

HUMANNESS AND ARCHITECTURE: LATENT VALUE SYSTEMS IN ARCHITECTURAL THEORY

Philip D. Plowright¹

¹Lawrence Technological University, Southfield, Michigan

ABSTRACT: Complexity of information in architectural design methods requires an understanding of the underlying process frameworks as a point of access to the structure of information and priorities, encouraging both greater success and more relevance to the outcomes (Plowright 2014). However, in addition to designer selected priorities and disciplinary requirements (environmental forces, social interaction, cultural projection), there are embedded values which are used to make many judgments within the system but are not recognized. This paper explores an aspect of this issue through the application of Conceptual Metaphor Theory (CMT) to a corpus of architectural theory.

CMT and conceptual metaphor analysis is one of the strongest tools to examine knowledge sources as it is based on the transfer of knowledge across domains. The paper uses a corpus of contemporary architectural theory and criticism texts to analyze the source domains, conceptual metaphors, primary metaphors and image schema used in architectural cognition through Cognitive Linguistic and Discourse Analysis methodology. The analysis highlights a fundamental way architects operate in pursuing their discipline is through the projection of being human – both as an act of formal design as well as in interpretation of our environment. Source domains of HUMAN ACTIONS, HUMAN INTERACTIONS, HUMAN MOTION and other types of ACTIONS and MOTIONS dominate discussions when talking about buildings, building elements and architectural ideas. These are organized through larger, more complex gestalts of human agency and personification. The interesting point of this analysis is that while the current research utilizes textual analysis, it should be highly relevant to other modalities of production within architectural design. This is due to what is known as the cognitive commitment, a theory that positions the human mind as a single system and fundamental in any discussion of embodied cognition. As such, the content of criticism and discourse would be indivisible from issues of design generation and span multiple modes of communication and interpretation. This paper examines the notion of projected humanness in more detail, addressing nuances in situatedness as present in architectural discourse.

KEYWORDS: cognitive systems; source domains; conceptual metaphor theory; architectural theory

INTRODUCTION

The introduction of non-architectural terminology and concepts is a significant feature of architectural discourse. The reliance on external sources of knowledge is well recognized by architectural theorists and historians who acknowledge the crossover between architecture and other disciplines as a central operation in the construction of architectural knowledge and meaning (Johnson 1994). Architecture is considered to “always represent something other than itself from the moment that it becomes distinguished from mere building.” (Hollier 2000, 190). Of course, the very act of “not being itself” brings a crisis into architectural theory. Some architectural theorists are concerned that the introduction of non-architectural terminology is *required* to have any meaning and see it as a threat. As a late 20th century designer and theorist lamented, “After more than half a century of scientific pretense, of system-theories that defined it as the intersection of industrialization, sociology, politics and ecology, architecture wonders if it can exist without having to find its meaning or its justification in some purposeful exterior need” (Tschumi 1994, 33). Other theorists see the sharing of terms and ideas across disciplines as natural rather than problematic as it aids in the labeling and discussion of “elusive concepts” by architects (Johnson 1994, 45). A cognitive linguist would immediately recognize the process of applying information from one domain of knowledge to another domain of knowledge as being the operation of a cognitive metaphor. Those theorists would claim that rather than being significantly problematic for the identity of architecture, metaphorical transfer is a natural part of cognition that permeates all aspects of architecture.

Through research in the cognitive sciences (linguistics, psychology, anthropology, sociology), metaphor has been shown to be inherent to, and embedded in, cognition (Lakoff and Johnson 1980, 1999; Johnson 1987, 2007; Lakoff 1987, 1993; Lakoff and Turner 1989; Gibbs 2008). It has also been shown that the use of metaphor has semantic and pragmatic relevance as well as being very important in reasoning, interpretation and assembling meaning (Carbonell and Minton 1983; Goatly 1997; Johnson 1987; Charteris-Black 2004, Cameron et al 2009). Traditionally, metaphors have been treated as surface phenomenon in linguistic and literary studies with language considered as a simple literal operation of binary coding-decoding. Recent research has shown that, in fact, human communication “involves no presumption of literalness and no default interpretation, and that metaphors are in no way exceptional with human communication

being one of inference rather than decoding” (Sperber & Wilson 2008, 87). As a primary operation in inference, metaphors are a matter of concepts and not words. Metaphors are also used in discourse for explanation, motivation, persuasion and informativeness (rhetoric). In their rhetorical role, they contain evidence of the ideological position of a participant in a discourse (Partington 2006, 268). Whether used dynamically through ad hoc expressions or latently through conventionalized terminology, source domains involved in conceptual metaphor structures will communicate a set of values simply in their presence.

1.0. Corpus and method

The research data comes from a corpus of thirty articles by individual authors belonging to the genre of architectural theory as defined by Forty (2000). The corpus totals 207,898 words and articles vary in length from 2000 to 26,000 words. The texts were chosen from authors with prominence in the intellectual architectural community and their influence on the development of the next generation of architectural designers. The sample selection filtered for authors who were educated as architectural theorists and historians with a professional architectural background (practitioner) or critics with deep applied disciplinary knowledge. All sample texts were written for other members of the architectural discipline rather than the general public. The texts contain a variety of ideological positions (post-functionalism, feminism, phenomenology, post-criticism, for example) to maintain a balance of approach. While the ideological positions and intellectual priorities are divergent, there is equivalency between the texts in their focus on the manifestation of architecture as a formal and experiential event (form-body-space). This theme maintains equivalency of focus on formal discussion for analysis – the idea of tangible, physical architecture rather than non-situated intellectual positions.

The research method for metaphor identification used in this paper follows the experientialist tradition of CMT (Lakoff and Johnson 1980; Lakoff and Turner 1989) with adaptations from cognitive theories of metaphor through genre and corpus studies (Geeraerts 2006; Caballero 2006; Deignan 2008; Cameron and Maslen 2010; Kimmel 2012). The approach uses the identification of literal incongruence within a sentence or sentence fragment as a general procedure of metaphor identification, with the understanding that there will still be variation in interpretation when analyzing for words in discourse (Pragglejaz Group 2007: 13). The corpus yielded a total 2069 metaphoric expressions containing 2610 metaphors, found singularly or as a series of clusters involving at least a full sentence and sometimes extending to span several sentences. Metaphors are used in all discourse contexts so in order to understand how they are associated with explicit architectural ideas, it is necessary to isolate expressions that were directly applied to a discussion of form, space or building as a target domain – the realm of architectural thinking. There were 1755 of these instances in the corpus. Of these, 71.7% (1242 instances) were conventionalized metaphors used as a latent expression while the rest were dynamic metaphors used more consciously (c.f. Caballero 2006). By examining these expressions and recognizing what source knowledge is valued, we can start to understand architectural priorities.

2.0. Metaphors used knowingly and unknowingly

It is important to understand that metaphors are used both knowingly and unknowingly in architecture. Metaphors used knowingly are part of design strategies and considered tools to either help guide a design process or to explain the formal or relational meaning of a project. The human body has been a dominant metaphorical source into the Renaissance and early Enlightenment. By the Industrial Revolution, the body was eclipsed by concepts of biology and machines – with the choice of one over the other often based on larger belief systems rather than the particular instance of use (Moloney 2011). Biology could be considered as extending from the existing metaphor of the body, however there is a difference between the two concepts. The use of anatomical terminology before the Industrial Revolution tended towards equating buildings to body elements and body schemas (arms, legs, head, heart, feet on ground, heart as central etc.) and this included a parallel view of CITY AS BODY. The metaphor could go so far, as McClung illustrates through a literary reference, that a building’s “medieval arrangement of apartments (hall with kitchens to one end and private quarters to the other) is imposed upon a point-by-point correspondence of the castle to the human body” (1981, 283).

The growth of biological knowledge in Western society through the Enlightenment changed the type of information expressed through metaphor. The dominant understanding shifted from the body as an anthropomorphic mapping between the environment and human physicality to instead focus on the body as a biological organism which stressed systems and natural laws (De Palma 2006). The organic metaphor was used in this way as part of early architectural Modernism, which applied biological principles to project completeness. This was useful as the building was then perceived as a final expression of natural, dynamic forces with a form that emerges from its context, and therefore cannot be questioned for its meaning (McClung 1981; Hvattum 2006). The metaphor also stressed issues of health and illness found in formal representation that ranged from early Modernist concepts of *purity*, *hygiene*, and *cleanliness* (Till 2007; Muller 2009) to late 20th-century fixations on *scars*, *scabs* and *parasites* (Caballero 2006; Kanekar 2010).

The consideration of the organic as an emergent, evolutionary system indicated a shift away from the body as a topographical object (appearances) to the body as a complex manifestation of relationships based on context (relations).

The machine as a metaphor could be said to occupy the same territory as the organic in representing forces as well as operating as a metaphor for the organic. For example, Violet-le-Duc wrote about the example of mechanical innovation occurring through the transfer of biology. Looking at the different bone length in the hind legs of stags, reindeers or elks, he explained that the relationship between the femur, tibia and calcaneum (heel) allowed for quick powerful action such as leaping over large obstacles. Using the biological source domains of anatomy and kinesiology, he transferred the *relationship* between the bones of the hind legs to designing a machine that would make a quick and power tension (Hearn 1990, 227). Other architects used biology and the organic as a source domain to address universal laws and to attempt to avoid issues of human fashion and temporary styles (Proctor 2006) as well to stress concepts of emergence and author-less design (Hvattum 2006).

While conceptual metaphors used knowingly by the designer are recognized by architects, they are based on similarity construction between sources and target domains. There is another type of conceptual metaphor that goes unnoticed by architects. This is the correlational metaphor that extends experiential knowledge based on embodied cognition. Correlational metaphors use associations between knowledge domains which is not logically determinable, as can be illustrated by the example:

- (1) “the *unfolding* of the space in time.” (Allen 2000, 107)

In the passage above, there is a violation of literal incongruence as space and time are not objects and cannot be unfolded making the expression a metaphor. Yet, it is not possible to understand the passage through mapping the similarity of elements found in the source to elements in the target domain. There is no simile constructed, no comparison through resemblance and no clear association found within the expression – space is not *like* something and time does not resemble anything else. Instead, both space and time are considered to be objects with space able to be manipulated while time is further conceptualized as a container that surrounds space. Where do these mappings come from if they are not created within the expression? As there is no similarity that drives this metaphor, the only way to understand the expression in the context is through previously formed associations between concepts and experiences – what has been defined as correlational knowledge (Grady 2007). Correlational mappings are highly conventionalized and use a type of information that is about “the role of our perceptions and representational schemas” rather than facts about the world (Grady 2007, 325). In this case, space is directly associated with the properties of objects through the conceptual metaphor SPACE IS AN OBJECT and then extended through the action of unfolding. Time is a conceptual theory developed by human culture and has no physical existence yet is conventionalized through the conceptual metaphor TIME IS AN CONTAINER, where a container is also an object. Both space and time are then put into a relationship with each other based on these basic correlational mappings. A critical difference between resemblance and correlational metaphors is that while “resemblance metaphors may involve correspondences between concepts of the same type, [...] correlation metaphors link concepts of different types.” (Grady 2007, 331). Many metaphors using similarity go unnoticed by the speaker, however all correlational metaphors are used unknowingly with the rare exception.

3.0 Patterns in conceptual metaphors in architecture as a physical experience

The type of knowledge that architects prioritize in the pursuit of their discipline can be examined through looking at the source domains present as part of metaphor structure. The most populous source domain found in metaphors with architectural target domains is HUMAN ACTIVITY (326 instances) followed by NATURE (193 instances), then ARTIFICIAL (175 instances), MOTION (95 instances) and, finally, HUMAN BODY (62 instances). It is clear that within source domains, not all sub-domains have equal representation. For example, the source domain HUMAN BODY is dominated by only two sub-domains – references to the body and its organs as objects as resemblance metaphors, and references to health and sickness as correlational metaphors. The other topics in this area, including references to the senses (*sight, sound* and *taste*), medical processes and biological relations (*father, sister, etc.*) generated only 13 instances across five source sub-domains compared to 93 instance for the first two source sub-domains. This pattern was common for all the source domains with two or three dominant categories. The most populous source sub-domains applied to just physical aspects of architecture are presented in Table 1.

Metaphorical Frame	Source domain	Source Sub-domain	Target: Architecture (physical)	
			Instances	Percent (of total instances)
HUMAN	HUMAN ACTIVITY	Actions (body)	136	7.8%
HUMAN	HUMAN ACTIVITY	Social interaction	105	6.0%
NATURE		Actions (enviro.)	93	5.3%

HUMAN	ARTEFACTS	Machines	35	2.0%
NATURE		Organisms	34	1.9%
HUMAN	ARTEFACTS	Objects	34	1.9%
NATURE		Landscape	33	1.9%
HUMAN	HUMAN BODY	Human body	30	1.7%
MOTION		Motion (liquid)	29	1.7%
MOTION		Motion (human body)	29	1.3%
MOTION		Motion (general)	24	1.4%

The three most common metaphor sources are not resemblances between buildings and machines, organism and the body as an object. Instead, they are based on applying physical ACTIONS (either those of the human body or from the environment) and SOCIAL INTERACTIONS to objects in the built environment. In fact, these three source categories are by far the most numerous by several factors of occurrence – they make up 38.9% of all metaphor sources applied to the physical aspects of architecture in a corpus with 58 source domains identified. The action/interaction source domains are followed distantly by physical references to MACHINES, ORGANISMS and the HUMAN BODY AS AN OBJECT. Between ORGANISMS and HUMAN BODY, aspects of the LANDSCAPE and natural features of the environment (*hill, mountain, lake, river, island*) and OBJECTS are found mapped to buildings and cities. Finally, MOTION is present, and if considered as a single domain rather than divided into different senses of motion, would supersede ACTIONS (ENVIRONMENT) with a total of 85 occurrences. Considered as separate sub-domains, the strongest motion references are to movements based in the human body (*dance, shamble, squirm, spring, leap, swim*) and to liquids (*flow, cascade, ripple, swirling, rolling, float, turbulence*).

Metaphors based on the relationship between the source domains of actions and interactions being applied to target domains of physical architecture can be illustrated through examining a few examples. The first is an example of actions based on the human body mapped to the space within a building.

- (2) “the pool is *pushed out* into the landscape” (Eisenman 1986, 195)

In the example above, a static object, a pool, is interpreted through the physical action “push”. The target domain is clearly an aspect of physical buildings – a “pool” would be an element in the design of higher-end residential design. The source domain is less clear as there is not any particular object, attribute or relationship being compared with the pool. However, there is clearly literal incongruence as the pool is not actually being pushed – it simply does not, nor cannot, move. Rather, the source domain is based in projecting an action into the built environment activating a sense of the human body engaging with objects. The metaphor is a correlational and maps visual interpretation of formal relationships to physical actions. The source and target domains together suggest a variation of the conceptual metaphor FORM IS ACTION, one that stresses spatial location, identity and normative appearance.

Actions are projected into the built environment in more active and complex ways as well, as can be seen by the follow example:

- (3) “[the eye is directed towards] the interior, which *turns its back* on the outside world” (Colomina 1992, 88)

The target domain in this example is not the building itself but the “interior” of the building both as a physical space and a conceptual idea. The source domain is the mapping of a body, most likely that of a human for a body is needed in order to “turn its back”. Rather than simply (HUMAN) BODY, this metaphor activates the source domain of ACTIONS (BODY) as it is the action as an event rather than the body as an object which is important. The action produces a social context and brings with it the social meaning of removing the attention of the gaze, and therefore interest and the ability to interact. Two metaphors are present to allow for discourse meaning to be understood. First is the metaphor (ARCHITECTURAL) SPACE IS A PERSON which introduces the mapping of the interior space to a person. The second conceptual metaphor is VISIBILITY IS RELATIONSHIP and is the more important one in terms of meaning. Movement and action, in this case, carries social meaning.

The examples above lead us into an examination of what metaphors are present in the source–target relationships. When we look at metaphors rather than just source domain information, the results reinforce the data above but also provides a slightly different perspective (Table 2).

Table 2 Summary of top occurrences of metaphors to ARCHITECTURE [PHYSICAL]

Metaphor	Source domain	Schema	Occurrences	Percent
OBJECTS ARE PEOPLE	HUMAN BODY	Personification	132	8.0%
FORM IS MOTION	MOTION	Spatial motion	55	3.3%
FORM IS ACTION	HUMAN ACTIVITY	Agency	54	3.3%
OBJECTS HAVE RELATIONSHIPS	HUMAN ACTIVITY	Personification	49	3.0%
OBJECTS INFLUENCE SURROUNDINGS	HUMAN ACTIVITY	Agency	42	2.5%
OBJECTS ARE ENTITIES	NATURE	Entity	40	2.4%
IDEAS ARE OBJECTS	NATURE	Object	39	2.4%
BUILDINGS ARE PEOPLE	HUMAN BODY	Personification	36	2.2%
CONNECTION IS POSITIVE	NATURE	Growth	29	1.8%
CONTROL IS GOOD	HUMAN ACTIVITY	Control	29	1.8%
ASSEMBLIES ARE PEOPLE	HUMAN BODY	Personification	25	1.5%
ENTITIES HAVE SOCIAL STANDING	HUMAN ACTIVITY	Personification	23	1.4%

The most common metaphors are those based on PERSONIFICATION schema which includes HUMAN AGENCY (Lakoff and Johnson 1980; Lakoff and Turner 1989; Lakoff 1990) with the projection of human abilities, perceptions, actions, interactions and emotions into the environment (OBJECTS ARE PEOPLE, OBJECTS HAVE RELATIONSHIPS, BUILDINGS ARE PEOPLE, ASSEMBLIES ARE PEOPLE, ENTITIES HAVE SOCIAL STANDING). This is followed by metaphors based in general AGENCY – the ability to give inanimate objects the abilities to act on their surroundings but without any explicitly human characteristics (FORM IS ACTION, OBJECTS INFLUENCE SURROUNDINGS). Finally, SPATIAL MOTION is strongly present where the interpretation of form is given a sense of movement (FORM IS MOTION). The presence of both MOTION and ACTION schemas in the metaphors where motion is a type of action that pertains to change in spatial location. While concepts such as PERSONIFICATION and AGENCY have been considered as ontological metaphors (Lakoff & Johnson 1980), the concepts are non-specific in their mappings and are “a feature shared by source and target.” (Grady 2005, 49) on which metaphors are constructed.

4.0 Causation and agency

The projection of action into an inanimate environment is usually considered to be through the conceptual metaphor EVENTS ARE ACTIONS, classified as either a generic-level metaphor (Lakoff and Johnson 1980) or a primary metaphor (Grady 1997). In both accounts, EVENTS ARE ACTIONS has an abstracted structure that can be applied to many situations regardless of specific source and target content. The metaphor “imputes agency to something causally connected to the event” (Lakoff and Turner 1989, 37), activating an inert and static situation with implied action which also includes spatial motion or interaction. This metaphor is part of a larger cognitive framework that has been expanded into the EVENT-STRUCTURE metaphor, a very abstract skeleton that links causation with all aspects of movement, events, actions, changes in location, changes of visibility and changes of state (Lakoff and Johnson 1999, 170). Causation as a generic concept is at the core of human development (Mandler 1992) and has been considered inseparable from concepts of events (Lakoff and Johnson 1999, 206). Causation has also been linked with almost every concept that involves locations, movement and/or action. The prototypical causation is confined to concepts of agency or “the manipulation of objects by force, the volitional use of bodily force to change something physically by direct contact in one’s immediate environment” (Lakoff and Johnson 1999, 177). While causation engages many primary metaphors (STATES ARE LOCATIONS, EVENTS ARE ACTIONS, CAUSES ARE FORCES, CHANGE IS MOTION, for example), when direct projection of actions into the environment is involved, the causation at the heart of this metaphor is considered to be based on the inference of animacy through the result of a human agent (Lakoff and Turner 1989, 37; Grady 1997, 288).

Agency has two meanings. The first meaning of agency focuses on causation where the agent is the entity doing the causing and the patient is the thing being affected. In this understanding, the form of prototypical causation has only “a single specific agent and a single specific patient” (Lakoff and Johnson 1980, 70) although other versions include “action at a distance, nonhuman agency, the use of an intermediate agent, the occurrence of two or more agents, involuntary or uncontrolled use of the motor program, etc.” (Lakoff and Johnson 1980, 71). The second meaning considers agency as a synonymy for control as a human capacity. In this sense, there is a “correlation between goal-oriented action and interaction with other people” or “between observable events in our environment and the presence of human agents” (Grady 1997, 288). This version of agency explicitly construes the metaphorical mapping as a projection of human

qualities into the environment.

Both agency of action and agency of control are present in the corpus with the former based on direct sensori-motor knowledge and the latter using inanimate motion or a projection of more complex actions of a human agent (i.e. having human capacities). The projection of agency in architecture, thus, moves from direct application of forces onto the environment to actions of the body to actions of social or emotional control. The first set of examples below address examples of agency through direct forces creating metaphorical actions.

- (4) “These walls *cleave* space;” (Eisenman 1986, 195)

In the example above, there is no particular aspect of the force which suggests the involvement of human capacities or the interaction of a body (human or nonhuman). The agent in (4) is clearly the building elements, “walls” and “(spatial) volumes” respectively, which are construed to interact with other building elements but are not projected as having bodies. Space is the patient through the metaphor SPACE IS AN OBJECT that allows space to be conceived as physically dividable.

There are examples of nonhuman agency in the corpus where a body is inferred, but still does not reach the threshold of human specific capacities.

- (5) “this surface could *brush up* in exquisite proximity to the architectural surface” (Lavin 2011, 82)

The passages above present a building element as being considered to have animate self-motion and implied bodies. In order for something to “brush up” against something, become “entangled” (Lavin 2011, 112), to be “captured” or “caught”, it is necessary for that thing (i.e. building, building element) to operate as an organism with the independent ability to move. Example (5) suggests the presence of a mammal with fur as “brush up” is an action normative to this type of organism and is generally experienced through house cats or dogs. The presence of a body introduces the capacity to actively engage in the surroundings beyond simple force dynamic actions. Rather, once a body is involved, there is a relationship created through interaction rather just action.

Nonhuman agency is very much a minority in the corpus with most instances of action being produced by human capacities and implying the role of body parts (generally hands). As seen through the corpus data, the architectural discipline routinely projects human agency into the environment once objects and concepts have been mapped to being people as physical entities (i.e. have bodies).

- (6) “the walls that *reach up* to connect you with the starry sky” (Buchanan 2012, 17)

The quotation above infers agency through the authority to act towards the environment with explicit human capacities, which includes blending physical objects with conceptual content. The example allows built environment objects to perform actions as if they were people by activating spatial location and touch through PROXIMITY IS RELATIONSHIP. In this metaphor, the human arm/hand is inferred as the major mechanism of connection. The walls in (6) can be interpreted to operate in two capacities – first as a person which can reach towards the sky and second as a prosthesis of the human (“you”). The latter allows the extension of person, as a real entity in real space, to form a metaphorical relationship between themselves, the wall and the sky to create a single entity. To do this, the sky needs to be conceptualized as an object which cannot only be touched but also can be part of a relationship through merging. The conceptual metaphors and metaphorical processes in (6) use the primary conceptual metaphors PROXIMITY IS RELATIONSHIP and OBJECTS ARE PEOPLE. The example has several mappings that shift between being an object that moves, an entity that acts and an object or substance that can merge all within the same sentence – all while still being an inert, physical object in the built environment.

There is another form of human projection which does not engage the physical body but rather the emotional and social capacities of being human. The causation is not as simple as direct action but involves the social pressure of human-to-human relationships and implied action. Examples of this causation is presenting in the following examples:

- (7) “No restful composure exists between elements and, instead, a kind of *jostling for position* excites the space,” (Cadwell 2007, 23)
(8) “A steel-grate platform *steals* the ground from under you” (Kipnis 2013, 121)

There is clearly a form of agency at work in (7) and (8) as there is the inference of a reaction in the surrounding environment or the suggestion of a necessary response. The referenced action is more complicated that is seen in the previous examples and without the clear activation of the human body. In (7), the building elements are being given a social life and the ability to interact independently where “jostling for position” is both an implied physical action but

also a reference to social status. In (8), the ground is projected as a human agent capable of taking a possession away from a human visitor, a purely conceptual act but in response to the inference of the surrounding built environment. In this case, *to steal the ground* refers to the use of a material that allows the view to pass through the surface to the area below as if the dematerialization of the ground surface material was an act of theft to the person occupying that plane. To characterize this interpretation as an action of theft projects authority and power into the environment where none exists, giving the ground control over the human user.

While the examples above address understanding the built environment as projection of human agency through action, there are also examples of agency (as causation and control) which do not imply physical movement and effect. Instead, the agent is based on social pressure but still with an underlying mapping of BUILDINGS ARE PEOPLE or IDEAS ARE PEOPLE.

- (9) “Concrete construction is *made* to behave with the taut precision of aircraft engineering” (Allen 2000, 112)
- (10) “there are some very interesting recent projects *which flaunt* the principles, rules and methods that combine to fix the normal dwelling;” (Evans 1997, 86)

In each of the passages, there is causation but no implied physical action in the expression. In (9), the material properties of a building are “made to behave” as if a human or domesticated animal, such as a dog, under the social control of another. The next example represents rejection of control by another. The architectural projects in (10) interact as part of society by “flaunting” social conventions. In this context, this means that they do not conform to housing typology but that rejection is based in emancipation. While both passages above contain causation, this agency stresses social pressure and control rather than physical action. These metaphors consider ideas and environmental objects as having the same social context as people do, allowing inert contexts to be considered as *playful, undermining, liberated, embracing* and so on. This is purely a projection of human cognition into that space and agency is acting to define, above all else, *relationships*. This includes relationships between occupier and environment, environment to its context and parts of the environment to each other.

CONCLUSION

In architectural theory, intellectuals and critics are discussing the role of architecture in culture through the interpretation of buildings rather than designers using analogies as generative devices or as design inspiration. However, discourse and knowledge structures operate in the same way between design generation and interpretation, otherwise we would have a fundamental inability to communicate anything. What dominates information sources revealed through the corpus research is not the traditional source categories of the human body, machines, and organisms. Instead, the prevalent pattern is metaphors using active projections of human capacities and human identity onto objects in the built environment. The body is activated through correlational mapping of perceived actions into nonhuman things, mostly through the inference of hands through touching, holding, grasping and reaching. This category includes the mapping of the human body onto nonhuman things through agency where the inanimate is given animacy. While there are some instances of sources that most would understand as classic literary metaphors (*boats, trees, clowns, literature, mythology*), the majority of the source domains in the corpus are expressions and projection of humanness.

Humanness is projected into our built environment through the conceptual metaphor OBJECTS/BUILDINGS ARE (HUMAN) AGENTS. The metaphorical expressions using this category apply source knowledge from the environment (*weave, tangle, fold, wrap*) or as basic force schema (DIVIDE, PENETRATE, PUSH, WRAP, EXPAND) in direct association with architectural objects as an agent affecting a patient. Human agency is expanded with the image schemas of COUNTERFORCE, RESISTANCE and BLOCKAGE which stress the concept of control as a type of agency interacting with the environment. These instances of agency still involve causation but focus on influence rather than direct action. Personification underlies agency as control as a gestalt and mega-metaphor found throughout architectural discourse. Personification is not just present in metaphors using agency but is also associated with instances of OBJECTS/BUILDINGS HAVE HUMAN BODIES, (BOUNDED) ABSTRACTIONS ARE PEOPLE, OBJECTS/BUILDINGS ARE PEOPLE, INANIMATE PHENOMENA HAVE HUMAN AGENCY, and metaphors based in effects of having a human body such as PROXIMITY IS EFFECT, PROXIMITY IS RELATIONSHIP, SEEING IS TOUCHING, UNDERSTANDING IS GRASPING or INFLUENCING IS TOUCHING. Personification allows the projection of human capacities that are not actions or motions into nonhuman things. This includes projecting identity, a sense of being and emotional capacities. In contrast, or more precisely as an extension, human agency allows a personified element to act in the world as a way to exert influence while personification allows awareness of existence.

It is common to find metaphors in the corpus that project human agency of control into the environment resulting in the ceding of authority into aspects of that environment. When inanimate architectural objects have control over their environment, this includes the users of that environment – i.e. humans. Through the transfer of authority that is part of human agency in the corpus, humans do not interact with their environment so much as the environment is conceived to make users of to act in a certain way. Ramps pull people through a building, windows allow views, doors encourage or deter entrance, and so on. In this way, power and control are very much part of the value structure of architectural

discourse, but it is the built environment or abstract ideas that have authority as if they were human.

Architects are quite aware of the power of the environment to affect the experience of human users, as one author states “the exterior gains social agency and the capacity to shape with gentle force the collective experience of the contemporary city” (Lavin 2011, 92) The interesting aspect from a cognitive point of view is the role of human agency and personification suggest that the overall role of metaphor in architectural discourse is less about understanding buildings as having human bodies or human capacities. Rather, an important way that we human understand our environment is through projecting ourselves into that environment as a tool of interpretation. At the same time, the projection of ourselves is cognitively ignored and the environment is allowed to take on a separate identity which then has control over its occupiers.

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