs of those who pass their days there. In the presence of a multicultural context, the ***sensorial*** dimension represents the greatest problem from the environmental point of view. Taste and sensitivity vary depending on the culture of provenance and current architectural layouts do not guarantee control of smell or heat. Asian cultures, for example, call for the post-natal period to be spent in particularly warm environments, avoiding the consumption of cold meals. The puerperant, in addition, should spend the day in complete rest, preferably leaving the new born baby to the care of relatives. Obviously not all western hospitals are equipped to satisfy this necessity.

It is suggested that the planning of multicultural facilities should take into account an evaluation of the levels of cultural congruence between social behaviour and the organization of built space, which depend on:

- The meaning attributed to the environment
- Symbolic aspects required by users

- Sensotype on the basis of which to assess the environment's communicative level

This enables the elaboration of a design that will facilitate the solution of micro-conflicts and intensify the symbolic aspects and identity of the place. The levels of congruency, on the other hand, depend on the attention paid to:

- The cultural habits of users to whom the project is addressed (study cultural principles)
- Knowledge of the fact that atypical cultural behaviours may be encountered, dictated by cultural syncretism and personalization levels of the collective cultural heritage.
- Observation of social behaviour with regard to the way in which users make use of the environment, studied through qualitative observations methods.

For these reasons, it is important:

- to maintain high levels of environmental flexibility
- to organize mobile environmental settings which recall the symbolic order of cultures.
- to pay attention to the importance of the physical limits and the symbolic content they carry, since they are a means of representing a person's degree of participation or isolation.

The environment and the sense of the place play an important role today in improving the quality of treatment and the maintenance of wellbeing. For this reason it is important to understand, and secondly to include, the viewpoint and perception of the treatment experience of patients and of those involved in the treatment pathway.

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