

Contesting the ‘territorial aggression thesis’ in environmental psychology, ca. 1965–1980

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INTRODUCTION

Human territorial aggression became a fashionable topic of both scientific research and popular discussion in the late 1960s. The connection between territoriality and aggressive behavior found in ethological studies on many vertebrates had been suggested by some ethologists to apply also to humans. This idea was widely popularized in the Anglophone world, especially with the publication of Robert Ardrey’s *Territorial Imperative* and the English translation of Konrad Lorenz’s *Das sogenannte Böse (On Aggression)* in 1966. But whether human beings were territorial at all, and whether aggression was something that belonged to biological ‘human nature’, was a question highly debated in human and social sciences. The

reasons human territoriality was not only something that raised interest but also a morally and politically loaded topic to the research community stemmed from the huge scale of the problems associated with the phenomenon. Territoriality was potentially not only a cause for intra- and inter-group aggression and violence but also for war. In addition, it was a possible mediating factor in problems of overcrowding and population control. Because of its speculated unsuitability in the modern world it was also seen as problematic by those who believed in its evolutionarily developed, adaptive value. Furthermore, for many it was certainly a scary topic because it could easily be used to justify conservative and militaristic politics and social stratification.

In this article, I will examine the environmental psychological research on the ethologically derived idea of human territoriality from the mid-1960s until 1980, and its connections with the debate on the origins of human aggression. Environmental psychology was a nascent field at the time, and research into territoriality played a substantial role in it right from the beginning. Territoriality as a topic fulfilled the new demands for social relevance and for a focus on the relationship between human behavior and the physical environment. However, the strong impact of ethology and the role of the 'territorial aggression thesis' was a peculiar phenomenon. I will analyze in which ways the ethological arguments were scrutinized, how they were understood, and what kinds of modes of reasoning or empirical evidence were used to criticize or support them. I will investigate the results that environmental psychologists acquired from their studies and analyze the changes that happened in their research between 1965 and 1980. Ultimately, I will examine how environmental psychologists answered the popular claims regarding the challenging nature of human territoriality and the sinister visions of the future of human kind.

This article will show that the biological underpinnings of human territoriality were approached in controversial, even paradoxical, ways in environmental psychology. When justifying their research topic and questions, many environmental psychologists capitalized on the general concern about aggressive human territoriality raised by popular ethological books. The concept was clearly borrowed from ethology, and the ethological theories were often cited. Nevertheless, a majority of the same environmental

psychologists rejected ethological theories and their relevance for the analysis of human behavior, especially with respect to territoriality and aggression. On one hand, this paradox was caused by ideals of interdisciplinarity, lack of firm research traditions, and the wish to acquire maximum societal relevance, which contributed to the application of ethological theories. On the other hand, the rejection of ethological theories was caused by the fear of biological reductionism, and by the assumed consequences of the territorial aggression thesis. The heterogeneity of the field added to the confusion and, to a certain extent, the differences of opinions concerning the application of ethological ideas followed disciplinary lines in the educational backgrounds of the environmental psychologists concerned. This notwithstanding, a common goal for all environmental psychologists in the mid-1970s seemed to be the prevention of either factual or hypothetical negative consequences of human territoriality and the rebuttal of an apocalyptic vision of the future. As the field matured, the use of ethology to justify the field ceased, and by the end of the 1970s human territoriality was disconnected from aggression.

Closer examination of the territoriality research uncovers a particular storyline in the development of environmental psychology. On the surface, this was about balancing the search for disciplinary identity with external influence. However, this article also illuminates another storyline in the debate surrounding human aggression and the biological versus environmental–cultural explanations of human behavior prevalent in the era. The case of environmental psychology is a unique story due to its distinctive perspective on territoriality. Yet it also serves as an example on how ethological ideas in general, and the idea of territorial aggression in particular, were widely considered relevant in many social scientific fields in the era, and shows how interdisciplinary loans traveled in popularized forms. The article suggests that a battle was often fought against a popular image of ‘biological truth’ and shows how powerful a popular interpretation of a scientific idea can be, even if ultimately rejected.

The connection between territoriality and aggression is quite obvious to anybody familiar with the debates on human aggression and the related popularizations of the time. In recent years there has been a growing amount of historical research on these topics (Milam, 2013; 2015; 2016; Weidman, 2011; 2013; Weinstein,

2016). Nevertheless, the complexity of various elaborations on and uses of the territorial aggression thesis has not been examined in detail, especially not in connection to environmental psychology. In some historically oriented introductions written by environmental psychologists, the connection to ethology and its impact on the defense and demarcation perspective of human territoriality have been mentioned (Bonnes & Secchiaroli, 1995; Brown, 1987). Territoriality and crowding being closely connected both in ethological and environmental psychological theories, Ramsden's and Adam's work on the reception of John B. Calhoun's crowding experiments among environmental psychologists are of special relevance (Ramsden, 2011; Ramsden & Adams, 2009).

I will begin the article by considering the role of the research on human territoriality in the emerging field of environmental psychology. Then I will move on to analyzing the reasons for the general interest in ethology and the societal relevance of ethological theories on territoriality. Subsequent sections will examine two opposing ways of responding to ethological theories in environmental psychological research on human territoriality: first the predominantly negative reaction to the idea of biologically based human territoriality and then the actual use of ethological or other biological theories. Finally, I will conclude with a comparison of the different responses and highlight a change in the environmental psychological research on territoriality.

TERRITORIALITY – A NASCENT TOPIC OF A NASCENT FIELD

By the end of the 1960s, growing public and scientific concern over and research on the condition of the socio-physical environment and its impact on human wellbeing resulted in the birth of a new discipline: environmental psychology. Compared to most areas in psychology, environmental psychology placed greater emphasis on ecological perspectives and on developing solutions for community-environment problems. As an interdisciplinary approach this new field shared ideas with human ecology, architecture,

planning, behavioral geography, and urban sociology, but emphasized basic psychological processes, as well as individual and group levels of analysis instead of societal perspectives (Stokols 1978, pp. 254–256). In the 1970s, the field was growing but there was still no clear definition of the field nor any agreement on its scale, theoretical basis or methodological assumptions (e.g. Proshansky et al., 1970, p. 5; Stokols 1978, pp. 256–257). Some representatives of the field included architects, designers, sociologists, anthropologists, and geographers, etc., who shared interest in the relationship between environment and behavior under the umbrella of environmental psychology (e.g. Craik, 1973, p. 403; Proshansky et al., 1970, p. 6; Stokols, 1995, p. 822). Others saw environmental psychology as a psychologically oriented subfield of the multidisciplinary field of environment and behavior or human–environment relations (Epstein, 1976, p. 347; Porteous, 1977, pp. vii–ix; Stokols 1978, p. 255; Wohlwill, 1970, pp. 308–310). However, in the latter case interdisciplinary activity was also called for. In what follows, I will concentrate on the psychologically oriented environmental psychologists and those in related fields who were relevant for their discussions on human territoriality.

Like the field itself, the term territoriality eluded clear definitions. Julian Edney¹ suggested a catchall description of human territoriality as “a set of behaviors that a person (or persons) displays in relation to a physical environment that he terms ‘his’, and that he (or he with others) uses more or less exclusively over time” (Edney 1974, p. 959). Even a loose description such as this, however, might not have been approved by everyone. Instead, Edney’s statement that territoriality was “a phenomenon that links an organism’s molar environment directly to his behavior” (1974, p. 959) was unquestioned, and that is what made territoriality a logical topic for the field. Common to all environmental psychology – whether understood in the narrow or more inclusive sense – was the interest in the interface between the molar physical environment and human behavior. Harold Proshansky² described environmental psychology “as the

¹ Julian Edney did extensive research on territoriality, partially in conjunction with his doctoral degree in psychology at Yale University in 1973. He continued actively researching the topic also after gaining his degree.

² Harold M. Proshansky (1920–1990) received his Ph.D. in social psychology from New York University in 1952. By 1966, he was identifying himself as environmental psychologist (Proshansky, 1990, p. 9). Proshansky had a strong role in establishing the first environmental psychology program in the Graduate school of the City University of New York in 1968. He participated in writing the first textbooks on environmental psychology with Leanne G. Rivlin and William H. Ittelson.

attempt to establish empirical and theoretical relationships between the behavior and experience of the person and his built environment” (1976b, p. 303).³

Research and theorizing on territoriality was taken up right from the beginning and by central characters for the development of the field, such as Proshansky, and Irwin Altman⁴, who later described it as crucial to his immersion in environmental studies (Altman, 1990, p. 234). Territoriality was closely intertwined with the research on crowding and spatial behavior in general which grew rapidly in the 1970s, peaking in the mid-1970s (Stokols 1978, p. 270), although territoriality was a less popular topic than crowding. In 1974 Edney claimed that despite the fashion and controversy in professional and popular journals, and the importance of the topic for both pure and applied research, there was still little good research on human territoriality. Fortunately, empirical work was “beginning to gather momentum” (Edney, 1974, pp. 959, 973).⁵

Many of the early environmental psychologists that did research on human territoriality had social psychological backgrounds. Altman thought that social psychology could contribute to environmental psychology especially in regard to topics related to spatial behavior, such as territoriality, personal space,

³ The man-made environments (compared to nature) were emphasized in the 1970s. However, by the end of the 1970s, it was more common to talk about socio-physical environment. Proshansky as well noted that every physical setting is also a social and cultural setting (Proshansky 1976b, p. 308).

⁴ Irvin Altman (1930–) gained his Ph.D. in social psychology from the University of Maryland in 1957, and conducted research for the U.S. Air Force, U.S. Army, as well as Naval Medical Research Institute. This last position spanned seven years and included basic research on social and environmental factors affecting adaptation to social isolation. In 1969, Altman became chair of the department of psychology at the University of Utah. Altman established a research-oriented organization called the Association for the Study of Man–Environment Relationships, together with the psychiatrist Aristide Esser and the architect Ray Studer. He also chaired the multidisciplinary Task Force on Environment and Behavior sponsored by the American Psychological Association. Together with Jack Wohlwill, he edited a series of volumes, *Human behavior and environment: Advances in theory and research* (Altman, 1990).

⁵ Similarly, many authors in the early 1970s were apt to complain about the “striking paucity of scientific knowledge about the effects of density upon human behavior” in the face of speculations in the popular press which boldly reported that crowding caused mental illness, physical malfunction, crime, riots, drug addiction, alcoholism, psychological withdrawal, and aggression amongst many other ills (Craig, 1973, p. 409; Freedman et al., 1972, pp. 529–530; Zlutnick & Altman, 1972, pp. 44–46, 48–50). In the late 1970s review-articles applauded substantial progress in theoretical analyses of crowding, despite the “panoramic diversity” of theories (Edney, 1977, p. 1211; Stokols, 1978, p. 272).

and crowding, which connected social interaction processes with the physical environment. He also applauded the recent influx of social psychologists into field (Altman, 1976, pp. 100, 104).⁶

Despite Altman's ideas on social psychology's possible contributions to the field, environmental psychology grew partially out of the disappointment and dissatisfaction with the parent discipline. Besides the discontent with "the paradox of psychology's relative neglect of the role of the physical environment in behavior, in the face of the insistence on the environmentally determined basis of behavior" as Wohlwill⁷ described (1970, p. 304), harsh critique was aimed towards laboratory methods and irrelevant topics. Proshansky complained that in social psychology "problems were being manufactured rather than formulated" and quantification was more important than understanding complex social phenomena. This in his view had led to ignorance of relevant real-world problems (Proshansky, 1976b, p. 304, see also Altman, 1976, p. 98; Epstein, 1976, p. 348).⁸ In the environmental design fields, dissatisfaction stemmed from the ignorance of people's psychological, cultural and social needs and behavioral practices in favor of pure aesthetics (Altman, 1976, 98). Even though human territoriality was a fitting topic for a discipline concerned about physical and spatial aspects of behavior, the importance given to it was largely based on environmental psychology's search for relevance.

INSPIRATION AND JUSTIFICATION FROM ETHOLOGY

⁶ Ramsden calls environmental psychology a subfield of social psychology (2011, p. 662). Bonnes and Carrus claim that initially, environmental psychology was based on two theoretical traditions: psychology of perception and social psychology (2004, p. 803).

⁷ Joachim F. Wohlwill (1928–1987) had a background in developmental psychology. In 1970 he became Professor of man–environment relations at Pennsylvania State University.

⁸ There was variation in the harshness of the critique towards parent disciplines. While Proshansky's critique was furious and he claimed having left social psychology behind when finding the field of environmental psychology, Altman identified himself as social psychologist and environmental psychologist at the same time (Altman, 1976, p. 108; Proshansky, 1976a, p. 359).

The impact of ethology on environmental psychological research into human territoriality is not a controversial claim. In his conceptual analysis on territoriality Altman summarized, how “almost every author introduces his work with a recitation of classic studies of animal territoriality” and how the field leans heavily on animal research (Altman, 1970, pp. 17–18. Also e.g. Edney, 1974, p. 959; Bonnes & Secchiaroli, 1995, p. 83).⁹ The interdisciplinary perspective was a highly appreciated feature in environmental psychology but why was the field taking the lead from ethology?

Both historians and participants in these debates have offered explanations for ethology’s popularity among lay audiences and social scientists in the 1960s. These explanations have included the inspiring progress in ethology and biology (e.g. Cartmill, 1997; Degler, 1991), and the wish to benefit from biology’s authority (Vicedo, 2013), the strong dislike and opposition to the overly constructivist or behaviorist picture of human beings and society prevalent in the social sciences of the era (Degler, 1991; Suttless 1972), and the need to find a solid biological basis for human action in order to oppose reengineering of endlessly malleable human beings by totalitarian regimes in the cold war context (Weidman, 2013). Similarly, pressures to find a common basis for all humans were inspired by the need to oppose racial differences (e.g. Cartmill, 1997; Milam, 2013; Weidman, 2011).

Environmental psychologists provided two main reasons supporting the value of ethology. The first was the methodological contribution which was promoted especially by the older generation of social psychologists whose critique towards laboratory methods was harsh. Harold Proshansky, for instance, proclaimed that “we should be guided by the approach of the ethologist who studies animal behavior in its natural setting by means of continued and extensive observation” (1976b, p. 306). A similar opinion about longitudinal observation and respect towards the physical setting was expressed by Altman: “The ethological approach

⁹ Even though ethological interpretations of human territoriality were pondered also in other social scientific fields, in many fields territoriality was also examined from perspectives that did not have a connection to ethological theories. For a succinct explanation of these separate perspectives (behavioral and politico-geographical), see Kärholm (2007, pp. 438–440).

has made a valuable contribution through its emphasis on studying organisms in relationship to the physical environment, and because of its frequent use of naturalistic observation” (Altman, 1976, p. 98).

The second reason was the inspiration that ethology offered in the form of pointing out socially relevant research questions. As Wiesenthal and Buchalter argued, “[e]thology should tell the experimenter where to look” and suggest hypotheses for the investigation of human behavior (1976, p. 59). Besides stimulating research, animal studies were also used for the justification of the topic, “as a provocative reminder of the need for further research among humans” (Lawrence, 1974, p. 713). But why then was it thought that animal studies would indicate what is socially relevant in human behavior? On a general level, the social relevance of ethology came from its recognition of the impact of the environment on behavior and on the well-being of an animal, whether non-human or human, which was crucial in an era of growing awareness of environmental and ecological problems, including the population explosion. However, more specifically in the case of human territoriality, the relevance came from the ‘territorial aggression thesis’. Besides having potential value in explaining current domestic and urban problems as well as international conflicts, it also raised broad public concern.

In ethology, territories are usually understood as fixed geographical areas that are maintained and defended against encroachment by an animal or group of animals. In his classical 1958 text *Territoriality: A Review of Concepts and Problems*, primatologist C. Ray Carpenter suggested some thirty different hypothetical functions of animal territoriality, ranging from security and protection via stimulating breeding behavior, localizing waste disposal, and structuring the group to regulating spacing, density, and size of the population (Carpenter, 1958, pp. 242–243). Many of the functions were connected to aggression. On the one hand, claiming and defending territory caused aggression. The stronger and more aggressive individuals gained larger territories and had more offspring. On the other hand, as an essential element of social organization, territoriality helped to reduce violence and competition and could be advantageous also for subordinate animals. Territorial fights were usually ritualized and aimed at stabilizing the dominance hierarchy instead of killing fellow-members of the species. In addition, territorial aggression

forced animals to space out so that the survival necessities were guaranteed and the population levels remained stable (e.g. Carpenter, 1958).

There was no disagreement among ethologists about the existence of territorial behavior or territorial aggression in a wide variety of species. The idea that humans might also be territorial was not a radical one either since the continuity between human and non-human animals was a notion widely shared by biologists. What made the issue so sensational was that the idea of aggressive territoriality also to be applied to humans spread both into the popular press and into the social sciences largely in a popular ethological version that was all but uncontested by other biologists.¹⁰ The most influential proponent for an aggressive territorial instinct in humans was Robert Ardrey (1908–1980), an American playwright and partly self-made anthropologist but also a superb popularizer of paleoanthropological and ethological theories (e.g. Gorer, 1968, p. 74).

Even though Ardrey was not a professional ethologist, he was keen to use Lorenzian ethology to support his arguments and can be classified as a popular human ethologist. Konrad Lorenz (1903–1989) was an eminent Austrian ethologist, “the father of ethology”, and Nobel Prize winner, whose ideas were supposed to be taken seriously even by his critics. That notwithstanding, *On Aggression* and some other popular titles were aimed at lay audiences. For Lorenz, aggression was a spontaneous instinct that internally built up until it eventually discharged. In his view, if a certain kind of behavioral outlet that it was evolved for was not expressed, the underlying drive had to find another way out. Intra-specific aggression, he claimed, had evolved because it brought survival and reproductive advantages not only to the more aggressive individuals but to the whole species, mainly through territorial behavior. Unfortunately, according to Lorenz, this adaptive trait had become destructive in humans because the species had changed its living conditions too quickly. In the modern world, there were not adequate opportunities to release aggression

¹⁰ The debate on the issue was quite vigorous for example in anthropology. See Montagu (1968), Alland (1972), Callan (1970), Tiger & Fox (1971). Also Milam (2015), Weidman (2011; 2013).

in constructive and non-harmful ways such as hunting, and built-up aggression came out in destructive ways (Lorenz, 1966, pp. 30–31, 47–50, 238–243).

Where Ardrey differed in his essentially Lorenzian interpretation of aggression, was in the primacy of territoriality. For Ardrey, territoriality was the primary instinct in humans, even stronger than the sexual drive, and the aggression instinct was strong because it was essential for the dictates of territoriality. He broadened the idea of territory to include human property that could be sold or exchanged and claimed that owning territory was so essential for man that it literally dictated the social life of humans. Gaining and preserving territory satisfied the psychological needs for identity (becoming a part of an interacting community), stimulation (strongest at the borders of a territory) and security (strongest at the center of a territory) (Ardrey, 1966, pp. 3–5, 52, 102–103, 350–351). Ardrey thought that territoriality in its present form developed biologically only after the ancestors of man took up hunting (Ardrey, 1966, p. 58). A hunter's territoriality was essentially connected with aggression and inter-group hostilities. The end result of a taste for killing and of the imperativeness of territoriality in human life was the natural unavoidability and omnipresence of war. Despite these extreme views, for Ardrey, territorial instinct was also a guarantor of freedom and morality (e.g. Ardrey, 1966, pp. 335–336, 350–353; Milam, 2015, p. 72; Weidman, 2011, pp. 273, 280).

Alongside Lorenz's and Ardrey's strong views on aggression and territoriality, environmental psychology and popular culture were very much affected by animal psychologist John B. Calhoun's crowding experiments, which became easily intertwined with the territorial reasoning. Density-dependency of animal aggression was a mainstream idea among biologists and an inherent part of the territorial mechanism in many species. Most ethologists saw resource competition as an important factor behind aggression and the density-controlling function of territoriality, whereas Calhoun showed that overt density was harmful even when there was no lack of resources. In Calhoun's experiments, overt aggression and even cannibalism occurred despite unlimited amounts of available food. The message was interpreted as if crowding resulted in pathological behavior, by extension also in humans, and Calhoun's 'behavioral sink' became a symbol of

the overpopulation problem (Ramsden & Adams, 2009, pp. 761–763). Calhoun as well thought that his studies had direct relevance to human behavior, but he did not see the situation as dark. According to Calhoun, humans were capable of constructing ‘conceptual space’ through role differentiation and new methods of communication. High density could be made beneficial by better designing urban environments, and all this would bring about a sense of responsibility and compassion, ultimately leading to a decline in fertility (Calhoun, 1971; Ramsden, 2011, pp. 661, 671).

The wider ethological and biological community did not approve of Lorenz’s and Ardrey’s views of self-sufficient spontaneity and the ineradicable, instinctual nature of aggression and territoriality. Aggression was an adaptive trait and man was prone to aggress, but physiological evidence was against the spontaneity of aggression and the “hydraulic model” either in animals or man and, consequently, releasing aggression was not necessary and did not help to reduce it (Barnett 1968, p. 19; Crook 1968, p. 150–151; Hinde 1967, p. 302–303; Scott, 1968, p. 52–53; Tinbergen, 1968, p. 1413). It was evident that not all species were territorial, and some territorial species were not aggressive. It was possible to maintain a territorial system by other means, such as mutual avoidance. Additionally, some species were territorial in certain areas but not in others (e.g. Crook 1968, p. 150; Kummer, 1971, pp. 223–232; Wilson, 1971, p. 195). Furthermore, most ethologists thought that animal studies could be useful for research on human behavior and for social science if they were used cautiously, but they were not willing to accept quick analogies between different species (e.g. Crook, 1968, p. 172; Klopfer, 1968; Tinbergen, 1968, pp. 1411–1412).¹¹

Because the instinctive and unchangeable nature of aggression and territoriality was widely rejected by most of those who accepted its adaptive biological origins, a large space was left open to various interpretations of the impact of both genes and the environment on behavior, and of the relevance of animal behavior to the study of humans. Nevertheless, it seems that in environmental psychology the more nuanced biological arguments were often lost in the shadow of Lorenz and Ardrey.

¹¹ For example, Edward T. Hall complained about the reluctance of ethologists to apply their findings to humans (Hall 1966, p. 174).

RESIGNING FROM BIOLOGICAL EXPLANATIONS

Even though ethological theories were used for inspiration and justification of research topics, questions, and hypotheses, as methodological models, and for formulating a preliminary definition of the concept of territoriality, mainstream environmental psychological research on territoriality rejected the applicability of ethological theories for the analysis of human behavior. The situation was peculiar: ethological theories were cited, sometimes briefly, sometimes at length, but shortly thereafter their relevance was refuted. For example, Proshansky referred to Ardrey, Lorenz, and Leyhausen, but also claimed that assuming that territoriality would serve the same functions in man as in animals “simply ignores the properties that distinguish man from all other groups of living organisms” and that “regardless of its [territoriality’s] essential origins in biology... the biological or animal analogy must necessarily be discarded” (Proshansky et al., 1970b, pp. 178–179). Similarly, the first systematic introduction to environmental psychology emphasizes the fundamental difference between animals and humans. Besides Ardrey, Lorenz, and Leyhausen it also mentions Hediger’s and Howard’s studies on animal territoriality, but the conclusion is that “...complex territorial behavior in humans differs from territoriality in animals” (Ittelson et al., 1974, pp. 143–144) and that “whatever their zoological significance, animal studies are seldom applicable to human processes” (Ittelson et al., 1974, p. 148).

It seems as if in these sorts of cases ethological references were included only to emphasize the differences between animal and human territoriality and the importance of cultural-learning elements for human behavior. “Whatever the complex social behavior ... it has been inextricably tied to man’s direct socializing and broader cultural experiences” (Ittelson et al., 1974, p. 143; also Edney, 1976b, p. 813; Proshansky et al., 1970b, p. 179). However, most often no attention was paid to the basis of human territoriality. Confronted with the lack of their own theoretical traditions, references to ethological classics might sometimes have been used just as an introduction to the researchers’ own analysis.

There was also another strategy available: take no stand on the biological underpinnings of human territorial behavior, but to argue for dissimilarities between animal and human territoriality either on the basis of empirical evidence or through theoretical formulations. In his classic 1975 book, Altman referenced ethological theories of territoriality and crowding and analyzed differences between animal and human territoriality¹². He stated that “most human social behaviors are an interaction of cultural-environmental and biological influences,” and that these influences in territorial behavior were far from resolved. Despite the ethological references and the acknowledgment of biological influences on human social behavior, he rejected the immediate impact of the possible biological roots of territorial behavior with respect to his analysis on human territoriality. He stated that the answer to the question of the different contributions of heredity and the environment to territorial behavior was not “necessary in order to study the phenomenon and to learn about its functioning” (Altman, 1975, pp. 106–111, 168–170).¹³

Nevertheless, the existence of territoriality in humans was considered a psychological fact (e.g. Altman, 1970, pp. 16–18; Edney, 1974, p. 961; Ittelson et al., 1974, p. 142; Proshansky et al., 1970b, p. 179). In conceptual analyses, territoriality and crowding were intertwined but aggression was not usually an essential part of the picture. For Proshansky, Ittelson, and Rivlin territoriality meant “achieving and exerting control over a particular segment of space”, but it was instrumental in achieving more primary goals such as maintaining a sense of personal identity and privacy. Territoriality was a mechanism for increasing the range of options open to oneself and maximizing the freedom of choice in a given situation. Crowding occurred when the number of people an individual was in contact with could “prevent him from carrying out some specific behavior” (Proshansky et al., 1970, pp. 179–182). For Altman, personal space and territoriality were “boundary-regulation” mechanisms designed to maintain a balance between desired and achieved levels of privacy. Crowding was an experience in which desired privacy exceeded achieved privacy

¹² According to Altman, humans could for example maintain several territories and be part of several territorial groups, “time share” temporary territories and entertain guests on home ground, unlike animals. Humans were possessive not only toward places and objects but also toward ideas which he called cognitive territoriality. In general, Altman saw animal territoriality uniform while human territoriality was variable (Altman, 1975, pp. 107–109).

¹³ Another researcher stating this explicitly was Edney (1976, p. 32).

and resulted in an excess of undesired social contact. Territorial behavior helped in fostering contact between people, and avoiding social conflict (Altman, 1975, pp. 3, 105, 146). Even though these functions of territoriality were not directly linked to survival needs and aggression, with their emphasis on the ability to resist intrusion or influence attempts, they are easily comparable to animal functions. Such is the case also with the idea of smoothening social communication and avoiding conflict.

Empirical knowledge and studies on human territoriality accumulated slowly. This was partially because territoriality often involved associations and feelings between persons and places that took a long time to develop and studying the phenomenon in the laboratory was difficult. On the other hand, the fact that naturalistic fieldwork was the dominant method made the research on human territoriality all the more important for the methodological aspirations of the field. A large part of the work consisted of long-term studies in institutions where people were not free to leave, such as psychiatric wards and prisons (e.g. Esser, 1968), a factor that made generalizations questionable. Aristide Esser was probably the most prolific researcher but he will be discussed in the next section because of his clear biological orientation. Here I will address a few representative empirical studies that do not explain the features of human territoriality with biology.

Altman and Haythorn examined interpersonal exchanges in isolated groups in two separate studies. Perhaps revealing for the spread of the concept of territoriality was that their 1965 article on the topic did not include the word territoriality at all, but their 1967 article on the same topic utilized the concept and introduced animal research on it. The latter article showed the need to counteract environmental stress through territorial structuring, and the importance of individual differences in personality for territorial behavior. Ethological theories were not used for explaining the results (Altman & Haythorn, 1965; Altman & Haythorn, 1967). Sundstrom and Altman (1974) mentioned the biological concept of territory, but did not draw their hypotheses or explanations from ethological theories in their field study of cottage groups of 12–15-year old boys. Their study exploring the relationship between dominance and territorial behavior owed a lot to Esser, though, who used a clearly biological orientation.

In their 1978 article on territorial cognition, Taylor and Stough (1978) tested the empirical validity of Altman's typology on territorial behavior. At this point, there was a sufficient amount of environmental psychological research on the topic to leave the ethological introduction out. The study contained interviews with urban and suburban subjects on their perceptions of the neighborhood. It confirmed the validity at that point of Altman's (1975) already classical typology of territories (primary, secondary and public) and the importance of the dimensions of centrality and temporal duration.

One important dimension of empirical studies was the research on the Calhounian-Lorenzian hypothesis of the causal link between high density and aggression, which was done most often in laboratory settings and most actively by psychologist Jonathan Freedman. Even though territoriality was not the main focus of these studies, the reasoning on territoriality was inherently linked in to them. In these studies, groups of strangers were typically put in differently sized rooms and their behavioral responses were measured. The laboratory studies emphasized control, manipulation and the use of only a few variables, and the often artificial research settings were criticized at the time (for a deeper analysis see, e.g. Altman 1978; Epstein & Baum 1978). Despite, or rather because the research results were inconsistent, one conclusion seemed clear: a straightforward connection between high density and aggression could be rejected. What effects crowding had on humans were mediated by other factors in the situation (Freedman et al., 1972, p. 528; Lawrence, 1974, p. 717–718). In his 1975 book, Freedman stated very strongly that “humans show no hint of territoriality in the sense of reacting aggressively to a lack of space”, and that crowding did not generally have negative effects. Instead, crowding intensified the individual's typical reactions to the situation, whether positive or negative (Freedman et al., 1972, pp. 545–546; Freedman 1975, pp. vii, 105).¹⁴

Freedman used the term crowding to refer to the physical situation of high density, not internal feelings (Freedman 1975, p. 11). For most other researchers the experience of crowding was dependent on other intermediating factors besides density, and even when the subjective experience of crowding was reported,

¹⁴ One inconsistency found was the sex difference in response to some crowded situations. Freedman speculated that the assumed higher territoriality of men compared to women could explain the more negative effects in men. However, he rejected this idea because the positive reaction of women in some crowded conditions would require some sort of counter-territorial instinct (Freedman et al., 1972, pp. 544–546).

there was no clear connection to increased aggression. An aggressive response to crowded conditions was a possibility, just as well as withdrawal or better coordinated cooperation, and when aggression occurred it could be caused by frustration linked to hindrance, not to density per se (e.g. Lawrence, 1974, pp. 717–718; Sundstrom, 1978, p. 56–59).

Julian Edney is interesting in his use of ethology because he explicitly stated his wish to promote politically correct conclusions by rejecting the applicability of biological claims on human territoriality. In his 1974 article on human territoriality, Edney claimed that the assumption of the underlying mechanisms of territoriality being the same, or genetic, in some animals and humans, “has an interesting political consequence: It relieves man of the moral responsibility for his territorially aggressive acts and invites the rationalization of human territorial warfare as simple fulfillment of man’s genetic predispositions” (Edney, 1974, p. 961). This naturalistic fallacy was quite unnecessary as regards examining the issue, but it also shows how bluntly Edney interpreted biological theories of territoriality. Furthermore, it is troublesome in the light of some other comments made by Edney in his theoretical formulations and his empirical work.¹⁵

In his experimental research on the effects of prior experience and anticipation of future experience on feelings and territorial behavior Edney stated that his findings of “tolerance of closer interpersonal distance in a place with which association has been experimentally established” were congruent with ethological theory on the absence of flight behavior in one’s own territory (1972, p. 134). In an article based on a field experiment in college students’ dormitory rooms he speculated about the ethological theory of fight-winning capacities of territorial individuals on their home ground (1975, p. 1108). Edney’s theoretical article on property rights referred to Wynne-Edward’s theory on the role of territory in sexual selection in animal communities and described Ardrey as a provider of a bridge between animal and human behavior (1976b, p. 812). Even though Edney spoke about important differences between animal and human territoriality, he

¹⁵ Ultimately, this statement was about the distinction between analogies (approved by Edney), and homologies (disapproved by Edney). An analogy means that behavior is similar in appearance, but its underlying mechanism can be different. In the case of homology, the underlying reasons are the same. Unlike Edney, some environmental psychologists were reluctant to even accept analogies (e.g. Proshansky et al., 1970b, pp. 178–179).

also claimed that territories serve humans and animals in “some fundamentally similar ways” (1976b, p. 814).

Edney’s concerns regarding the claims of the underlying genetic mechanisms of territorial behavior were clearly directed toward the territorial aggression thesis. In several articles, he strongly argued against the connection between aggression and territoriality in humans (Edney, 1975, p. 1114; 1976a, p. 33; 1976b, p. 813) stating aggressive defense being “neither necessary nor sufficient as a factor in defining human territoriality” (Edney, 1976a, p. 33). A less than convincing proof came from his claim that in empirical research on human territoriality, aggressive defense had rarely been used as a criterion (Edney, 1975, p. 1114; 1976b, p. 813). Moreover, Edney questioned the density-regulation function of territoriality in humans (1976a, p. 37). Despite his use of a variety of ethological theories, Edney seemed to be of the opinion that aggressive defense as an essential qualifier of animal territoriality was an established biological fact.

Similarly, without convincing empirical evidence, Altman claimed that “[f]ull-scale aggressive defense reactions are probably atypical of humans” (1975, p. 109). According to him “[o]vert aggression between individuals is a rather infrequent everyday event. And rarely does aggression occur in the context of territorial competition” (Altman, 1975, p. 139). By the mid-1970s, in the mainstream environmental psychological research the density-aggression link was contested, and territoriality was detached from aggression and population-control mechanism. Since the relevance of biological reasoning was denied and concern over blind generalizations was strong, the assumed usefulness and validity of comparative analysis between humans and animals because of “sufficient overlap” (e.g. Altman, 1975, p. 109) remained tenuous. In the next section I will investigate those environmental psychologists who did not share this same ambivalence about using animal studies.

WISDOM FROM ETHOLOGY AND EVOLUTION

Psychologist Kenneth H. Craik in his 1977 article on different environmental psychological paradigms placed the studies on territoriality and crowding under the paradigm of functional adaptation, employing the concepts of ethology, psychobiology, and social psychology. According to him, this approach was “alert to the possible adaptive functions of behavioral and social mechanisms and adjustments from the standpoint of biological and socio-cultural evolution” (Craik 1977, p. 152). As I have described in the previous section, the standpoint of biological evolution was not shared by all environmental psychologists. In the article Craik referred directly only to Donald T. Campbell, Aristide H. Esser and Irvin Altman. Even though Altman was careful not to reject the possible influence of biology, he was certainly not alert to the evolutionary explanations. Campbell and Esser, instead, clearly represented a more biologically oriented perspective.

The psychiatrist Aristide H. Esser¹⁶ (1930–) conducted a lot of studies on the relationship between territoriality and dominance amongst psychiatric patients (e.g. Esser et al., 1965; Esser, 1968), using ethological models and claiming that understanding the evolutionary developed functions of human territoriality was crucial. Even though he subscribed to some extent to the idea of territorial aggression in humans, his model was not deterministic nor did it come from Ardrey. Esser aimed at solving problems connected both to the clinical management of patients, ward structure and group cohesion (Esser, 1968, p. 147; Esser et al., 1965, p. 44), as well as to wider questions of developing what he called a “truly pluralistic society”. Esser promoted the need to regulate, plan and design on the one hand, and to educate and foster cooperation on the other. His goal was to help humans to “become fully human” and to take advantage of what Calhoun called ‘conceptual space’ (Esser, 1972, p. 26; Esser, 1976, pp. 120, 123).

¹⁶ Indonesian-born Esser (1930–) was educated in the Netherlands and came to the USA in 1961 as a Lederle International Fellow for psychiatric research at Yale University Medical School. From 1962 to 1969 he worked as Director of the Research Ward of the New York State Nathan Kline Institute for Psychiatric Research. Later he worked in both mental health services as well as research. He was a co-founder of the Association for the Study of Man–Environment Relations.

Even though Esser's biological approach was not applauded by many environmental psychologists his empirical studies were regularly referred to. His claim of finding a connection between territoriality and aggression (Esser et al., 1965) was criticized by Edney (1974, p. 968), but his mixed results concerning the relationship between territoriality and dominance could just as well be used by those who were reluctant to accept biological explanations (e.g. Edney, 1975; Sundstrom & Altman, 1974).

The psychologist and philosopher Donald T. Campbell was an odd character for Craik to reference. Although some of his work raised interest among environmental psychologists, such as his 1969 article promoting an experimental approach to social reform and science-based administration (e.g. Altman, 1976, p. 106; Craik, 1977), his 1972 article on human territoriality was completely ignored. Campbell went quite deeply into biological theorizing when arguing for the possibility of eliminating war because of the biological selfishness of human beings (Campbell, 1972).¹⁷ Campbell did not mention Ardrey but his critique of the idea of biologically based group territoriality implies a rejection of a large part of the 'territorial imperative'. According to Campbell, individual human territoriality might be instinctive, but group territoriality was cultural.

In a theoretical article, psychologists Gary Evans and William Eichelman promoted a research strategy and a model of human spatial behavior that emphasized ecological and evolutionary perspectives. They concluded that humans were not territorial animals, at least not in the traditional sense. Human cognitive mapping abilities meant the ability to store more information about environments and this made many of the basic animal functions of territory unnecessary. They also assumed that individual territoriality would be maladaptive due to its deterring effect on group cohesion, which was important for the human species

¹⁷ According to Campbell, in social insects group-territoriality had developed because of the genetic structure of those societies and the lack of genetic competition amongst the soldier caste. In the case of humans, the self-sacrificial nature of group territoriality was in opposition to individual territoriality and the selfish nature and genetic competition of human beings. He criticized group selectionist arguments (used by Ardrey and Lorenz as well) with the help of George Williams, but his understanding of individual selection did not take into account kin selection. For Campbell, cultural reasons and cultural evolution worked in the opposite direction than natural selection in the case of wars. Culture and social pressures needed to overcome biological selfishness in order to get human beings to go to the war and risk getting killed for common goals (Campbell, 1972).

(Evans & Eichelman, 1976, pp. 107–109). Evans' and Eichelman's evolutionary reasoning implied just as strong a rejection of the Ardreyan territorial aggression thesis as Campbell's model, even though they did so from an opposing perspective. For the present purposes it is essential that the basic Ardreyan model was rejected by psychologists who embraced biological reasoning.

In their experiments concerning invasions of shared space, psychologists Michael Efran and Allan Cheyne (1974) used a great deal of information and hypotheses produced by animal studies. Territorial violations elicited negative affective arousal which they found parallel to agonistic encounters in nonhuman primates. On the basis of their results, Efran and Cheyne warned about the "stress of modern life" caused by the ubiquitous unpleasant, though seemingly trivial, social encounters. However, territorial encroachment did not cause any overtly aggressive reactions, but rather the opposite. Psychologists Alton DeLong, in turn, empirically studied the relationship between dominance and territoriality in small groups (1970). He used the ethological analogy uncritically and cited Ardrey as one source of ethological wisdom. However, he did not clearly take a stand on the underlying reasons for human territoriality nor on Ardrey's claims about human territorial imperative (DeLong, 1970). With the exception of Esser (1972) and DeLong (1970), all these biologically oriented studies referring to ethological theories left Ardrey and Lorenz uncited. This was in sharp contrast to researchers who denied the relevance of biological reasoning in the case of humans for whom Ardrey was a regular point of reference.

If we look also at the design fields which could be included in the wider definition of environmental psychology, we will find a different attitude towards pop-ethological ideas. Architects were more willing to accept not only a biological basis for human territoriality, but even some of the features of the 'territorial aggression thesis'. To a certain extent, Aristide Esser could be compared to these architects, in that he accepted the connection between territoriality and aggression and sought clear design solutions.

Architect Barrie Greenbie was an exception in explicitly acknowledging that his interest in territoriality and in better taking into consideration biological realities in design was originally sparked by Lorenz and Ardrey and the popular controversy surrounding them (Greenbie, 1976, p. xiii). Yet, he was well read in ethological

theories of territoriality, as well as in biological neuropsychiatry. He clearly accepted biological constraints for human conduct and even some nightmare scenarios, but without deterministic surrender. His goal was to solve problems through better design that would not ignore basic biological or cultural needs. In society and in urban planning, the challenge was to support group identities and group territoriality without letting them become prisons, and to enhance positive encounters between different groups (Greenbie, 1976, pp. 8, 147, 154, 179–180).

Another architect, Oscar Newman, provided the most concrete recommendations for planning and design. Newman's embrace of Ardreyan theories of territoriality and their direct application in design and planning instructions was summarized in his popular book *Defensible Space*. In his view, a key problem with urban low-cost housing was the creation of semipublic areas that were not personalized, territorial or under the control of the residents, and consequently they attracted criminals. The solution was to transform these areas into proper secondary territories by using symbolic territorial markers, for instance by arranging windows to permit better surveillance, and by benefitting from the residents' feelings of territoriality and responsibility (Knoblauch, 2014; Newman, 1973). Newman's ideas were picked up by housing authorities (Knoblauch, 2014, p. 339), and he was probably the clearest example of how pop-ethological ideas were absorbed uncritically without noticing the origins. Many of those scientists who criticized "the overextension of ethological concepts", such as Wiesenthal and Buchalter, did not hesitate to neutrally refer to Newman's theory (Wiesenthal & Buchalter, 1976, p. 58; also Altman, 1975, p. 116).¹⁸

According to the pop-ethological narrative, human beings had become misfits in the world they had created. This had happened by disturbing the balance of the stable environment that had developed in connection with adaptive genetic qualities during evolution.¹⁹ Despite the acceptance of the territorial instinct and problems that it could possibly cause in the modern world, design-oriented environmental psychologists did not shy away from actively changing the environment (physical and social) for the better.

¹⁸ Also later, for example, Wohlwill (1995) analyzed different historical trends in environmental psychology, and talked about territoriality research and Newman, but without any reference to ethology or Ardrey.

¹⁹ For a good analysis of how environment was considered a part of the evolutionary design, see Vicedo (2013, pp. 210, 229–230).

They shared a strong belief in the possibility of fighting against the unwanted consequences of human territoriality, and in that sense, they were in line with other environmental psychologists.

CONCLUSIONS – FROM TERRITORIAL AGGRESSION TO PLACE IDENTITY

In the late 1960s and early 1970s, environmental psychologists shared an interest in human territoriality as a result of the biological claims stemming from the field of ethology. Even though the concept was borrowed from ethology, especially those with a social psychological background often rejected its biological dimension in the case of humans, sometimes quite furiously. This was caused not only by the belief in the cultural-environmental determinants of human behavior, but also by the wish to reject the popular ethological territorial aggression thesis, which included claims about territoriality's instinctive and aggressive nature, its role in forming social hierarchies, and its connection to the problems of overcrowding, population regulation, and warfare. Many environmental psychologists imagined that accepting animal like biological underpinnings for human territoriality would automatically mean accepting deterministic conclusions made on the basis of the Ardreyan territorial imperative. The concurrent application and rejection of ethological ideas caused contrived argumentation.

Still, also those theoretically focused environmental psychologists who accepted the relevance of biological and evolutionary reasoning for examining territoriality in humans rejected most of the claims concerning the aggressive nature of human territoriality. They did not base their biological model of territoriality on Ardrey's or Lorenz's popularizations even though their biological reasoning was sometimes weak. The strong disagreement between ethologists about the nature of territorial aggression, as well as about the applicability of ethological concepts to "human nature" was not clearly seen in the discussion on environmental psychology at the time. Despite scattered comments mentioning biologists' criticism (e.g.

Edney, 1974, p. 960–961)²⁰, it is clear that the popularized version of ethological knowledge had the strongest influence on environmental psychology.

This becomes more evident if we compare environmental psychologists with the influential aggression researchers Leonard Berkowitz and Albert Bandura. Neither territoriality nor biological elements had any importance in Berkowitz's and Bandura's own theories of aggression,²¹ but they both reviewed ethological theories and commented on the insignificant or nonexistent role of territoriality in understanding aggression, and in addition, the absence of any instinctive drive toward war in humans. They did this with the help of biologists such as Scott, Crook, Tinbergen and Hinde (Bandura, 1973, pp. 14–20; Berkowitz, 1962, pp. 19–21, 25).²² Naturally, for Berkowitz and Bandura, human aggression remained a question to be answered, while for environmental psychologists the main interest was territoriality. Aggression was important to the extent that it was related to territoriality and to the contested hypotheses that made territoriality societally relevant.

The theoretically focused environmental psychologists discussed in this article wanted to prove the popular ethological theories on human territorial aggression wrong, and sought to develop subtle theories on the nature of territoriality. In contrast, the design side called for urban planning and architecture that would build on the recognition of human territorial instincts. Despite the differing ideas on the nature of human territoriality, common to all of these researchers was the wish to fight off any deterministic surrender in the face of the negative consequences of territorial aggression, hypothetical or real. Perhaps this ultimately common goal helped those environmental psychologists who were critical of biological explanations to be quite tolerant of their design-oriented colleagues, as well as of psychologists using biological reasoning, and to give recognition to their results. The criticism towards “design-determinism” expressed by some urban

²⁰ More often other social scientists' criticism toward Ardrey was mentioned. Edney even seemed to find Rousseau's and Kant's contradictory opinions as relevant as the opinions of biologists'.

²¹ Biology's impact on aggression and human behavior was acknowledged at the same time that it was reduced to having a minimum influence (Bandura, 1973, pp. 21, 26; Berkowitz, 1962, p. ix). Berkowitz's theory was an elaboration of the mainstream behaviorist frustration-aggression hypothesis originally developed by Yale scholar John Dollard and his colleagues. According to this theory, aggression was always a consequence of frustration (Dollard et al., 1939, p. 1). Bandura's theory was a social learning model.

²² In fact, Berkowitz attacked psychoanalytical instinct theories with the help of ethology (Berkowitz, 1962 pp. 13–15).

sociologists (Ramsden, 2011, p. 684) was not seen among psychologists. It is likely, however, that this tolerance was partially due to the goal of developing the field and building a disciplinary identity; the existence of a wide variety of paradigms was pointed out neutrally (e.g. Craik, 1977; Stokols 1978, p. 257). The strong aspiration toward interdisciplinarity seemed to be partially wishful thinking, however. Besides taking interdisciplinary loans from ethology in its popularized form, environmental psychologists with different educational backgrounds did not communicate that deeply with each other. The psychological theories on territoriality without a clear design-orientation, such as Altman's, were in turn ignored by the design-side (e.g. Greenbie, 1976; Newman, 1973).²³

The goal of environmental psychology was to offer rigorous data and practical solutions that could be used for dealing with existing or anticipated problems. "We must calmly eliminate some of the value judgements and begin to survey present knowledge before social policy can be intelligently constructed and implemented," stated Wiesenthal and Buchalter. Since they criticized newspapers and politicians as well as some so-called experts for "unfounded gloom and doom predictions" (Wiesenthal & Buchalter, 1976, p. 58), their obvious aim was to confront the most deterministic biological views. Nevertheless, non-biologically oriented environmental psychologists also shared the general concern that there were potential problems connected to overpopulation, crowding and territoriality. One task was to find out which factors (besides density) contributed to the unpleasant experience of overcrowding. Thus, the issue was not all about reducing the number of people per unit of space but also about the right kind of environmental design and urban planning. Furthermore, people could be trained to use environments creatively in order to better control interactions with others and to minimize psychological and physiological costs (e.g. Edney, 1977, p. 1227; Zlutnick & Altman, 1972, pp. 55–56). For many, the efficient use of a territorial mechanism was one way of organizing society and interpersonal relations so that an

²³ The best example of real interdisciplinary influences would be the psychologist Robert Sommer (1929–) who was clearly dedicated to developing design solutions and whose work was recognized also by architects. Sommer mainly studied personal space, which could be seen as a part of territorial behavior but was often considered separate. He also studied temporary individual territories in public settings, such as spaces in college libraries. Also anthropologist Edward T. Hall (1914–2009) was widely influential in various disciplines.

adequate amount of privacy could be maintained and negative feelings of overcrowding, frustration and loss of control avoided. If there was aggression related to territorial behavior, it was explained by something other than territorial instinct.

The impact of ethology on the environmental psychological research on human territoriality started to diminish after the mid-1970s. There was a growing trend towards cognitive and social-organizational functions that left associations with defense and exclusion aside. For example, while exclusion was an essential element of Edney's description of territoriality in 1974 (see above p. 4), in 1976 it was not included as a criterion any more. In 1976, the definition was a "continuous association of person or persons with specific place" (Edney 1976a, p. 33). Territoriality was still sometimes connected with defense and feelings of security, but more often it reflected the needs for identity and belonging. Identity functions related to territoriality were seen, for example, in the research on the personalization of space (one's territory), but in the late 1970s, also the term place-identity was taken up. For Proshansky, place-identity meant "those dimensions of the self that define the individual's personal identity in relation to the physical environment", and behavior norms and values linked to territoriality belonged to a person's place-identity cognitions (Proshansky, 1978, p. 155; Proshansky et al., 1983, p. 64).²⁴ Additionally, new ways of benefitting from territoriality, for example in solving environmental problems concerning resource management were tested and developed (Cass & Edney, 1978). Aggression did not play any role in these studies, and the need to contest the connection between territoriality and aggression was also gone. Environmental psychological research on territoriality was gradually detached from the aggression perspective.

Environmental psychological research on territoriality outlasted the debate on territorial aggression. Initially, encouraged by its popularity and putative relevance for large-scale modern problems, environmental psychologists had borrowed an idea from ethology and benefitted from it. Even those environmental psychologists who rejected the relevance of biology draw support from animal comparisons.

²⁴ In fact, identity also had an important role in Ardrey's theory on territoriality, but it was usually not commented on by these later identity studies.

By the late 1970s the discipline had established itself and no longer needed justification from ethology for its research questions and hypotheses. There was also a sufficient amount of environmental psychological literature to be used as a reference point. The fashion around territorial aggression gradually faded in many fields and from the public sphere. Relevant “real-world” research questions also changed; environmental problems did not vanish but the concern over the ‘population bomb’ and the psychologically and behaviorally deteriorating effects of crowded urban environments became more moderate. Most importantly, by the late 1970s, environmental psychologists (design side excluded) had proved, at least in their own opinion, that aggression was not an essential part of human territoriality. If territoriality was linked to interpersonal aggression, violence and crime, it was more part of the solution than a problem in itself.

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