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# Attitude towards architectural objects and the Construal Level Theory (CLT) by Liberman and Trope

**Abstract**

Human attitude towards architectural objects depends on many factors. These include cultural, situational, and individual conditions, as well as psychological distance towards the object. Yaacov Trope and Nira Liberman – creators of the Construal Level Theory (CLT) – maintain that psychological distance towards any object may significantly influence psychological construction of the object; we construct psychologically distant objects more abstractly, and close ones – more concretely.

In our article we present the results of a study in which we manipulated the psychological distance towards architectural objects, making them more concrete (bringing them closer psychologically to test participants) by placing logos of chosen restaurant brands on their fronts. We were looking for an answer to the question: Is an abstract object (building) evaluated differently than a more concrete one despite the fact that both have identical formal features (color, shape, form)?

We tested 120 people. Experiment results support the assumptions of the CLT. Participants reacted differently to an abstract object (without a signboard) than to all objects made more concrete with restaurant logo signboards (including a fictional franchise). The differences in affective reactions were especially significant. Reactions to objects on the same level of concreteness did not differ, even between

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varying brands. Regardless of brands, affective reactions towards more concrete objects (any signboard, any brand) were more positive than towards an abstract object (without signboard).

**Keywords:** Construal Level Theory, CLT, Liberman, Trope, environmental psychology, architecture evaluation, evaluation of architectural objects

## Streszczenie

Ustosunkowanie człowieka do obiektów architektonicznych zależy od wielu czynników. Jednym z nich, oprócz uwarunkowań podmiotowych, kulturowych czy sytuacyjnych, jest dystans psychologiczny do obiektu. Yaacov Trope i Nira Liberman – twórcy teorii poziomów konstruowania poznawczego (CLT) – uważają, że dystans psychologiczny do dowolnego obiektu może w istotny sposób warunkować konstruowanie poznawcze tego obiektu; obiekty dalekie psychologicznie konstruujemy abstrakcyjnie, a obiekty bliskie - konkretnie.

W tym artykule prezentujemy wyniki badań, w których manipulowaliśmy dystansem psychologicznym do obiektów architektonicznych, ukonkretniając je (zbliżając psychologicznie do badanych) poprzez umieszczanie w ich elewacjach szyldów z logotypami kilku marek restauracyjnych. Poszukiwaliśmy odpowiedzi na pytanie: czy obiekt (budynek) abstrakcyjny jest oceniany inaczej niż ukonkretniony, mimo zachowania identycznych cech formalnych tego obiektu (kolor, kształt, forma)?

Przebadaliśmy 120 osób. Wyniki eksperymentu wspierają założenia CLT. Reakcje badanych na obiekt abstrakcyjny (bez szyldu) były inne, niż na wszystkie obiekty ukonkretnione szyldami marek restauracyjnych (w tym marką fikcyjną). W szczególności istotnie różniły się reakcje afektywne badanych. Nie różniły się natomiast reakcje na obiekty o tym samym poziomie konkretności, bez względu na konkretyzujące je marki. Niezależnie od marek, reakcje afektywne na obiekty ukonkretnione (dowolnym szyldem, dowolną marką) były bardziej pozytywne, niż na obiekt abstrakcyjny (bez żadnego szyldu).

**Słowa kluczowe:** teoria poziomów konstruowania, CLT, Liberman, Trope, psychologia środowiskowa, ocena architektury, ewaluacja obiektów architektonicznych

## Introduction

### *Perception of objects*

Contemporary cognitive psychologists agree that perception is more than a sum (or a simple combination) of sensory impressions. Human observations

are not mere results of physical stimulation from outside, and perception itself is not transcription of data, but rather mining them for meaning (Moskowitz, 2009).

Probably any impression reaching our senses, no matter how simple or complex, must be initially "organized", and immediately given meaning. For an individual to perceive any environment, or its element, for example an architectural object, she must draw some conclusions, which are not encompassed directly in the physical qualities of the environment (or object). No matter how rich or how lacking the information supplied by stimuli is, every stimulus is interpreted cognitively by the observer, saturated with meaning, and put in some context or causal sequence (Minsky, 2007). The observer of an environment will try, though not always consciously, to extract some meaning from data available to the senses, even when the data appear meaningless (Moskowitz, 2009). The fact that the observer knows (seemingly) nothing about an object does not mean that the object appears "generic", meaningless, to her mind. After initial perceptual isolation of the object comes initial categorization, and then the phase of searching for cues, when the observer attempts to categorize the object more precisely, to determine "What is it?" (Bruner, 1978; Sternberg, 2001). Thus a mental counterpart of the object (or environment) is created, which replaces the physical object in the processing of information. In this manner each of us constructs their own image of the world, building a dynamic cognitive representation (Nęcka, Orzechowski, and Szymura, 2006).

*Attitude towards a perceived object*

Each perceived object is thusly reflected in its own way, as an individually constructed, distinctive mental representation in the mind of the observer. The observer always has some attitude towards a mental representation (Eagly and Chaiken, 2005; Wojciszke, 2012). The process results in an individual attitude -- specific to each person -- "towards the surrounding world". It must be said here that even though the formation of attitudes, as well as their models, are the domain of social psychologists, in the end all objects appearing in the perceived environment are subjected to evaluation; and this includes the effects of the cognitive construction of architectural objects. Aronson and others (Aronson, Wilson, and Akert, 1997) argued nearly twenty years ago that attitude can be treated as a positive or negative evaluation of people, things, or ideas, because "people are not neutral observers of the world" (Aronson et al., 1997, p. 313). We assume that cognitive construction of architectural objects, as well as the formation of a specific attitude towards the objects, follows the same principles as the construction of all other objects in the world around us.

*Determinants of attitude towards objects*

We know today that evaluating architectural objects may depend on a number of different co-variables. If we take into account the described mechanism of cognitive construction, it will be obvious that an object's physical (formal) traits are only one of many factors influencing its evaluation. After all, we do not evaluate an object's objective traits; rather we form an attitude towards its mental representation, which often includes more than we actually observe. Various studies on attitudes towards architectural objects, for example by Akalin and others (2009), Erdogan and others (2010), or Forsyth and others (2010), to name only the latest, point to the conclusion that the object's form (color, shape, etc.) does not have to determine the attitude towards the object, or at least not by itself. It is known that there are more factors at work, and there are various, and old, frameworks describing the problem of attitude towards architecture (and design in general) in a wide context. We find them, for example, in Dębek (2011), Gifford (2007) Crilly and others (2004), or Nasar (1994).

To sum up the above systematizations and conclusions from numerous research papers, including those by Dębek and Janda-Dębek (Dębek, 2012), Gifford (2000; 2007; 2012), Bańka (1997), or earlier by Nasar (1994; 1988) – contemporary psychologists accept that the creation of mental representations and shaping of attitudes towards architectural objects may be connected to (1) gender, (2) age, (3) place of residence, (4) socioeconomic status, (5) membership in a specific culture (e.g. Euro-Atlantic, Asiatic), (6) individual determinants (personality, for example), (7) knowledge, experience, beliefs, fashion, (8) present psychological situation, (9) present tasks and context (physical and situational), (10) evolutionary determinants[3], or, finally, (11) psychological distance towards the object. The last factor among those possibly determining attitude towards an object – psychological distance – is the one that interests us in our present paper.

*Specific determinant of attitude towards an object – psychological distance and the Construal Level Theory (CLT)*

One of the most interesting frameworks of cognitive construction in recent years seems to be the Construal Level Theory by Yaacov Trope and Nira Liberman (Trope and Liberman, 2010), fundamentally linked to the notion of psychological distance. The two define psychological distance as a subjective notion that something is physically close to the self (Trope and Liberman, 2010, s.440). Authors of the CLT assume that when psychological distance towards an object grows, psychological construction of the object becomes more and more abstract; and,

[3] The evolutionary hypothesis is, however, still the most strongly questioned one.

in turn, the more abstract the object (idea, event, image), the more psychologically distant it seems (Liberman, Trope Y., and Stephan E., 2007; Trope, Liberman, and Wakslak, 2007; Trope and Liberman, 2010). Larger or smaller psychological distance towards an object may thusly determine its evaluation, as far as the evaluation is determined by the specificity of how the object is cognitively constructed.

Referring to the earlier part of the present article, let us recall that the mechanism of cognitive construction is very complex and leads to the formation of mental representations, towards which we have certain attitudes (we value them somehow). Thus, if some variable, like psychological distance, influences the process of cognitive construction, it also influences the final mental representations of the world and objects within it. Psychological distance, by changing the level of psychological construction (and thus changing the character of the construction process) towards more abstract or more concrete processing, may change the final cognitive representation of a constructed object. In other words, depending on psychological distance to the object, it may be constructed as object A or A' (with some constraints, of course, determined by its physical characteristics). We can have the attitude X towards object A, and the attitude X' towards object A'; we can react to object A with behavior R, and to object A' with behavior R', and so on.

Psychologically close events and objects are constructed on a low level, concretely. Distant objects are constructed differently: on a high level, abstractly. Low-level constructs are relatively weakly structured, but they "contain" context and include secondary features of objects or events. High-level constructs are schematic, they represent the essence of the phenomenon (object class, for example) for the moment, extracted from various data; they may not contain context. High-level construction, peculiar to the perception of objects and situations that are psychologically distant, allows for varied interpretation of phenomena (stimuli).

Furthermore, according to Liberman and others. (2007), if something is psychologically distant, we make decisions related to it faster, we evaluate it faster, we generate opinions more efficiently, and our judgments are more strongly influenced by our central values, than in the case of low-level constructs.

*Psychological distance, the CLT, and attitude towards architectural objects*

To illustrate the practical implications of CLT we can use the example of cognitive construction of architecture. Consider a school building. Assume that the building is psychologically distant to the observer (in real or imagined distance). In the mind of the observer the evaluation of the object may be, in effect, determined by the attitude of the observer towards a category of objects (say, the idea of school in general), rather that the attitude towards the specific object

(say, the particular yellow school building projected onto a screen). The situation may occur when the test participant is asked to evaluate an object labeled only as a "school" (which dictates psychological distance, and, as a result, high-level, abstract construction), or when the participant is asked to evaluate an object without label, but which is probably a school (as suggested by some formal qualities, for example). In turn, if the object is made more concrete, for example as "Elementary School no. 84 on Górnickiego Street in Wrocław", it becomes psychologically closer, and can be constructed on a lower level, more concretely. Asking the test participants for their attitudes towards a psychologically distant object will not diagnose, perhaps, their attitude towards yellow hues on school buildings; rather it will diagnose attitudes towards the institution of school, while the participants could completely overlook the yellow color (cognitive omission of the color). Moreover, if we test many people (as is the norm), it may occur that each participant will construct the building differently, and the result will regard, for example, attitudes towards the institution of school (institutional key), towards public buildings (functional key), or places to avoid (emotional key, etc.).

We ought to mention here what seems to be an important and widely discussed problem of environmental psychology – attitudes described as NIMBY ("Not In My Backyard"). People express a strong emotional objection against certain investments in their close neighborhood, even though they realize that it is necessary to build the object in general. Glaring examples of these include landfills, nuclear power plants, and highways. Other facilities that often become sources of controversy include rehabilitation centers for criminals, hospitals, or even welfare centers. The problem was described, for example, by Bell and others (2004).

It is easy to see that the topic has much to do with psychological distance and the Construal Level Theory. When asked what they think about erecting a welfare center or a nuclear power plant somewhere in the world (in a great distance), people mostly approve of the idea. But if the nuclear power plant is to stand close to their place of residence (close distance), attitudes change dramatically to radically negative. Perhaps it is caused precisely by construction on different levels in different psychological distances.

A nuclear power plant somewhere in the world is abstract; it possibly belongs to the class of "environment-friendly sources of electricity" or "an element of the country's energy policy necessary for progress". It is physically far, but – what's more important – people do not, perhaps, "see" radioactive waste, security zones enclosed with barbed wire, or menacing smokestacks (the smoke is, by the way, completely harmless water vapor). Their minds might not even construct the power plant as a building, only as an idea. It's another thing if the plant is to be built in their town, somewhere physically close. The situation changes diametrically –

the representation is no longer an idea: people clearly "see" an industrial, enclosed "death zone" visited by trucks decorated with the recognizable black-and-yellow propeller symbol meaning radioactive hazard.

If psychological distance actually modifies our cognition in this way, it is hardly surprising that people only want to see gardens in their proximity (and allotments aren't necessarily so welcome!), or maybe a hypermarket (because they already see "their favorite washing powder for a quarter of the price"). In turn, they do not welcome hypermarkets as an idea (in distance), .for example somewhere in town. When asked, "Does the town need more supermarkets?", they will answer "no" (Bartoszewicz, 2004), because on an abstract level supermarkets are "an evil, destroying small trade and sucking out our money, transferring profits abroad".

In light of the above considerations it seems there is no doubt why the CLT, empirically verified in many studies, has become one of the most important theories of cognitive construction (Fiedler, 2007). Moreover, the theory is now considered to be a fundamental concept for explaining judgments, evaluations, and preferences, as well as explaining various decisions regarding other people, objects, and even risk.

## Studied issues

### *Previous empirical findings on the connection between psychological distance and attitude towards architectural objects.*

We have raised the topic of the link between psychological distance and attitude of tested persons towards an architectural object in the years 2007-2010 (Dębek, 2011). We have initially verified if various ways an architectural object can be described determine its evaluation. Twelve 30-person groups of test participants evaluated objects[4] described in the following manner: "Imagine that the presented building stands somewhere in the world". Another 12 groups evaluated objects described: "Imagine that the presented building stands in your immediate neighborhood". We believed that we could establish a certain distance between the test participant and the building in this way, which would, in turn, determine the building's evaluation.

The results of the study did not, however, reveal significant differences in attitudes towards objects depending on whether it was described as far or close,

[4] Each group rated one unique object – one of 12 variants of the same building. The objects differed in color, shape, and the degree to which their form was diversified. Each object was a particular combination of three independent variables: color, shape, and formal diversity.

that is – depending on a written "immersion" of the tested persons into a certain psychological situation by the experimenter.

In a second approach (Dębek, 2012; Dębek and Janda-Dębek, 2012), objects were made more concrete by giving them a hypothetical functional meaning and a hypothetical spatial position. Participants declared how much they would prefer[5] the object as a hypothetical "place where I live", "in my shopping place, shopping mall", "my workplace", or as a building somewhere in the person's town.

We observed significant differences in preference of objects depending on their concrete/hypothetical character. The differences were sometimes large and multi-dimensional (Dębek, 2012; Dębek and Janda-Dębek, 2012).

Summing up our hitherto results, it begs mentioning that aesthetic qualities of an object, including color, shape or formal diversity, did not appear to be independent and fundamental criteria for evaluating architectural objects. All color schemes and all shapes turned out to be equally "good" in the end, as long as they weren't linked to other, non-formal attributes of the object. Such non-formal attributes include, for example, the object's hypothetical function , and its hypothetical spatial placement, which may, in our opinion, "dictate" a certain level of cognitive construction (and psychological distance) to the observer, with all the consequences predicted by Trope and Liberman's CLT (2010).

The research discussed above does not, of course, demonstrate how much and in what way the whole of an object's perception changes depending on its hypothetical function and spatial placement. We only know that hypothetical function or hypothetical spatial distance can determine a person's preference for an object, despite its constant formal features (such as color or shape).

*Issues in the study discussed in our paper*

Let us sum up the ambiguous empirical background of the present study. First, in one experiment (Dębek, 2011), attempts to change distance by hypothetically placing the building in different spatial distances did not affect the cognitive or emotional attitude towards the object (instructions: "This is a building somewhere in the world", "This is a building in your town" did not change attitude). However, and secondly, hypothetical manipulation of the building's concreteness by assigning the role of "my house", "my shop", and so on, caused significant differences in declared preferences for the object (Dębek, 2012; Dębek and Janda-Dębek, 2012).

We decided to conduct another study. This time we did not want to limit ourselves to mere declarations of preference from test participants regarding hypo-

[5] A one-item, five-grade Likert scale was used, where the tested persons expressed their preferences, rating statements like "I would like this object to be the place where I live" (strongly agree; agree; neutral; disagree; strongly disagree).

thetically concrete objects. In the new study we aimed foremost to make the objects concrete in a real, not hypothetical manner. Secondly, we intended to study not hypothetical preferences so much as a clear attitude towards the object in a cognitive and emotional dimension. Especially as Trope and Liberman did, besides describing the different characteristics of cognitive construction in short and long distance, we maintained that the more psychologically distant an object is, the less intensive are the emotional reactions to it. They wrote that people mostly react more strongly to events that are closer in time and space, events that happen to them and not to others, and to real events rather than hypothetical ones (2010, s.456). This reflection seemed to us intriguing and worth further verification.

We posed to ourselves the following questions: (1) Is an abstract object evaluated differently than a concrete one despite identical formal qualities (color, shape, form)?, and (2) Is the emotional attitude towards an abstract object less pronounced than towards a concrete object?

*Making an architectural object more concrete*

Architectural objects always have some functions and are labeled, for example with signs, signboards, neon, or plates. In our study buildings were made more concrete by labeling them with signboards of two existing and one fictional fast food franchises. Buildings with these signboards are popular in the contemporary architectural landscape, and the chosen restaurant brands are widely known (all of the members of the tested group knew them and each member ate at the restaurants at least once).

As is known, brand is a broad and variously defined notion. Accepting one of the most classic definitions by Kotler and others (2009), we can say that brand exists in order to differentiate a certain product or service from others that are its competitors in the same category. Wheeler (2010) and Strizhakova and others (2008) agree – brand is firstly there to distinguish. Brand can be understood as a symbol or name designed to make the object clearly identifiable (Kotler et al., 2009). According to contemporary marketing theory a brand has the most concrete, though extremely multidimensional, attribute – its own identity (Kotler et al., 2009).

In this meaning a brand surely makes an object much more concrete, and if it does that, according to Trope and Liberman's CLT (2010), it also brings the object psychologically closer to the observer with all the psychological consequences of such proximity. Thus we assumed that if we add a brand to an object (i.e. give a building a specific attribute making it more concrete), we will affect the cognitive mechanism of constructing the object by observers. Speaking precisely: we theorized that a brand appearing on a building will change the construal level from high (abstract) towards low (concrete), that is: it will bring the object psy-

chologically closer to the test participant. The change should, according to us and in line with the CLT, result with constructing a different (than when the object is abstract) mental representation; it may cause the study participants, when asked to state their attitude towards the object, to be guided by different cues, ones linked to low-level construction (e.g. the particular colors, form, or shape, instead of abstract typicality in the general category of "architecture"). As a consequence of the changes, we expected a more pronounced and significantly different cognitive and emotional attitude towards a concrete object than towards one without brand.

*Hypotheses*

In accordance with our discussed issues and research aims we formulated two hypotheses:

H1. Linking an architectural object to a brand – increasing concreteness – causes change in cognitive evaluation of the object (compared to an attitude towards an unbranded object).

H2. Linking an architectural object to a brand – increasing concreteness – causes change an emotional attitude towards the object (compared to an attitude towards an unbranded object).

## Method

*Structure of the study*

In the experiment we have studied attitudes towards four architectural objects. All participants were shown the same building, however: (1) the first group was shown the building with no label – this was the control group, (2) the second group saw the building with the McDonald's logo in a window on the ground floor, (3) the third group saw the building with the KFC logo, whereas (4) the fourth group saw the building with the logo of a fictional brand called "Quick Meals".

We introduced the fictional brand so that we would be able to determine if a possible variance of attitudes towards more concrete, "branded", objects does not flow from strong, diversified attitudes of the participants towards concrete brands that have existed for years and were positioned in certain ways for years. The "Quick Meals" brand does not exist, and thus could not be promoted or systematically positioned in the minds of the participants; its only obvious attribute is a hypothetical membership in the category of restaurants, which allows for it to be compared to the McDonald's and KFC brands in the same category.

The experiment was planned without repeated measurement – each test participant saw only one building and only once.

*Participants*

Participants included students from the University of Wrocław Institute of Psychology, students from the Wrocław University of Technology, Department of Architecture, and students from the Wrocław School of Banking, Department of Management and Finance. We tested 120 people in total – 71 women and 49 men, aged 18 to 39 years (*Mdn* = 21), divided into four groups of 30 persons. The participants were not paid.

*Tools*

Up for evaluation were images (3D visualizations) of a fictional architectural object created for purposes of the experiment in four variants (three with different logos and one unlabeled). The base object (presented in variants) was chosen from among 12 three-dimensional models of architectural objects which were used in studies of attitudes in the years 2007-2010.

In the studies of attitudes towards architectural objects (Dębek, 2011) the test participants had average, though uniform, preference for the object used in the present study. This was true regardless of whether they imagined it as a potential shopping center, workplace, residence, or a building "somewhere in town". The object yielded the most stable results (the smallest differences between quartiles) from the 12 tested models. The average attitude towards the building was mostly positive on the cognitive and emotional scales alike.

In the experiment, attitude towards the object was measured with a slightly modified Questionnaire of Attitudes Towards Architectural Objects (Kwestionariusz Postaw Wobec Obiektów Architektonicznych) (Dębek, 2012). The modification consisted of adding one item to the emotional attitude scale in relation to the 2010 version. The questionnaire asked the participants to state their attitudes regarding some statements about the object, including: *"Looking at the presented object I feel:…"* in turn: *safe, depressed, sad, angry*, and *"I think that the presented object is:…" interesting, pretty, inviting, I would return to this object.* In each item the participant was to state their attitude on a five-grade scale starting with "strongly disagree" to "strongly agree". The eight items made up two reliable scales: emotional attitude towards the object (UE, Cronbach's $\alpha = .73$), and cognitive evaluation of the object (OP, Cronbach's $\alpha = .84$).

*Procedure*

The participants in each group were given pictures of the object and the Questionnaire of Attitudes Towards Architectural Objects. They were asked to look closely at the picture and fill out the questionnaire. Testing one group took about 10 minutes.

## Results

*Linking an architectural object to a particular brand – making it more concrete – causes a change in cognitive attitude towards the object (compared to the attitude towards an unbranded object).*

Hypothesis not supported. The mean cognitive attitude towards the object made more concrete by brand is not significantly different from the attitude towards an abstract (unbranded) object. Making the object more concrete had the following effect on cognition: $F(3, 120) = 1{,}05$; *ns*. Average attitude towards objects is shown in Table 1.

**Table 1:** Cognitive attitude towards objects

| Objects | *M* | *SD* | N |
|---|---|---|---|
| Unbranded | 13.57 | 3.28 | 30 |
| McDonald's | 13.83 | 3.94 | 30 |
| KFC | 12.17 | 4.43 | 30 |
| Quick Meals | 12.83 | 4.29 | 30 |

*Linking an architectural object to a certain brand – making it more concrete – will cause a significant change in emotional attitude towards the object (compared to attitudes towards a brandless object).*

Hypothesis supported. The effect branding had on emotional attitude: $F(3, 120) = 11{,}06$; $p < 0{,}001$; $\text{eta}^2 = 0{,}22$; may be considered moderately strong. The mean emotional attitude towards a branded object (any brand) is significantly different than the attitude towards an unbranded object (Table 2).

**Table 2:** Emotional attitude towards objects*

| Object | M | SD | N |
|---|---|---|---|
| Brandless | 13.27 | 1.55 | 30 |
| McDonald's | 16.80 | 2.42 | 30 |
| KFC | 16.17 | 2.66 | 30 |
| Quick Meals | 15.17 | 3.22 | 30 |

* scale ranges from 4 to 20 where 4 is a strong negative attitude, and 20 is a strong positive attitude; 12 is a kind of emotional neutrality.

Multiple comparison results[6] show that emotional attitude is significantly different between an unbranded object and objects linked to each brand (including the fictional "Quick Meals" brand). There are, however, no significant statistical differences between branded objects.

## Discussion of results

Experimental results seem to support the most general assumptions of the CLT, as well as our predictions regarding the perception of architectural objects, related to the theory.

The results clearly show that emotional attitude towards a more concrete object, made so by the addition of a certain banner, is indeed more pronounced than it is towards an unbranded object (further, more abstract). The result is fully consistent with theoretical assumptions of the CLT. Our study has also shown that participants declared significantly more positive emotions towards objects made more concrete with a brand (including a fictional one) than towards unbranded objects.

Let us stress once more that the participants declared more positive emotions regarding buildings decorated with all three brands; comparisons of emotional attitudes between branded buildings did not, however, show significant differences. Thus it is clear that the results were not caused by a positive affect regarding one brand, but solely by the objects' increased concreteness. The varied emotional attitudes may result from the participants' categorizing branded objects that belong to the category of restaurants (source of nourishment, satisfying basic needs). The entire category may be seen more positively by the participants on an emotional level.

An interesting result was the lack of statistical differences in cognitive attitude towards objects. The scale of cognitive attitudes included such items as "interesting", "pretty" or "inviting". We believe this may mean that changing the construal level to a lower one – making the object psychologically closer – does not, in the case of an architectural object, influence the cognitive processing and rational evaluation of formal cues appearing on the object, such as color, shape, or form. In other words – regardless of whether the architectural object is psychologically close or distant, it remains equally pretty (or ugly) and equally interesting (or boring) from a formal standpoint. Whatever the specific, perceived, and cognitively evaluated aesthetics may be, our emotional attitude towards the object may be different, depending exactly on the distance towards the object, entailing, perhaps, a specific construal level.

[6] Games-Howell test.

## Summary

The results of our experiment point to a significant probability that there is a link between construal levels and emotional attitude towards architectural objects. Abstract, psychologically distant objects without specific meaning seem more emotionally neutral. Concrete, psychologically close objects seem to rouse more emphatic emotional reactions.

Trope and Liberman's theory of construction may have fundamental methodological implications for environmental psychology, which often studies reactions to images of various environments. As it turns out, reactions to environments (an architectural object, for example) may vary radically not because of its formal features, but based on whether it was given some "label"; how concrete a picture of an object is – may radically change psychological distance to the object, and, as a consequence, also change the emotional reactions regarding it.

There is a probability that regardless of whether an object is psychologically distant or close (i.e. regardless of its construal level) our cognitive evaluation of its aesthetics will not change. If an object is, for instance, ugly, it will remain so regardless of how far from the self it is at the moment. Psychological proximity is crucial to how "comfortable" we are with the object, or, in other words, how we feel about architecture. Consequently, an ugly object may also be sympathetic, nice, or evoking joy (if it is the particular building that houses something I like, if it was designed by an architect known by name, if it is significant in some place). The exact same (ugly) building may not evoke any feelings – if it is just some unspecified object. Similarly, a very beautiful building may evoke strong positive emotions. However, an observer may, despite being aware of how attractive the object is, not "feel it" – if the object is psychologically distant from him, and is processed abstractly.

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