AFFORDANCE AND BEHAVIOR SETTING:
A MULTI-LEVEL ECOLOGICAL PERSPECTIVE IN THE STUDY OF THE MEANING OF HABITAT

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ABSTRACT

Habitat, the environment where people dwell and have their everyday life and activities, has characteristics and features that afford opportunities for social practices and actions, and that communicate meanings. Individuals and collectives, through these social practices and activities, assign meanings to habitat. The relationship between habitat and individuals is thus mutual. But there is no consensus as to how the fit between environments and individuals works. In other words, what is the congruence between people and habitats made of and how can it be studied, and what happens when features of the environment and/or characteristics of people are shaped or changed? This paper proposes a conceptual framework using Barker's concept of behavior setting and Gibson's notion of affordance for the study of habitat and its meanings.

Habitat can be conceptualized as consisting of several behavior settings (BS). A BS is a higher order environmental structure which is suited to certain behavior patterns. But we question the limits of two important facets of a BS: being a function of collective action alone and being relatively stable in space and time. Environments are used and (re)shaped constantly by participants and other stakeholders. Considering a BS only as a relatively static environmental structure would limit the understanding of the complex mutual relations between the setting and the social practices that occur in it. At the same time, the collective focus of a BS limits the preciseness of the description of its milieu properties for understanding their congruence with the participants. Approaching a behavior setting with affordances in mind can lead one to think about the kind of individuals who would participate in particular settings. Affordances, by definition, are identified relative to the actions of specific perceivers. If affordances are socio-cultural phenomena then shared functional characteristics of the participants in the setting might be considered for understanding the nature of a behavior setting. This means that the functional characteristics of a behavior setting may be specified relative to the shared or normative characteristics of a group of participants or intended users, who are often also individually motivated by the affordances provided by the BS to participate in the setting. In this paper, a conceptual framework for studying habitat from a multi-level ecological perspective will be further elaborated.

KEYWORDS

Ecological perspective; behavior setting; affordance; meaning; habitat

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INTRODUCTION

This paper presents an ecological perspective for the study of the meaning(s) of habitat. Because it requires the description of the habitat, of the social organization of the individuals and groups[1] in its habitat, and of the relationship between the individuals and groups not only with others but also with structural aspects of the environment, the ecological perspective is particularly of interest in the study of meaning(s) of habitat. In sum, this approach focuses on how individuals and groups adapt (to) their habitat, and vice versa.

The term habitat seems to suggest better than the term environment, the reciprocal relationship between individuals and groups and their daily "environment", and the psychological processes related to it (Heft, 2007). As highlighted by Turner (1976 in Roderick, 2006), habitat is both a product (i.e. a dwelling, a neighborhood, even the whole city) and the process (i.e. the construction of, the upkeep of). For these reasons, we argue that habitat is preferable to dwelling and home territory, being more inclusive of the different places of what may constitute "home"[2]. Individuals and groups alter their habitat by constructing/modifying what Heft (2007) names econiche, in other words adapt it in order to function/live in it. But, "[t]oo often, the concept of adaptation is mistakenly understood to be one-side effect" (Heft, 2007: 90). The relationship between habitat and the participants of the setting is mutual. As an environment, habitat is made of several places that have characteristics, features that afford opportunities of actions and communicate meanings through everyday life, activities and social interactions. This explains why researchers such as Lees (2001 in Clapham, 2011) criticizes the "reading" of a building (or the built environment) as a text without taking into account how space is appropriate by ordinary people. "She argues that 'consumption (of space) is an active, embodied and productive 'practice' and recognizes "the creativity of consumers in actively shaping the meaning of the goods they consume" (Lees, 2001: 55 in Clapham, 2011: 364).

[1] Here, "a group is defined by its recurrent meeting in time-space due to the social obligations of the members" (Elligard, 1999: 167).
[2] Moser (2006) refers to the habitat as a microenvironment while the immediate environments (the neighborhood) can represent the extension of habitat.

But, despite decades of interest in the study on how the fit between habitat and individuals and groups "works" , there is no consensus on what the congruence is and how it should/could be studied, even less in a dynamic perspective (i.e. when characteristics, features of the space are changing), or in different cultural contexts. Furthermore, as Clapham (2011) emphasizes, there is still a lack of integration in conceptual frameworks that considers not only the uses but also the symbolic elements of habitat. Several places constitute a habitat, including but not exclusively, the dwelling and the home territory. Places of the habitat are made of unanimated and animated features (mostly other individuals and groups) (Heft, 2007) and provide the setting for social interactions, what Giddens refers to as locales. We propose to contribute to the debate by developing a conceptual framework that could be used in the study of habitat, based on two concepts that "make up much of our habitat" (Heft, 2007: 99): 'behavior setting' (Barker, 1968) and 'affordance' (Gibson, 1986). Barker and Gibson represent "two separate lines of research and theory in psychology, both calling themselves 'ecological', one emphasizing perception and the other behavioral adaptations" (Charles and Sommer, 2012: 7), but according to Heft (2001) their work is intimately related because they share the same metaphysics.

This paper is divided into three parts. The first presents different classical perspectives in the study of the meaning(s) of habitat, in order to highlight their specificities but mainly their limits. The second part introduce the base of our conceptual framework by introducing Clapham's housing pathway and by presenting both Barker's concept of behavior setting and Gibson's concept of affordance and how they are related. A discussion on the originality and applicability of this proposed ecological perspective is presented in the final part.

FROM HOUSING QUALITIES TO HABITAT

Since the 1990s, studies of "home" proliferate but looked mostly on specific aspects of the concept using specific disciplinary approaches despite the acknowledgement that "home" is a multidisciplinary concept (Mallet, 2004). As such, many studies focused for example on housing qualities and preferences (Coolen, 2014; Coolen and Jansen, 2012); on residential mobility (Rossi, 1980; Brown and Moore, 1970; Clark and Onaka, 1987) or on territoriality of home (Bélanger et al., 2012). These studies can help us better understand some aspects of the transformation of residential environments, how spaces are appropriate, for what purpose and by whom. However, as we shall demonstrate, none of these approaches integrate the reciprocal relationship between

individuals or groups in their habitat while considering the uses and symbolic elements, and that are valid in a dynamic perspective and in different cultural contexts.

Several reasons have been mentioned for studying housing preferences of (potential) inhabitants of dwellings (Coolen and Jansen, 2012). First, to improve, especially, the qualitative match between housing demand and housing supply. A mismatch between demand and supply may lead to dissatisfied inhabitants and unoccupied dwellings. Second, housing preferences are interesting from the point of view of consumer sovereignity. In many product areas consumer preferences are seriously taken into account, the housing field seems to be ignoring these preferences, at least in many housing systems. Third, in many discourses about housing certain groups of inhabitants seem to be overlooked systematically. For instance, Karsten (2009) shows that in many urban discourses families with children are hardly addressed. Research on housing preferences may bring such groups and their wants out. Although housing preferences have been studied from different theoretical perspectives and with a great variety of methodological approaches (Coolen and Jansen, 2012), they lack a systematic perspective on people-environment relations (Coolen, 2014). Many methods for measuring housing preferences allow for little freedom of choice of housing characteristics, focus on a limited set of dwelling features, and often result in very general programs of requirements. Since most of these methods were developed in a supply oriented housing market, it is understandable that the focus is on the dwelling and its main features in a very general way. Information on the use of the house is only needed in a very general way so that it provides certain basic functions to all. But in an ecological approach the emphasis shifts, in first instance at least, from the house and its features to the use people make of it and how this is related to structural aspects of the house. Most prevailing studies of housing preferences only focus on what people want while ignoring why they want it. The ecological perspective combines both aspects of dwelling. In such an approach the starting point for the elicitation of housing preferences might be the inhabitants' activities and behaviors with respect to dwelling, and the final design consists of a dwelling that affords these activities and behaviors as much as possible.

Understanding the meaning of habitat can help in understanding dissatisfaction with housing conditions that can lead to residential mobility. Various studies have shown that the decision to move voluntarily is initiated by dissatisfaction with housing conditions or with the physical and social environment of the neighborhood. Broadly speaking, those studies on residential mobility are interested in the mismatch between the characteristics of households such as the lifecycle stage or the cultural or socioprofessional profile and the needs, expectations and aspirations of households about their living environment (Rossi, 1980; Brown and Moore, 1970; Clark and Onaka, 1987).

Households, depending of their characteristics, do not respond the same way to their environment (Stahl and Struyk, 1985, quoted by Strassman, 1990). For example, the symbolic role of place which is linked to individuals' and groups' identity will influence individual choices (London and Palen, 1984). But according to Rapoport (1985), lifestyle would synthesize all households' characteristics. "Lifestyle is related to education and reflect values and attitudes to nature, life, child rearing, and so forth, which in turn are important in choosing home-environment" (p. 273). In North America's gentrifying neighborhoods, lifestyle is the most important stimulus to explain the difference in housing choice between two groups of the middle classes – one choosing the American way of life in a bungalow at the periphery, the other one preferring central neighborhoods. In gentrification studies, lifestyle synthesizes a few sociodemographic variables characterizing households of the "new middle class" (Ley, 1996): smaller households, fewer children, level of education, employment sector, dual-earner households, etc.

But most of the literature on housing preferences and choices or on residential mobility is rather silent on the subjective nature of individuals and groups and how they appropriate/use the spaces: how subjective is the meaning they have about these spaces. Research on the territoriality of the home seems more explicit about this. Home, this "kind of space" under the control of individuals, households or groups would be localized but not necessarily fixed and has blurred and changing boundaries (Douglas 1991 in Bélanger et al., 2012). As Porteous (1976 in Clapham, 2011: 362) highlighted "[h]ome provides individuals with all three of the identities: territorial satisfactions of identity, security and stimulation".

At different scales, individuals and groups, through their daily activities, appropriate spaces (of their habitat) and define them (De Certeau, Giard and Myol, 1990) as their spaces, making them part of their territory. Appropriation can take different forms, causing conflict or not: physical/symbolic, permanent/temporary; casual/contrived/borrowed. Central to the idea of territory, this "bounded meaningful space" (Delaney, 2005) is control and the image of such control, be it physically or symbolically of and in the space (Campos, 1999).

> Territory is a space where we live with those who are like us, and it is marked by memory and the perspective of a future, giving it geographical and symbolical limits (Silva, 1992). These limits mark the end of a physical space while also representing a cultural indicator that additionally serves to identify where the space begins and ends. Limits also allow people to clearly recognize their group, marking the distinctions between the inhabitants of the territory and the "other" or "outsider" with different practices or customs. Thus the territory is something physical, but also a mental extension (Silva, 1992). In sum, the territory has two dimensions: one official, visible, with known limits; and the other cultural, imagined, and constructed

> by its inhabitants and sometimes invisible to outsiders. (Bélanger et al., 2012)

The territoriality of home perspective focuses on the construction of territories and on the possible defensive reactions by individuals and groups who are facing contamination, violation or invasion by outsiders (see Gifford, 2012; Taylor and Brower, 1985). However, this perspective is insufficient to understand the underlying process leading to use/appropriation of spaces and its features which then will lead to territoriality.

As we have just seen, none of these approaches integrate both the use and the symbolic meanings of places of habitat while taking into account the subjective nature of households. We propose to try to overcome this gap with the development of a conceptual framework using a multi-level ecological perspective.

CONCEPTUAL FRAMEWORK

Housing pathway and the locales

In this context we use Clapham's (2005) conceptualization of a housing pathway which is defined as patterns of interactions concerning house and home, over time and space. According to Clapham, housing is consumed by households, where a household may consist of one or more people. For Clapham, the basic unit of analysis for housing is the household, despite the problem inherent in using the concept of household (Kemeny, 1992). Moreover, each member of a household may not interact the same way with regard to their habitat and its features. Furthermore, as we will see later, each member`s own subjectivity may influence the interactions with others as well as the action in the setting.

The housing pathway of a household is the continually changing set of relationships and interactions which this household experiences over time in its consumption of housing. One of the interesting aspects of Clapham's approach is that the housing pathway is a framework, which places the subjective nature of meanings held by households at the center of the analysis (Clapham, 2005). Although habitat consists of more places than just the dwelling, we consider the house to be a central place in it, because for many individuals it forms the primary anchor in the habitat that provides such basic functions as concealment and shelter.

A housing pathway also includes such elements as the career-lifecycle of households, mobility and the idea of housing career. These last elements suggest some parallels with the residential mobility

approach. However, despite some prospective studies on what could make people move (i.e. a change in the lifecycle stage or the degradation of the neighborhood), most are of a more static nature, looking at the mismatch between an actual household's status and its habitat (including the social component of it, i.e., the neighbors) without considering the evolving relationship between household and housing.

The conceptualization of a housing pathway leans on Giddens' structuration theory and on Hagerstrand's time-space geography. It draws attention to the social practices, those patterns of interaction that are ordered across time and space. Social practices are inherent: 1) in the movement of households through the housing field during their lifecourse and 2) to the locales. Locales are more than just physical settings of interaction but also comprise the use of space that provides the settings of interaction (see Giddens, 1984). Thus a locale is not just a space but a space with a range of properties (or features), a physical setting specified by individuals' and groups' modes of utilization. These features afford opportunities of use, giving opportunities of interaction. In other words, locales are sort of localized "'stations' in which the routine activities of different individuals intersect" (Giddens, 1984).

Locales are of different scales. As such, locales may be a house, a street corner, a neighborhood, a city and even a nation state. Each of these locales can be divided in "regions", which are more than just sub-locales because they are directly linked to social practices that are taking places at different scales, different sub-spaces and different times. As such, "[h]ouses in contemporary societies are regionalized into floors, halls, and rooms. But the various rooms of the house are zoned differently in time as well (division day and night)". For example, the room of a child may be used for playing, relaxing and making homework during daytime, while at night it functions as a sleeping place. So, a house may be described as a locale for certain social practices of the household in the course of a day, the place where routine activities/interactions of the different members of the household intersect, while the locale's settings are also used to constitute meaning to the interactions; contemporary houses are also regionalized into several sub-locales that zone time-space in relation to social practices and that provide context to both household and individual activities and behaviors. But not all the social practices of household members take place in the dwelling. Although it is the place that forms the primary anchor in the habitat, it is only one of the places for social practices that are being used by individuals and collectivities. Considering the dwelling as one of the places that make up the habitat, makes it possible to understand its specific functions in the context of the other places of the habitat. The concept of locale can also be applied to habitat despite the higher complexity created by the inclusion of public spaces. A habitat can be described as a locale

providing context to households' and individuals' activities and behaviors and can be regionalized into several sub-locales. The complexity is related to the fact that different regional limits can overlap. Other individuals and groups sub-locales are then part of different locales during the course of the day. In sum, habitat is a locale, made of different regions (places) providing the setting for social interactions.

The importance of the conceptualization of 'locales' as places that provide the settings for interaction, while at the same time specifying its context cannot be overestimated. Social interaction always takes place in locales, which provide the context for the meaning of this interaction! However, choosing the household as the basic unit of analysis in housing pathways confronts us with a problem, because the highlighting of subjective and psychological aspects of housing would make it more natural to use the individual as the basic unit of analysis (c.f. Bengtsson, 2002). Although it may be right that the household is the natural unit in which people consume housing and make decisions about it, the contention that the pathway approach inevitably leads to the 'household being opened up' is problematic, because the pathway seems to lacks the conceptual framework to do so. As we saw, depending on their social positions, individuals and groups won't appropriate spaces the same way (Bassand et al., 2001). It seems then that this is where ecological psychology may come into play.

Behavior settings

Barker (1968) originally started his research and fieldwork, well aware of the complexity of the systems of reciprocal relationships between individuals and groups in their environment, with the idea of explaining individual behavior, "using methods that exerted as little influence as possible upon the situation being studied" (Charles and Sommer, 2012: 9). Barker observed that behavior appeared to be framed by the setting where it took place. The collective actions and the interdependence of these actions of a group of individuals, would give rise to the notion of behavior settings, a higher order environmental structure that is congruent with respect to a certain behavior pattern (Heft, 2001). There "[i]ndividuals who occupy a particular setting are to an appreciable degree interdependent" (Heft, 2001). This means that actions by one in a behavior setting are likely to affect others in the same behavior setting. In the same line of thought, "[t]he same behavior setting might provide different inputs to the same person as that individuals behavior change" (Charles and Sommer, 2012: 10). Interdependence of actions, and not physical characteristics, is the

primary criterion used in identifying a behavior setting (Heft, 2001). This interdependence of actions is as real as the physical environment for the occupant of a setting (Schoggen, 1989).

As Heft (2001, 2007) summarized, behavior setting has both structural and dynamic attributes. Even if some of these attributes are both structural and dynamic, behavior settings would be "quasi-stable; they manifest mechanisms in response to perturbations, and in doing so, within limits they preserve their integrity" (Heft, 2001). Behavior settings properties could "develop and change over long periods of time" (Charles and Sommer, 2012: 10). This integrity is also translated by the specific geographical location and fixed boundaries, perceptible by participants of the settings. Participants are aware or entering/leaving a setting. Behavior settings "operate for a time", when there is participants into them (Heft, 1989) but continue to exist, independently of any single person's experience of it. For example, a dwelling is a behavior setting, which affords possibilities of activities for the members of a household. It has clear boundaries and one knows when one enters the setting. When there is no one in the dwelling during a certain period of time, the setting is "closed down" but continues to exist and will again afford opportunities of activities to participants upon their return.

The use of the notion of a behavior setting for the study of home territory shows a higher complexity and more limitation, due to overlapping territories which may blur boundaries for (some) participants in what we rather identify here as being a locale. Participants will perceive their entrance in what could be part of different settings. For example, a participant is well aware of entering his/her habitat while another individual, sharing the same space may not be aware of entering this specific locale or may perceive entering a different locale (i.e. another habitat). Moreover, we are in the presence of within group interdependence and between group interdependence. The presence of people in habitat may impact behaviors to a certain extent, may this people part of the group or part of another group. In sum, habitat doesn't have self-generated boundary and it is dependent of the individual or group who appropriate the space and make it its/their own. Thus, it is not an ecological unit in Barker's sense (Schoggen, 1989). However, habitat, is a locale made of places and has ecobehavioral resources, options for individuals, "ressources from a psychological standpoint" (Heft, 2001: 257), at a particular time. In addition to the dwelling, it may contain other behavioral settings more or less related to community activities.

If we take Clapham's idea of a housing pathway as a starting point and conceptualize habitat in Giddens' terms as a locale for certain social practices of individuals and groups, it follows immediately that habitat can also be conceptualized in Barker's terminology as being made of behavior settings (but not exclusively). Behavior settings provide the fittingness behavior-milieu for

collective actions. But at the same time these settings can be considered as places where characteristics with particular affordance properties are likely to be found, and people will recognize that certain affordances are typically found among the characteristics of particular behavior settings, which in turn has become part of their knowledge about environment-behavior relations. Why is this conclusion relevant in our context? The reason is that we are interested in studying habitat qualities in terms of meanings. But, as Bengtsson rightly remarked, studying (habitat) qualities in terms of meaning, lean, to a large extent, to psychological aspects which require a focus on the individual.

Therefore, we assume that a behavior setting, a collective construction, affords possibilities of actions to individuals. This is why we question the limits of two of the structural attributes of a behavior setting: 1) being a function of a collective action alone and 2) being stable in space and time. Environments are used and (re)shaped constantly by participants and other stakeholders. Architects, designers and engineers create, design structures that will facilitate certain behaviors (Clapham, 2011; Schoggen, 1989). This argument applies also for the transformation, modification of existing physical environment and features. Considering a behavior setting only as a static environmental structure would limit the understanding of the complex mutual relations between the setting and the social practices that occur in it in a dynamic process (i.e. when characteristics, features are changing). Heft (2001) rightly pointed out the relevance of identifying behavior settings over some period of time to evaluate the psychological resources of a locale and to compare it to other locales. However, there is no mention of the behavioral response to the physical transformation of a specific setting. Following its (re)design, the built environment will be transformed to become what social practices do with it (see Giddens, 1984). This (new) setting will guide/coerce the interdependence of actions of participants. As for the collective focus of behavior settings that we question, it limits the preciseness of the description of its milieu properties for understanding their congruence with the participants.

Behavior settings' affordances

We argue that studying the meaning of habitat at the level of the individual has to be related to the extra-individual level of the household and other collectivities in which the individual participates. Barker was involved with extra-individual-environment congruence which he called synomorphy. Synomorphy of behavior-milieu is related to other facets than only the physical forces of the topography and the design (the characteristics) of its features. Some of these are related directly to the perception of individuals such as the physiological processes which may interfere with behavior, the physiognomic perception of individuals and the selection of settings by individuals because of

the kind of functional opportunities or affordances a setting extends. But other facets are also related to behavior-milieu synomorphs such as the social forces exerted to individual(s) to conform to expected behaviors, the learning of affordances through customs or other means, the selection of individuals who meet certain criteria by the settings for example in dwellings, and the influence behaviors may have on the milieu (Heft, 2001). Gibson on the other hand solely focused on individual-environment congruence called affordances. But behavior setting, synomorphy and affordance are conceptually related (Heft, 2001). What distinguishes affordances and synomorphs is that synomorphs refer to milieu features that define settings and functionally support collective action of individuals. Affordances, by definition, do not support collective action, but instead are identified relative to the actions of specific perceivers. What brings together affordances and synomorphs is that they both refer to publicly accessible, meaningful features of the environment specified relative to the behavior(s) of an individual(s). In short, the affordance perspective prompts a consideration of the group-specific milieu properties of a behavior setting, and in doing so it adds a measure of precision to behavior setting analyses that they otherwise do not have (Heft, 2001).

The concept of affordances basically highlights the congruence between structural features of the environment, including other persons, and functional possibilities for the perceiver (Heft, 2007). The perception of this congruence – this environment-person congruence – is essential in experiencing affordances. The individual process of perception is personal and framed by the needs of the individual which "control the perception of affordances (selective attention) and also initiate acts" (Gibson, 1975: 411 in Clapham, 2011: 368). Affordances in behavior settings can be seen as resources, components that create possibilities of action or, at the opposite, constrain them. Thus, the same setting can afford different possibilities of actions for different individuals. Not only are there affordances *in* behavior settings but also, "by definition, behavior settings are places with functional properties when considered as dynamic structures of collective behavior. It is reasonable to claim, by extension, that behavior settings as places afford certain possibilities for an individual". Therefore there are affordances *of* behavior settings.

Meaning resides in the congruence, in the use (functional meaning), but is not limited to it. "The affordances, behavior-milieu synomorphs, and other meaningful features of the environment are one facet of a dynamic individual-environment transaction" (Heft, 2001). We believe that this is where intentionality and cultural context come into actions. The other facet of the dynamic transaction is made of intentional actions of individuals and this aspect of individual-environment relations becomes most apparent in the selection, the discovery, and the creation of meaningful environmental features. An act (physical or mental) needs to be initiated to create meaning.

Environmental features such as surfaces of support or graspable objects are not dependent on cultural influences, but, as highlighted by Heft (1989: 17), “much of the functional meaning in our perceptual experience is not of this nature; it is culturally-derived”. Individuals learn from each other, they transmit their knowledge and learned behaviors (Schoggen, 1989). By means of social heredity individuals learn to adapt to both their social and natural environment (Linton, 1936: 85 in Schoggen, 1989). If affordances are sociocultural phenomena then shared functional characteristics of the participants in the setting might be considered for understanding the nature of a behavior setting. Prochansky (1978) argues that one aspect of identity— specifically place identity— is influenced by the dimension of space itself. Place identity attaches these different dimensions (who one is) to the physical environment (where one is or where one belongs) by means of ‘beliefs, values, feelings, expectations and preferences’ (p. 163) (see also Cuba & Hummon, 1993). This means that the functional and symbolic characteristics of a behavior setting are specified relative to the shared or normative characteristics of a group of participants or intended users, who are often also individually motivated by the affordances provided by the behavior setting to participate in the setting. Therefore, we assume that a behavior setting is a sociocultural collective construction made of features which have socially-shared and individual meanings.

Conceptualizing habitat in Barker’s terminology as consisting of behavior settings and interstitial places, and with affordances in mind can also lead one to think about the congruence between habitat and individuals in a dynamic perspective (i.e. when features of the space are changing). A dynamic perspective on habitat is too often only associated with the animated features of places which are often reduced to “other people” in a setting. This excludes the transformations and creations of unanimated features, all of which may create new affordances. So far, research on people-environment relations, whether from a classical perspective or an ecological perspective, seems to have focused more on the static aspects of habitat. Thinking about behavior-milieu congruence with affordances in mind leads us to infer that people recognize and even expect to find affordances in behavior settings, because affordances in behavior setting can be seen, as we previously argued, as resources or components that create possibilities for action, or restrain these possibilities. But the dynamic perspective in most studies is more related to the way individuals and groups use, shape, appropriate features and places and how this influences their behavior. The question is then how the creation or transformation of affordances in behavior settings will influence the interdependence of actions and milieu features. In other words, how it will modify existing or create new synomorphs. A behavior setting is a collective construction which affords possibilities of action to collectivities and individuals. The creation or modification of affordances in behavior settings won’t automatically modify or create new behavior-milieu synomorphs in these

settings (or maybe create new behavior settings). It won't automatically create new synomorphs supporting collective behavior patterns, although it might. Despite the complexity involved when using the notion of behavior setting for studying the meaning of habitat in a dynamic way and the obvious need for further exploration and elaboration, we argue that the notions of behavioral setting and affordance both already showed their relevance for studying habitat from a multi-level ecological perspective.

BY WAY OF CONCLUSION

In terms of people-environment relations habitat may be considered to be a locale that consists of, but not exclusively, behavior settings. The dwelling can be viewed as a behavior setting for certain social practices of the household and its members that take place in the house in the course of a day; it is the place where many activities and behaviors of the household members intersect; many houses are regionalized into sub-settings that zone time-space in relation to social practices and that also provide the context for the meaning of these practices (kitchen, living room, dining room, bedroom, bathroom, garden, etc.). A dwelling provides synomorphs to the household that dwells in it and affordances to the members of the household which they experience by virtue of being a household member. Examples of synomorphy: dining together – dining room/suitable area in living room; watching TV together – suitable area in living room; going to bed/sleep at night – suitable arrangement of sleeping places/bedrooms; simultaneous activities (cooking, children playing) – suitable arrangement of spaces; shelter, security, privacy for the household. Examples of affordances: relaxing – living room/garden; resting/retiring – own (bed)room; safety, privacy – own (bed)room; working at home – own (bed)room/other suitable place, etc. Habitat is made of behavior setting(s) and interstitial spaces. The dwelling is for many people the "central" behavior setting of the habitat. Other "resources", such as public spaces, will often also be part of the habitat.

It is remarkable how Barker's and Gibson's views on environmental meaning match with Rapoport's who also considers environmental meaning to be relational. Since he holds the most elaborated views on environmental meaning in the field of housing, I will summarize some of these here. Rapoport (1988) considers meaning to be of central importance in understanding the built environment, in fact, he considers meaning often to be the most important function of the built environment. This is the case because meaning is one of the central mechanisms in environment-behavior relations, i.e., in linking people with their environments.

According to Rapoport (1988) there are three different levels of meaning that are communicated by built environments: the high level ones (cosmologies, cultural schemata, world views, etc.); the middle level ones which are the latent aspects of acting and behaving such as identity and power; and the lower level ones, everyday and functional meanings, "which enable users to behave and act appropriately and predictably, making co-action possible" such as the cues of settings. The first two are reminding us of the symbolic aspects of settings and the last one points to affordances as sociocultural phenomena.

There is also another remarkable similarity between an aspect of Rapoport's conceptualization of environment-behavior relations and those of Barker, Gibson and to a certain extent Giddens. Rapoport often considers a dwelling as a collection of fixed, semi-fixed, non-fixed elements. Notice how these elements appear in the work of the others; fixed elements: milieu, physical aspects of locale; semi-fixed elements: behavioral objects, human artefacts; non-fixed elements: standing patterns of behavior, social practices.

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