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Affective judgment in spatial context: How places derive affective meaning from the surroundings

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ABSTRACT

Why do we favor some places over others? Much is known about the intrinsic properties that make places appear good or bad. The present research investigates the complementary question: How places derive affective meaning from the surroundings. In six experiments we showed how the appraisal of target places changed when the surroundings contained a negatively valenced location. In accordance with a model of affective judgment in spatial context that combines the inclusion/exclusion model of assimilation and contrast and range theory, places were either negatively *or* positively affected. The specific effect depended on the negatively valenced location's gradient of influence and on the size of the chunk of environment people considered for their judgment. The results fill an important gap in the place appraisal literature.

1. Introduction

Making decisions about places is challenging for humans and animals alike (Waller & Nadel, 2013). Wrong decisions about places can have serious consequences for one's well-being, such as when one purchases an apartment only to realize after the fact that the location does not suit. For successful decisions, people have to predict how a given place will make them feel (Damasio & Carvalho, 2013; Loewenstein & Lerner, 2003; Miloyan & Suddendorf, 2015; Slovic, Finucane, Peters, & MacGregor, 2002). Specifically, places that facilitate the accomplishment of goals are positively valued whereas places that hinder the accomplishment of goals are negatively valued (Anderson, 2008). In turn, people are attracted to positive places and avoid negative places (Mehrabian & Russell, 1974). Thus, to use geographical space without being able to map affective value onto it is like wandering through the world without a compass. It is not adaptive.

Places, like people or situations, evoke affective reactions (e.g., Amedeo & Golledge, 2003; Ulrich, 1983). Much is now known about the intrinsic properties that make places or spaces pleasant (e.g., Appleton, 1975; Hull & Harvey, 1989; Kaplan, 1987, 1992; Nasar, 1983; Orians & Heerwagen, 1992), safe (e.g., Fisher & Nasar, 1992; Wolfe & Mennis, 2012), or stressful (e.g., Evans, 1984). This knowledge allows the design of places that better fulfill human needs. However, what is missing from this line of research is the essential fact that human judgment is fundamentally context dependent (Suls & Wheeler, 2000, 2007). That is, people rarely judge places in isolation without taking into account the surrounding context. The goal of this research was therefore to investigate how people judge places as a function of the accessible spatial context. First, we will present a general model of judgment in context that has gained great popularity and apply this model to affective judgment in spatial context. We will further show that affective judgments in spatial contexts necessitate the integration of a complementary model of judgment in context from a different research tradition. Finally, we will present a set of six studies that tested the model's predictions.

When a target is being judged in a given context the target judgments can either concord with the context judgment – i.e. assimilation – or they can contrast with the context judgment. One of the most influential models of these assimilation and contrast processes is the inclusion/exclusion model of assimilation and contrast (IEM; Schwarz & Bless, 1992; for more recent reviews see Bless & Schwarz, 2010; Schwarz & Bless, 2007). This model originated in the social psychology research tradition and is particularly relevant because it focuses on evaluative judgments. According to IEM, assimilation occurs when the contextual information can be

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included in the representation of the target. For example, watching a documentary about Nixon (context) makes politicians (target) appear less trustworthy because Nixon can be included in the category "politicians." Increasing the amount or the extremity of negative or positive contextual information that can be included in the target representation (e.g., watching a documentary about several corrupt politicians) increases the size of the assimilation effect. Assimilation is thus the "mere application of qualities of the context to the target" (Glaser in Stapel & Suls, 2007, p. 316). Contrast, on the other hand, occurs when the contextual information cannot be included in the representation of the target. For example, watching a documentary about Nixon makes Clinton appear more trustworthy because Nixon is not Clinton. In cases like this, contextual information is useless as information about the target but may act as anchor point or standard of comparison.

There are different ways in which context information can be included in the representation of the target (Schwarz & Bless, 1992). One way is when the context information fits into the category of the target, like in the Nixon examples above. When the target is ambiguous, priming can also lead to the inclusion of context information. Category boundaries also play a role. Contextual information that is on the other side of a category boundary is excluded from the representation of the target. For example, recalling bad events that belong to another period in one's life can make the current life situation more pleasant. On the contrary, de-emphasizing the division of one's life in life periods leads to assimilation (Schwarz & Strack, 1999). One important process for spatial contexts is feature overlap. The more features context and target share, the more assimilation occurs. For example, people assimilate other persons to themselves more when they focus on shared characteristics rather than differences (Mussweiler, Rüter, & Epstude, 2004). People feel more attractive after viewing a highly attractive same-sex model that shares similar attitudes and values, whereas they feel less attractive when the model does not (Brown, Novick, Lord, & Richards, 1992). Extreme context information that shares fewer attributes with a target than moderate context information elicits contrast, whereas moderate context information elicits assimilation (Herr, 1986).

Feature overlap between objects in space can occur because one object influences the other. Space is a medium that supports influence. It permits attributes originating in one object to spread to another such that they appear to share more characteristics.[1] This transfer of attributes may be based on rational considerations. For example, it is plausible to assume that criminal activity that originates in a high crime area spreads to neighboring places. But, as shown in the contagion literature (Rozin, Millman, & Nemeroff, 1986), transfer can occur even if the means of transfer is not rational. For example, people enjoy cookies less when the sealed box which contains the cookies touched a sterile box of tampons. The tampons have a negative influence on the cookies despite the fact that no transfer of physical attributes is possible (Morales & Fitzsimons, 2007). When considering influence in spatial contexts both rational and irrational transfers of attributes are possible and should cause assimilation effects as defined by the IEM (Schwarz & Bless, 1992). Nonetheless, the concept of assimilation in the IEM is currently not used for the case where influence causes a transfer of attributes from the context to the target. Assimilation in the sense of the IEM is a psychological effect that results from the categorization of the context and the target in the same category. Although the target concords with the context information in both kinds of effects, the underlying process is different. To acknowledge this difference, we will call *influence* the effect in the present research.

Everyday experience shows that any such influence decreases with distance. If we assume that everybody possess a naïve theory along these lines (we will call this theory *gradient of influence*), then the influence effect should decrease with distance. People's naive theories should also determine how far an object's gradient of influence extends. In this vein, most people might agree that the influence of some objects spreads farther (e.g., nuclear power plants) than others (e.g., crime hot spots). At some point, influence should stop spreading, however. Therefore, the influence exerted on some distant targets might appear so small (or even inexistent) that the attributes of the influential object become excluded from the target's representation. Thus, at some point a high crime area in the same city ceases to be likely to influence the safety of the target area where a person lives. At this point, the attributes of the high crime area will not anymore be shared with the target and should therefore be excluded. As exclusion elicits contrast (Schwarz & Bless, 1992), distant targets should take on contrasting attributes. For our example, this means that target places located outside of the gradient of influence should appear more attractive than they otherwise would. In short, whether the judgment of a target concords with, or contrasts away from the judgment of another object depends on the position of the target relative to the gradient of influence of the other object. Yet, how people perceive gradients of influence may itself depend on the context.

A simple thought experiment suggests that the size of the area under consideration also has an effect. Assume that several objects that are relevant to your goals are localized on a map. The same target object will look more attractive when the other objects are all located nearer from a negative location than when the other objects are all located farther away. This notion is the topic of range theory (Parducci, 1963, 1995; Volkmann, 1951). Range theory is a model of judgment in context that originated in the psychophysics research tradition. It states that when people make judgments, they tend to use the range of the accessible set of stimuli to set the lower and upper bounds for the dimension of interest. The stimuli located in between the most extreme stimuli receive graded levels ranging between the lower and the upper bound. If an extremely low stimulus is added to the set, then the lower bound is displaced further down such that all the other stimuli appear higher on the dimension. Thus, gradients of influence should appear to extend further in larger than in smaller contexts. As a consequence, the area in which influence occurs should be larger and the point where contrast emerges should recede further into distance in larger contexts.

Finally, it is important to note that some objects are more likely to exert influence upon others. The most accessible or the most salient contextual information elicits the most powerful context effects (e.g., Higgins, 1996; Koffka, 1935; Köhler, 1929). Motivationally relevant information is generally very accessible because it is salient (Fiske & Taylor, 1991). As affect signals motivational relevance, it follows that places that pop out affectively constitute the most powerful contextual elements. As such, they should have a disproportionate influence on the appraisal of the other places in the spatial context.

1.1. Overview

We conducted six studies. Studies 1 to 3 were designed to test whether affectively salient locations elicit influence nearby and contrast farther away. Study 4 tested whether gradients of influence underlie influence and contrast. Study 5 and 6 tested whether larger contexts cause more extended gradients of influence. In all studies, the participants reported their feelings (Study 1, 2, 4, 5, 6) or the amount of rent they would be willing to pay (Study 3) if they

[1] This characteristic is contained in the etymology of the word: "Influence" comes from the Latin *influere*, which means "to flow into".