

Blueprints for a History of Environmental Psychology (I): From First Birth to American Transition.

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Abstract

This is the first of two papers on blueprints for a history of environmental psychology. Four stages are established: First Environmental Psychology, American Transition, Architectural Psychology and Environmental Psychology for Sustainability. In this first paper, the origins of environmental psychology are traced back to early XX century German authors, who were the first to speak specifically of the discipline. The American transition period covers the years when, although environmental psychology was seldom mentioned, a considerable part of its theoretical foundations was laid. The second paper will describe and justify the period of Architectural Psychology. Its late 1970s crisis paved the way for a twofold shift: social and "green" which would lead to a new environmental psychology focused on sustainability.

Keywords: History, Environmental Psychology, Architectural Psychology

Apuntes para una Historia de la Psicología Ambiental (I): Del Primer Nacimiento a la Transición Americana

Resumen

Este es el primero de dos trabajos dedicados a desarrollar un ensayo sobre la historia de la psicología ambiental atendiendo a cuatro momentos o estadios. El primero de ellos etiquetado como La primera Psicología Ambiental, el segundo como la Transición Americana, el tercero como Psicología de la Arquitectura y por último Psicología Ambiental para la sostenibilidad. En este artículo se trazan los orígenes de la disciplina desde los autores alemanes de comienzos del siglo XX. El período de transición americano cubre los años en los que, aunque la psicología ambiental rara vez fue mencionada, se estableció una parte considerable de sus fundamentos teóricos. En la segunda parte se desarrollarán los otros dos períodos para terminar caracterizando la Psicología Ambiental moderna.

Palabras claves: Historia, Psicología Ambiental, Psicología de la Arquitectura

The first Environmental Psychology

During the 1970s and 1980s not many texts acknowledged early XX century authors as worth-to-be-mentioned forerunners of environmental psychology. Indeed, the works of Kaminski (1976), Graumann (1976) and Kruse & Graumann (1987) were the first to seriously explore that early period, establishing a difference between a first birth at the beginning of the century and a second birth during the 1960s. In their works, Hellpach is said to be the first to use the term Environmental Psychology. A similar search for the roots of the discipline can be found in some of the texts from the book compiled by Jiménez Burillo (1981). However, as from the 1990s, there is a growing amount of literature somehow referring back to this remote past. Bell, Fisher, Baum and Greene's textbook (1996) mentioned works from geographers Gulliver (1908) and Trowbridge (1913) as forerunners of cognitive mapping. Likewise, within the French and British traditions –what is called “historical classics” (Pol, 1988, 1993) – Philippe's *Image Mentale* (1904) and Bartlett's works (1932) are recognized as precursors to the later trend towards “environmental cognition” (Lee, 2003).

From Geopsyche to Psychologie der Umwelt

Willy Hellpach (1877-1955) was an odd, atypical character. He was Wundt's student and collaborator –although he would later criticize Wundt's ideas– in Leipzig where he did some research on peripheral vision between 1889 and 1900 (Boring, 1979: 362). In 1902 Hellpach published a study on culture and the nervous system. He engaged in politics and was the Minister of Education of Baden State from 1922 to 1925 and *Land's* President in 1924-25. He even runs for president of the Reich, although he was never elected (Kruse & Graumann, 1987).

In *Geopsyche* (1911), his first work, Hellpach analyzes climatic and geographical effects at the macro, mezzo and micro levels. Thus, his book deals with the effect of the sun and the moon on people's activities; the effect of colour and form; the effect of extreme environments –such as the Tropics or the Arctic; the effect of urban microclimates, etc. *Geopsyche* was widely read and attained a remarkable success. It gathered more than eight editions (the last known one in German, 1977); it was translated into French, Dutch and Spanish and there was even an English rendering which was about to be published in the United States of

America when World War II crushed the attempt. Oddly enough, it has been quoted more often in current books from other disciplines (Palomares, 1988) than in psychology works.

Hellpach explicitly defined environmental psychology in a volume titled *Psychologie der Umwelt*, part of the *Handbuch der biologischen Arbeitsmethoden* [Handbook of Biological Methods] published by Abderhalden after World War I. For Hellpach, the goal of research in environmental psychology should not be “artificially individualized psychic life” –which was his criticism of research done in experimental psychology labs– but rather “the psyche in as far as it depends on its factual environment” (Hellpach, 1924: 110 cf. Graumann, 1976 p. 27). This reciprocal dependence between what he then called “psyche” and what he referred to as “factual environment” brings him remarkably close to current ideas on “environment” within the most recent trends of environmental psychology, as well as to the concept of “environment” in its most complex and comprehensive current senses, which include both natural and artificial elements.

Hellpach divides the environment in three circles: natural or “geopsychological factors” environment; community or “psychosocial factors” environment and the “built world” –which, further on, he will call “technopsychology”. He believes each one of these factors exerts two kinds of influence on the human mind: influence through the meanings of impressions (that is, immediate experience), and influence causing psychological changes in the body, which, in turn, generate experiences.

In 1939, Hellpach also studied typically urban phenomena, such as crowding, overstimulation, continuous change, hurry, and alert state, concluding that the perceptive frame of urban citizens is quite different from that of the rural inhabitant. According to him, urban environment is ambivalent: on the one hand it frees people, allowing for their independence, yet, on the other hand, it leads to isolation. Therefore, the environment –*Umwelt*– exerts a threefold influence on people: as natural environment, as social environment and as historical-cultural environment.

Hellpach has quite an outstanding *curriculum vitae*. Yet, he is barely mentioned in modern texts on environmental psychology, with the exception of German works and a few others, such as the brief mention the Canadian author Gifford included in the second edition of his

Textbook (1997). This lack of acknowledgement is probably due more to ignorance of his work than to Hellpach's characteristics, although the omission may also have a political element. Nevertheless –and this may account for his being sometimes neglected– his text is more programmatic than empirical, although Hellpach himself was, as Kruse and Graumann highlighted, “a critical man, who believed in final empirical tests that could be experienced” (1987, pp. 1199).

Hellpach was not the only psychologist interested in environmental and urban issues in Germany. Hans H. Muchow, who was focused on the environment of young people, and Martha Muchow, who devoted herself to children and the educational aspect, should be mentioned. Before World War I, Martha Muchow studied under Stern and then collaborated with him. During the 1920s she worked from Hamburg on urban and educational issues in contact with Maria Montessori, Jean Piaget and Friedrich Fröbel. She died prematurely, in 1933. *Der Lebensraum des Großstadtkindes* [The living space of the big city child], was published in 1935 as a posthumous work written with Hans H. Muchow. It was to become their more widely known work and it has been reedited several times (the last known edition being launched in 1998). The book takes up Stern's idea of “personal world”, focusing on the dimensions of “personal space” and “personal time”. Personal space is to become one of the recurring subjects in the so called second birth of environmental psychology, studied by several authors, including Hall, Osmond, Sommer, Ittelson and Proshansky. In her study, Muchow distinguishes three dimensions in the child's living space: the space the child lives *in*; the space the child experiments and the space the child lives *with*.

Gestalt psychology –with Wertheimer, Köhler and Köffka– emphasises understanding the environment from a holistic viewpoint to account for behaviour. Bell, Greene, Fisher and Baum (1996) consider the Gestalt one of the starting points of environmental psychology. They choose Köhler's test of the insight into the monkey's dilemma to reach a banana as a clear cut case in which the solution to the problem lies in the configuration of the environment and the action applied to it.

Gestalt's contribution carries on Köffka's distinction between geographical and behavioural environments (1935). The geographical environment refers to that which exists in the real world and the behavioural one refers to the environment experienced by a person.

According to Koffka, only behavioural environment is relevant for the analysis and description of behaviour. On the other hand, the isomorphic theory asserts the existence of inborn neurological mechanisms in every person which tend to ensure correspondence between both kinds of environments (this correspondence is later to be found in works from Barker).

Although this school may be considered a clear precedent for environmental psychology –and the mark of its approach on perception and cognition can still be found in current works (McAndrew, 1992) – its followers would not pay much attention to environments, with the exception of contributions made by a few indirect followers such as Brunswik and Lewin. These authors, mostly Lewin, are frequently referred to as “founding fathers” (Levy-Leboyer, 1980) or predecessor of modern environmental psychology. Notwithstanding, their contributions cannot be understood without bearing in mind the contexts in which they took form: a period infused with a considerable level of environmental sensitivity.

Towards an Urban Psychology: in the wake of George Simmel - between Sociology and Social Psychology

The concern for the environment during the first third of the XX century was not just a theoretical and epistemological worry for the way in which the incidence of the environment on people’s development should be accounted for as opposed to its biological dimension. It had an important element of response to a transitional society, shaken by geopolitical changes, technological changes, social changes, migrations, urban concentrations, and the emergence of new marginal groups, new kinds of poverty and new conflicts.

Authors from the newly born social sciences, like Durkheim or Weber, had already analyzed and reflected upon the habitat, the city, and its organization and experiences. Among these forerunners, George Simmel (1858-1918) deserves a special mention due to the sharpness and topicality of his thought, his global conception of society and his psychosocial and interactive view of urban dynamics (García-Cotarelo, 1988). It is with due cause that, after periods of neglect, his most emblematic works, such as his treatise on sociology (1908) are still republished. According to Simmel, the city is a structure that can offer freedom and opportunities, but, above all, an environment that involves

anonymity, isolation, deviance and decadence. Simmels focuses on the psychological effect of the urban environment and the sociopsychological consequences of monetary economies. On the one hand, he considers money makes all things equal and “breeds indifference towards the differences among things” (Jimenez Burillo, 1986). On the other hand, the overstimulation resulting from the urban context –the rate of uninterrupted change in this environment– leads “the urbanite” to set up defence strategies (cold, intellectual, detached, impersonal, calculated reactions) that end up being the basic attitude of the individual: *ennui*. All the evils of modern urban society stem from this utter weariness, as authors such as Park, Wirth and Milgram will theorize later.

Decent housing for the new urban working classes, who lived crowded in subhuman conditions, as Engels (1845) had denounced a century before, became one of the problems calling for an urgent solution. Modern architecture stands out among the many movements attempting to respond to the issue by proposing new physical forms and new building technologies. The Bauhaus as a school and Walter Gropius, its founder, as a theoretical and applied architect, make constant references to the Gestalt, with which they share formal elements of their approach. Besides, modern architecture has to face yet another aspect of the problem: massive building of living quarters for unknown clients. This leads to a gap in communication and knowledge between architects and users as regards the definition of a needs schedule to be satisfied by housing. Environmental psychologists would attempt to fill this gap during the 1960s.

On the other side of the Atlantic, the Chicago School of Sociology exerted a certain influence on the development of environmental psychology. The Chicago School owes much to Simmel; his influence is particularly noticeable in Park who had been Simmel’s student in Berlin. Burgess, Park and Wirth encouraged translation of Simmel’s works into English. In 1925, Park and Burgess wrote *The City*, placing particular emphasis on the growth of cities and on deviant behaviour.

For Wirth there is an urban mentality clearly distinct from the rural mentality. The urbanite thinks in mechanistic, rational terms whereas the peasant thinks in magical naturalism terms (Jiménez Burillo, 1986). An interest in a comparison between rural and urban areas, as well as in the problems associated to migrations, had already been present in the study

from Thomas and Znaniecki's (1958) developed between 1918 and 1920 –which approaches the analysis of attitudes from the standpoint of social psychology– on the adaptation of immigrating Polish peasants to the new urban environments in the United States.

The Chicago School also deals with migration processes and the settlement of immigrants in urban ethnic *ghettos*. These issues, although highly topical nowadays, have had, curiously enough, no incidence among contemporary environmental psychologists, with the exception of more discursive than empirical references from some texts gathered by Proshansky, Ittelson and Rivlin in their book *Environmental Psychology: Man and His Physical Setting* (1970).

Chicago sociologists, as Wieviorka pointed out (1991), are the first to study urban spatial segregation phenomena. This segregation need not entail racial nuances. In Wirth's opinion (1928), the emergence of ghettos is not a political decision but a spontaneous trend. The ghetto allows immigrants to preserve practices deeply rooted in custom and religious and secular traditions and offers them the "warmth and protection" of a living culture. Furthermore, according to Park, it tends to make social mobility easier and opens the door towards progress and modernity for these new urban clusters. Based upon such situations sociologists came up with a theory of cyclic relationships (Bergere, 1996) highlighting four stages: contact, conflict, assimilation and accommodation.

As from the 1930s the very Chicago School (Drake & Cayton, 1945; Duncan & Duncan, 1957) will have to change their initial positive assessment of *ghettos* as ecological niches of acceptance which allow immigrants to accommodate to a new reality. Indeed, sociologists had to admit that ethnic enclaves (in particular black *ghettos*) do not follow the same criteria or the same positive dynamics that white European clusterings showed. On the contrary, ethnic *ghettos* lead to marginalization (self- and hetero- marginalization), racism, degradation, overcrowding, intolerance, mafias, etc. (Wieviorka, 1991).

In any case, the Chicago School has exerted both a direct and an indirect influence on certain American specialists in environmental psychology. On the one hand its legacy shows up in the object of interest and the approach to certain urban issues. Such is the case with many of the articles by Strauss, Jacobs, Schorr, Lee, Gans, Gutman, Carr, and others which Proshansky *et al.* (1970) carefully selected to constitute the

chapters in their book. On the other hand, in the American emergence of modern environmental psychology it is possible to follow a trail that leads to the Chicago School, through the relationship it has with early symbolic interactionism as well as through the bonds Proshansky himself acknowledged with this movement. Further, through the Chicago School the trail leads to Simmel and to German social and environmental thought in the first third of the twentieth century.

Although it is not possible to speak of architectural psychology at that time, the period was full of clear predecessors of what would later become one of the flourishing stages of environmental psychology from the 1960s onwards. However, Kruse and Grauman (1987) do consider it possible to speak of an “urban psychology” in early XX century Germany. This trend will later spread worldwide, especially to the United States of America through the contributions of the authors mentioned so far.

The Environmental Element in Work Psychology

Psychothechnik should be mentioned as a precursor work in a field which is later to be fully integrated in modern environmental psychology and ergonomics. The term was introduced by William Stern in 1903 and developed by Münsterberg (1911) in a work he published in German when he already belonged to the faculty in Harvard. Kruse & Graumann (1987) think it legitimate to consider *Psychotechnik* a meeting point between environmental psychology and industrial psychology since the labour setting it focused on was a specific case of individual-environment relationships. Furthermore, *Psychotechnik* may be considered a close precedent for Hawthorne’s future experiments (1927-1932).

It is owing to their nature that Hawthorne’s experiments are frequently mentioned as an antecedent of environmental psychology. The experiments were directed by Elton Mayo from 1927 to 1932 (Roethlisberger & Dickson, 1939) at Western Electric’s plant in Chicago. Lighting systems and other aspects of environmental design and of working conditions were deliberately modified and the effects of these changes were studied in the so called *Test Room*. The experiments made it possible to assess how factors of psychosocial interaction had greater effects on productivity than the changes imposed to the physical conditions at the plant.

The experiments had quite negative consequences for environmental psychology. The interpretation of their findings was fatal to “the environmental” approach in psychology (Canter, 1978, Aragonés & Américo, 2000). Graumann (1976) considers Hawthorne’s experiments partially responsible for the lack of attention general psychology pays to the environment. The paths psychology will undertake –more focused on the inner determinants of behaviour than on the contextual determinants– are not the best suited to consolidate the incipient environmental psychology since they entail neglecting the actual environment as an influential factor (Bell *et al.* 1996: 439).

Austrian Marie Jahoda also links environmental psychology with labour psychology. She can be thought of as a link between the first and the second environmental psychology (in accordance with Kruse & Grauman’s terms (1987), a period which herein corresponds to architectural psychology). Jahoda can be considered a “missing link” (Pol, 1993) not only due to her work and influence during the “American transition” period but also owing to her participation in the first meeting in which the environmental issue was explicitly discussed, held in Great Britain in 1963 (Lee, 1984, personal writing). In short, she is far more significant for modern environmental psychology than what is usually ascribed to her.

Indeed, environmental conditions would emerge as determinants in the analysis she made on the strike in Marienthal during her years in Austria (Jahoda, Lazarfeld y Zeisel, 1933, newly published in several languages in the 80s). Once in the United States, Jahoda joined several projects on racism, prejudice and social intervention, however, she would never lose interest in the labour environment. She was the president of the Institute for Psychological Studies of Social Issues between 1955 and 1956. During the 1970s, Jahoda actively criticized some of the international environmental projects of the UN and the Club of Rome. Her perspective is closer to the period of environmental psychology for sustainability than to the period of architectural psychology.

Summing up, far from considering Hellpach’s case and his use of the term *Psychologie der Umwelt* an oddity, we agree with Kaminski (1976) and Kruse & Grauman (1987) that although the period did not have all the conditions that define a discipline it can still be credited with the first birth of environmental psychology. The conditions at the time are not very

different from the ones present in other areas of study which have been granted such a “privilege”.

The American Transition

Borders defining the above mentioned stages are necessarily vague. Key elements from the first environmental psychology project themselves in what we consider the second stage or "American transition". They coexist and intertwine with the contributions that we believe make it possible to speak of a second period. Thus, the years from the crisis of 1929 to the end of the World War II correspond to the period of Lewin and the Chicago School of Sociology's influence. The period from the end of World War II up to the late 1950s and early 1960s –when the first formal lectures on environmental psychology are delivered– belongs to the Chicago School's followers, whose works are interwoven with the more experimental and academic American tradition.

In our opinion, it is a period when modern environmental psychology comes fully of age. It is true that the new discipline lacks its own communication channels, such as magazines, lectures or institutionalized programs. Nor is the “environmental” label used but incidentally in psychology. Yet, there is a frequent and varied (however erratic) use of terms such as “*psychological ecology*”, “*ecological psychology*”, “*ecological theory of perception*” or “*environmental perception*”. Authors in this period do not identify themselves under the label of environmental psychology. Nevertheless, they will coin the term for the first conferences on environmental psychology and architectural psychology in the late 1950s.

It is in this stage that the foundations of a considerable part of the theoretical developments later claimed by environmental psychologists as emblematic or characteristic of their discipline are laid: the “ecological” theories of perception, the empirical and experimental rationale of cognitive mapping, the “ecological” theory of behaviour settings, the empirical research on territorial behaviour and crowding, the works on the symbolic value of space and the first publications on responsible ecological behaviour with behavioural emphasis. As a whole, all that would be was already present in the period... a heritage too precious so as not to speak of environmental psychology. Let us take an overview of some of the outstanding contributions of the period.

Lewin's inheritance and legacy

The underlying concerns over labour conditions, housing, the urban setting, educational and social issues apparently present at least in early XX century Germany seem to lurk over the United States in the same period. It should not be surprising that a character with the height of Kurt Lewin's emerged against this background. Lewin's proposals include and develop the concepts of life space, behaviour as a function of person-environment, forces of attraction-repulsion (positive/negative valency), holistic versus atomistic vision. Lewin talks about an ecological psychology or an psychological ecology –depending on the translations. Lewin stands out as the great forefather, although he was only “discovered” –or imputed– albeit belatedly, by reviewers (rather than historians) of environmental psychology in the 1970s and finally granted his due place in the 1990s.

Before emigrating to the United States in 1932, Lewin had developed a series of works on life space in children (1931). The issue was fairly topical in Germany at the time –as the abovementioned research by Hans and Martha Muchow shows– and was part of the influences that, together with the Gestalt, structured his later work. His works, particularly his construct of “life space” and his typology theory, will trigger many of the future developments in European and American environmental psychology (such as Barker, Wicker and Gump's ecological psychology). His proposal of action research –also adopted by some trends in recent environmental psychology– is one of his most seminal contributions to social psychology. Late XX century authors will add the concept of “participatory” to Lewin's action research, especially research carried out from a certain community approach, such as work done in Latin America (Fals Borda, 1983, 1992; Wiesenfeld, 1994; Jimenez Dominguez, 1996), North America (Hart, 1992/1997/2001).

The Age of Environmental Perception

The primary theories on environmental perception were launched during this period, under the influence of Gestalt psychology (considering Ittelson's 1973, 1978, distinction between “perception” and “environmental perception”). The positive holistic heritage and the famous principle that “the whole is more than the sum of its parts”, plus the role of the individual as an active agent, are, however, offset by the

criticism of the scarce role of cognitive processes in perception and the lack of concern for a problem which would later assume a leading role: the correspondence between the objective physical environment and the perception we have of it (Bonnes & Secchiarioli, 1995).

The Hungarian Egon Brunswik is a key author from this period. He studied in Vienna under the influences of the Vienna Circle and the German Gestalt. He moved to the United States in 1935. Under Tolman's invitation he settled in Berkeley where he exerted a considerable influence. Some well-known authors –both in the English speaking world (Gifford, 1987, 1997) and the Spanish speaking world (Aragonés & Amérigo, 1998, 2000)– credit him with being the first to use the label “environmental” in the field of psychology (although we disagree) owing to his probabilistic theory of perception and his introduction of “environmental probability” in an article from 1943. Brunswik (1943) considers psychology has forgotten it is a science on the relationship organism-environment and has become a science concerned only with the organism. He is also specially interested in the correspondence between the actual environment and the perceived environment, and approaches it in terms of the “ecological validity” of the perception process.

James Gibson's ecological theory of perception (1950), on the contrary, considers that meaning is inherent in the environment and that perception is a direct function of stimulation, that is the physical stimuli to which the individual responds. In other words, people perceive directly the meaning already present in the environment, which they have learnt through socialization. In this aspect he differs completely from the Gestaltists. Although some aspects of their theories oppose, Brunswik and Gibson agree on what was to become their main contribution to environmental psychology: the importance of a holistic approach to the actual environment and the correspondence it has with the perceived environment.

Berlyne's contribution (1960, 1974) will also be immensely influential in later environmental psychology developments. His emphasis on exploratory behaviour in human beings and his definition of what he called “collative properties” (complexity, novelty, incongruity and surprise) will become determinants in later applications of perceptual processes to

design and in studies on landscape preferences. Likewise, it is worth mentioning Bruner colleagues (Bruner. & Goodman, 1947; Bruner, Goodnow & Austin, 1956; Bruner, 1957) and their *New look in perception* for the significant concept of “perception hypotheses” and the determination of the influence of the perceiver’s social characteristics. Ames (1951), from his transactional view, would highlight the person-environment dialogue in the perception process. That is to say, individuals have an active role and build their perception based upon their previous environmental experiences.

Laying the theoretical foundations for cognitive mapping and behaviour settings

Cognitive mapping will be one of the emblematic and characteristic issues of environmental psychology during its consolidation period. Gulliver’s geography and his research on children’s acquisition of orientation (1908), Trowbridge’s imaginary maps (1913), Phillippe’s mental images (1904) and some of Wright’s works (quoted by Moore, 1987), Bartlett’s cognitive scheme (1932) (Lee, 2003) and the later cognitive developments, all constitute relevant antecedents of cognitive mapping. Edward C. Tolman (1886-1959) –under the influence of Lewin, Brunswik and Koffka– published the results of his experiment on mental maps in rats (in 1948) paving the way for the concept of cognitive mapping. From his position as a mediationist behaviourist, Tolman showed that once a rat has found its way in a labyrinth, if this path is blocked, it is able to find an alternative way in just a few attempts. This enabled Tolman to infer rats had composed a mental representation of the labyrinth. Thus, Tolman suggested this learning was not a mere chain of stimulus-response associations but that the rats would create “mental” maps of the labyrinth’s general structure.

The architect Kevin Lynch, in his famous book *The Image of the City* (1960), took up the concept and developed it into “cognitive mapping” applying it to urban space knowledge and assessment. The great impact and strong development that cognitive mapping had during the 1960s and 1970s owed more to Lynch and to architects, urbanists and geographers than to Tolman and to psychologists, since the latter were obsessed with the construction of a new science both “scientific” and “experimental”. It was not until the consolidation of the cognitive model

and the outbreak of the crisis in psychology in the 1960s that the psychologists fully turned their attention to the issue.

Brunswik, Gibson, and Tolman, among others –although having clear influence on environmental psychology– are not considered environmental psychologists nowadays. Nor were they ever aware of having participated in a new branch of psychology. Such is not the case of Roger Barker, Herbert Wright, Allan Wicker and Paul V. Gump. Many textbooks consider them predecessors (Bonnes & Secchiaroli, 1995; Gifford, 1997; McAndrew, 1992) because they had coined the term ecological psychology for their field. Other reviewers, such as Stokols (1977) or Krasner (1980) believe they are parallel developments more or less convergent with environmental psychology. Bechtel (1997), Craik (1977) and Holahan (1982) certainly credit them with being the first environmental psychologists in the current sense of the term. In fact, they themselves have always taken direct part in the activities and publications in the field of environmental psychology (e.g. the Handbooks in 1987 and 2002), although they have always kept their specific name as a trend within environmental psychology itself.

Roger Barker y Herbert Wright, two students of Lewin's, founded the *Midwest Psychological Field Station*, in Oskaloosa, Kansas, which was active during 25 years (1947-1972). Together with Paul V. Gump, they lived in and delved into the community –naturalist observation– with the aim of studying people's behaviour, especially children's behaviour under natural conditions. The rationale of their argument is clearly expressed in Gump's statement that "two children in the same place behave in a way more similar than one child in two different places" (quoted by McAndrew 1992, 6). Yet Barker developed not only a research procedure, but a whole theory on the influence of the physical environment –behaviour settings– in human behaviour.

For Kaminski (1989) the term "ecological" psychology implies a biological perspective. He considers it can be applied to Barker since he studied behaviour in the natural niche it takes place. Such approach brings Barker's object of study close to the one defined by Hellpach, though changing "psyche" for "behaviour" which was the fashion in psychology at the time. Barker *et al.*'s works have all the elements to be included in the field of environmental psychology: influence of the environment on behaviour, holistic perspective, qualitative observational

methodology combined with quantitative techniques. Those are the reasons why Holahan (1982) and Bechtel (1997, 2000) consider Roger Barker the first environmental psychologist. This ecological psychology has had a far-reaching influence, albeit an influence due more to quotations than to the applications of its methods and constructs –as some specialists such as Bechtel (1997) and Kaminski (1983) admit.

The study of the influence of the architectural setting on the individual's behaviour in space, social cohesion and propinquity is another trend developed in North America which is also part of the undisputed heritage of current environmental psychology. Festinger, Schachter and Back (1950) are acknowledged by some authors (such as Gans, 1961; Gutman, 1966) as forerunners in this field. They studied the role of physical proximity of neighbours, and friendship relationships through the analysis of a student residence for couples. The study would have several later replies. Likewise, cognitive dissonance theory (Festinger, 1957) and social comparison theories (Festinger, 1954) are to be useful and seminal to account for environmental behaviour, place identity and landscape preferences, in particular in the late 1980s and during the 1990s. The perspective of the setting in the construction of the self also has its roots in this period. What is nowadays known as “place identity” has a certain continuous presence with a strong expansion over the 1990s. Some (Twigger-Ross, Bonaiuto and Breakwell, 2003) would search for predecessors in Mead (1934), James (1890) and Hegel (1807) –following Proshansky's tradition– or in Erikson (1946) in the case of Fried's (1963) precursor works on space identity.

The review might be much more comprehensive, but these four notes should be enough to reach a conclusion: although no formal environmental psychology could be found in these years, a considerable part of the theoretical assumptions supporting the later architectural psychology would emerge and develop over this period –as well as throughout the previous one.

FORTHCOMING PAPER

The next paper will review the new birth of environmental psychology as architectural psychology in the late 1950s as a result of two different social situations in Europe and the United States. Facts, milestones and actions will be described as well as the illusions and expectations –

perhaps too high in both cases– leading to the inner crisis in the discipline at the end of the 1970s. This crisis will end up in a twofold shift, both social and green, with a change in the object and the perspective of study. Thus it is possible to speak of a fourth stage as from the 1990s: environmental psychology for sustainability. In their character of “blueprints”, this series of papers is not intended as a comprehensive review of the contributions made to the field; rather it aims at providing the elements to understand environmental psychology’s strengths and weaknesses, its contradictions and, ultimately, its construction as a theoretical and applied science.

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