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REVIEW ARTICLE

BLOOMS TAXONOMY: PSYCHOANALYSIS AND ARCHITECTURAL DESIGN

Ravindra Gunerathne and Faiz Marikar

General Sir John Kotelawala Defence University, Ratmalana, Sri Lanka
**** Corresponding Author Email: faiz@kdu.ac.lk***

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ABSTRACT

The study intends to clarify how this integration can improve the cognitive and creative parts of architectural processes by analyzing the stages of Bloom's Taxonomy in relation to psychoanalytic concepts. The study explores how psychological insights may affect the different phases of design thinking and provides educators and practitioners with a more nuanced understanding of how to make use of these frameworks. Finding the connections between educational taxonomy and psychoanalysis and highlighting their combined impact on architectural ideation and execution is the main goal of the research. The potential contributions of this multidisciplinary approach to architectural pedagogy and practice are highlighted in the abstract, which further emphasizes its significance with consideration of metaphors. This paper hopes to shed light on cutting-edge approaches that could improve architecture education and guide more comprehensive design approaches through this investigation.

KEYWORDS

Architecture education, Blooms taxonomy, Metaphor

1. INTRODUCTION

Blooms Taxonomy defines three domains of learning namely, the Cognitive, Affective and Psychomotor (Zhou et al., 2022). When architectural design is viewed through the Blooms lens, these three domains begin to lose their distinctness as they transition into each other. Thus, in the architectural design process they are reconfigured into a dynamic process. This unification of the three domains becomes evident in the architectural design studio, where students conduct their design inquiries into the nature of existential space in order to give form to our built environment (Cortesao and Lenzholzer, 2022).

In the studio, the simulation of the basic phases of the design process as it occurs in the real world takes place, providing instructors with an opportunity to train students to become competent architectural professionals. A client is defined in accordance with the specific nature of the design exercise and students are given a brief comprising a list of spatial requirements for a given site based on the client's needs. This process, as mentioned earlier, is a mimesis of the design process as it occurs in the real world, with one single exception: students' solutions to given design problems generally do not get built.

During the initial stages of the design process students have recourse to the logocentric verbal process in design conceptualization, which corresponds to the Cognitive domain in Blooms Taxonomy. Words during this stage are much more than mere words; they function as signifiers, conveyors of meaning, with the potency to generate spatial metaphors. The ability to engender poignant metaphors or words with potency could be attributed to diverse factors, amongst which facetted and wholesome childhood experiences coupled with intrinsic acumen play a major role.

Such acumen and long forgotten experiences are generally embedded in our unconscious, which is a crucible of unrealized potential, surfacing momentarily during unforeseen moments to disrupt, either negatively or positively, our day to day existence. It is the ability to access this rich lode of potentiality that plays a key role in the conceptualization of a complex design. Students who are not in touch with this potential that lies latent within them, generally flesh out design solutions that are simplistic and lack complexity. And this, in fact, is the difference between spaces that have architectural resonance and building as mere shelter.

It is of vital importance, therefore, for the discerning instructor to precipitate awareness in the student – since the attainment to such an awareness cannot be simply left to chance – by setting theory assignments that function as psychological probes to enable students to better understand their unconscious proclivities. The awareness generated by such assignments cannot be underestimated; they provide the sudden insights that compel students to move away from their comfort zone to venture into regions that they have hitherto not had the courage to explore. During such exercises students enter a liminal mental space, which is an area of transition between the tried and tested and unknown terrain: it nurtures emotional growth and clarity of vision and is defined as the Affective Domain in Blooms Taxonomy (Aheisibwe et al., 2021).

From this liminal space of emotional equipoise students emerges strengthened into creative new terrain where they begin to exercise their psychomotor skills. This comprises the 3rd phase of design exploration during which students use their manual skills to visualize and design spaces with the aid of sketches, perspectives, plans, sections elevations, models and finally computer-aided design drafting. As should be evident by now, design tutoring is a cumulative process leading to synergy. It is much more than a mere inscribing of instructions on the tabula rasa of student sensibilities. Thus, as mentioned earlier, the three domains of Blooms Taxonomy in the form of the Cognitive, Affective and Psychomotor, become a dynamic process in the discipline of architecture where design is "Envisioned", students are "Empowered" and design is "Engendered" respectively. The setting of theory assignments as psychological probes that facilitate emotional equipoise and wellbeing in order to empower students will now be taken up for discussion.

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2. Accessing the Affective Domain - Empowerment and Pathways to Self-Awareness

Architectural theory is generally taught at the undergraduate level through the dissemination of factual content, which has to be memorized by the student. However, instead of having recourse to this traditional approach in the teaching of theory, I used targeted assignments to rupture the students' habitual thinking patterns that seek the comfort of tried and tested solutions to design problems. Habit in its negative form is inimical to the creative impulse which manifests itself as innovation. However, when innovation itself becomes a habit, it becomes an attribute of excellence and, as such, it would be the ultimate desideratum for designers. "Excellence [then] is an art won by training and habituation. We do not act rightly because we have virtue or excellence, but we rather have those because we have acted rightly. We are what we repeatedly do. Excellence, then, is not an act but a habit (Gardella, 2022)."

To attain to such a state of mind requires letting go of biases and inhibitions lying dormant within us, mostly due to the sedimentation of childhood fears, anxieties and traumas. Memory, in such instances, is an embarrassment and a mental faculty that the growing child can ill afford. Thus, as troubled children we bury our traumas under layers of forgetfulness summoned in desperation, in an effort to face the here and now and the onset of puberty and adulthood with hope and optimism. With the passage of time such incidents are expunged from our conscious to become relics of our subconscious mind. Relics, however, that surface in our conscious from time to time when our habitual ways of being in the world are threatened, only to impel us along predetermined trajectories that deny us choice. And this denial poses a danger to the designer – for design by its very nature comprises novelty and flight.

3. Assignments as Psychological Probes

It is to release the mind of the student from its bondage to constraining habits – or biases – arising from childhood traumas, that the Color Assignment series was conceived. Its raison d'être being the universally accepted axiom that "no one can [actually] change the underlying organization of personality and character by merely taking thought" (Collins, 2020). (Such a feat requires tremendous insight and strength of character, which generally ensues in the aftermath of an emotional meltdown, when "the underlying organization of personality and character" that has crystallized around a social conception of reality begins to break down for the first time.) By eliciting students' responses to their awareness of color, which is a quintessential mode of self-expression that panders to our innate narcissism, the assignments, in fact, contrive to effect such a change.

In the first color assignment, the student is asked to respond to his earliest memories of a color that expresses his manner of being in the world – his favorite color in other words – and to trace the numerous associations and resonances it has for him. Being his preferred color, the associations are invariably positive in nature, and the student emerges from this initial foray into his past elated and strengthened. This prepares him for the next color assignment, which is diametrically opposite in nature to the former.

4. Freeing the Oppressed Mind

In the second assignment the student visits the landscape of childhood memories once again, but this time around he is tasked with tracing the events associated with the color that he most despises. The responses are poignant, overwhelmingly emotional. Nothing prepares you as a mentor and teacher to receive the traumatic revelations that the students entrust you with, at this juncture! Their responses to this assignment are rife with cathartic outpourings, as one painful memory after another is excavated from the forgotten recesses of their unconscious mind. For the first time in their lives they begin to realize that it is not the color, but rather the emotions engendered by a series of painful incidents associated with it that they despise. This understanding liberates their minds, and especially their aesthetic sensibilities, from the thralldom of repressed traumas associated with negative incidents from their childhood, which made them averse to a particular color.

For the student, this exercise becomes a precedent, a probe – much more than a mere theory assignment – to explore the emotional knots and convolutions of his own psyche. With it, hopefully, he would be able to dislodge at least one stone in the wall of the unconscious to usher in the light of understanding. By the end of the second color assignment, then, the student has evolved simultaneously into psychiatrist and analyses and, which paves the way for the final phase in this triad of assignments.

5. Transcending the Obstacle

The student, revitalized by this transformation which has been facilitated by an increased self-awareness achieved through a probing exploration of his inner being, is now primed to ascertain for himself the depth of his own attainment. The third assignment, where he is required to design an interactive monument, provides him with just such an opportunity. However, in order to make it aesthetically appealing, the student has to now invest it with the grandeur of the very color that he has despised throughout his entire life. The success of this exercise rests on his ability to reconsider the despised color of his childhood days as a viable decorative option in his design.

Only a few students succeed in demonstrating conclusively that their color sensibilities are, indeed, totally disengaged from the angst associated with the traumas of childhood. But, from the point of view of the student, the "way has been found"; they are free – in more ways than one – to indulge in any form of creative exercise aimed at liberating themselves from crippling biases and phobias that limit and straitjacket their capacity to design.

6. Designing with an Open Mind

Each teaching episode, in this fashion, becomes much more than just an opportunity to disseminate and gather facts by lecturer and student respectively. It becomes a platform for the students to delve deeper into themselves and access the innermost recesses of their being, the places that scare them. They have begun, to borrow the title of a key text from the 80s, to conduct "inquiry by design" (Salama, 2020). An inquiry, presumably, into the nature of existence and their place in it, through their designs.

In the teaching of studio design, we have found these assignments to be efficient and useful devices in helping students access their Affective Domain of feelings and emotions and biases arising from them, to enable them to change their debilitating self-perceptions by eliminating negative biases. Dismantling established patterns of negativity helps liberate the minds of students and this is a prerequisite for the holistic conceptualization of a design. The results – almost always – manifest themselves in time as improved and innovative solutions to given design problems.

7. Envisioning: the Cognitive Domain - Conceptualizing Design Through Metaphor

In the foregoing section we attempted to show how preparatory assignments functioning as psychological probes could create pathways to our unconscious/subconscious in order to access wholesome childhood experiences and inherent acumen, which then become the basis for productive conceptualizations. The issue of conceptualization, which concerns itself with the power of words, will be discussed in the following section.

It was Thomas Kuhn who said that "you don't see something until you have the right metaphor to let you perceive it", drawing attention to the importance of conceptualization in the design process. Metaphors are potent words and, in the field of architecture, they are conveyors of connotative imagery, a verbal attribute that could make the vital difference between the creation of architectural space and mere shelter. The innovative designer, then, is he who has at his disposal a wealth of metaphorical ideas, with which he creates a rent in the fabric of reality; the compelling vision he sees through this rent becomes the concept and subject matter for innovative architectural design.

8. Metaphorical Thinking

A simple definition of metaphor is "understanding and experiencing one kind of thing in terms of another" (Lakeoff and Johnson, 2020). However, its popular notion as a "device of the poetic imagination and the rhetorical flourish" notwithstanding, Lakoff and Johnson in their ground breaking work, "Metaphors We Live By", present us with overwhelming evidence to the contrary (Leete, 2021). Their findings seem to indicate beyond any reasonable doubt that metaphors condition our everyday thinking and go to prove that our conceptual system is fundamentally metaphorical in nature. The book provides fascinating examples that amply demonstrate their point of view. Consider for example something as commonplace as an argument. Lakoff and Johnson demonstrate how we might perceive its real nature by citing some descriptions that are frequently used with regard to arguments.

Your claims are *indefensible.*

He *attacked every weak point* in my argument.

His criticisms were *right on target.*

I *demolished* his argument.

I've never *won* an argument with him.

"You disagree? Okay, *shoot*!"

If you use that *strategy,* he'll *wipe you out*.

He *shot down* all of my arguments (Cassirer et al., 2020).

9. Rock Logic, Water Logic

The predominant metaphors in the foregoing social settings, as shown in italics, are those of war. However, when we consider that certain cultures view argumentation as a means of inquiring into the nature of truth, we begin to become aware how our perception of situations such as these are 'hardwired" and that they are actually part of the cultural baggage with which we are encumbered. De Bono refers to these cultural differences that metaphorically alter our perceptions of social situations, events, and indeed of the phenomenal world itself (Hendryx, 2023). Thus, what is evidently a polarized situation where one either wins or loses an argument within the actuality of one culture, becomes a non-confrontational process of triangulation between two individuals with inquiry into truth as the sole objective of the exercise, in another. De Bono presents what he refers to as the 'rock logic' of the West as opposed to the 'water logic' of the East respectively, as examples of the two foregoing argumentative stances. This proves beyond a shade of doubt that metaphors are much more than figures of speech and that our brains are hardwired in regard to our understanding of metaphor. "The experience of 'thinking' and 'intellectual comprehension' is [in fact] a metaphorical derivative of primary sensory processes" (Lakoff and Johnson, 1980). Rather than being a literary device, a figure of speech that is, metaphorical perception is now seen as an attribute of our deep structures underlying all our verbal interactions and interpretations of reality.

These metaphors may be classified into various categories based on their essential functional attributes. Lakoff and Johnson provide many examples under various categories such as personification, conduit, orientation and synecdoche, to name a few. Most of these categories are self-explanatory; synecdoche, however, refers to a situation where the part stands for the whole under the greater category of metonymy which uses 'one entity to refer to another that is related to it.' In the metaphor of orientation, 'up' in contradistinction to 'down,' is always associated with qualities that are positive and hence desirable. The conduit and orientation metaphors are probably two of the commonest metaphorical categories that we unconsciously use, especially since they seem to invariably crop up in our daily conversations.

Table 1: Types of metaphors

Personification (Bowers, 2008)	Conduit (Lakoff and Johnson, 1987)	Orientation (Ghulamalizadeh and Huseyni, 2023)	Synecdoche (Bernadetta et al., 2023)
Life has cheated me. *Cancer* finally *caught up with* him.	His words *carry* little meaning.	She'll *rise* to the *top.*	I've got a new *set of wheels.*
Inflation is eating up our profits.	Your words seem *hollow.*	He came *down* with flu.	There are a lot of *good heads* in the university.
This *fact argues* against the standard theories.	Your reasons *came through* to us.	I am *on top* of the situation.	We need some *new blood* in the organization.
	His words *carry* little meaning.	I wouldn't *stoop* to that.	She's just a *pretty face.*
	It's difficult to *put* my ideas *into* words.	He's at the peak of health.	

10. Metaphor in Architecture

This brief foray into the metaphorical structure of our conceptual systems brings us to the issue of the use of metaphor in architecture - especially as a tool in design (Table 1). Architecture concerns itself with the provision of shelter, enclosure and ambience for human interactions and, as such, it is a discipline that is responsible for the provision of spaces for all fields of human activity. By virtue of this fact, it occupies a pivotal position among the arts and assumes a multidimensional character. Commensurately, it can also define itself by drawing from an entire range of fields. The wealth of metaphorical concepts that constitute the architectural domain and which are also at the disposal of the architect-designer may be showcased through an interesting anecdote from the Indian tradition. The Indian aesthetic canons contain an illumining story where a student applies to a Master versed in the art of architecture and aesthetics, to acquire knowledge and skill in this field. The story goes on to show how the master inquires after the student's proficiency in sculpture, painting, dance, music and singing, in that specific order, refusing to teach him what he wants since he has had no formal education in any of the arts he mentions. The student finally agrees to commence his architectural education at the bottom of the hierarchy of desiderata, by addressing himself to the mastery of the most fundamental requisite stipulated by the master - that of singing.

What this implies is that facility in all of these arts constitutes a prerequisite for the mastering of architecture. Thus architecture may be conceived as comprising the plasticity of sculpture, the color and compositional balance of painting, the rhythmic movement of dance, the harmony and ordering of music and the tonality and pitching of singing. That it has drawn from all these arts becomes evident when one compares the wealth of metaphors that are at the disposal of the architect-designer for the fashioning of his oeuvre. In architecture, therefore, one could refer to *molding* of form, street*scape* and urban *fabric*, architectural *composition, rhythm, movement* and *ordering* of elements to achieve a *harmonic balance*, *progression* of spaces and so on. These terms have been cannibalized by architecture but in the process, they have become metaphors that help us conceptualize the design process in architecture. Depending on the occasion, site and context, therefore, the designer would be able to use any of the above as strategies to envision the scheme. The ability to use potent words or metaphors, then, becomes an integral part of the architect's stock-in-trade and, indeed, that of the student as well.

References

Aheisibwe, I., Kobusigye, L. and Tayebwa, J., 2021. Bridging Education Gap in Higher Institutions of Learning Using Bloom's Taxonomy of Educational Objectives. African Educational Research Journal, 9 (1), Pp. 69-74.

Bernadetta, M.P., Linuwih, E.R. and Kurniawan, Y., 2023. Metaphors in selected Blackpink's song lyrics. Journal of English Language and Pedagogy (JELPA), 1 (1), Pp. 22-35.

Bowers, C.A., 2008. Why the George Lakoff and Mark Johnson theory of metaphor is inadequate for addressing cultural issues related to the ecological crises. The Trumpeter, 24 (3).

Cassirer, E., Lofts, S.G., and Gordon, P.E., 2020. The Philosophy of Symbolic Forms, Volume 3: Phenomenology of Cognition. Routledge.

Collins, S., 2020. Wisdom as a way of life: Theravāda Buddhism reimagined. Columbia University Press.

Cortesão, J., and Lenzholzer, S., 2022. Research through design in urban and landscape design practice. Journal of Urban Design, 27 (6), Pp. 617-633.

Gardella, M., 2022. Aristotle on Riddle. Ancient Philosophy, 42 (1), Pp. 233-249.

Ghulamalizadeh, M., and Huseyni, S.S., 2023. The Cognitive Analysis of Container and Inside Matter in the Conceptualization of the Abstract Concepts of the Repentance Chapter: A Study Based on Lakoff and Johnson's Ontological Conceptual Metaphors. Journal of Contemporary Islamic Studies (JCIS), 5, Pp. 2.

Hendryx, J.D., 2023. Edward de Bono. In *the Palgrave Handbook of Educational Thinkers* (pp. 1-12). Cham: Springer International Publishing.

Lakoff, G., and Johnson, M., 1980. The metaphorical structure of the human conceptual system. Cognitive science, 4 (2), Pp. 195-208.

Lakoff, G., and Johnson, M., 1987. The metaphorical logic of rape. Metaphor

and symbolic activity, 2 (1).

Lakoff, G., and Johnson, M., 2020. Conceptual metaphor in everyday language. In Shaping entrepreneurship research, Pp. 475-504. Routledge.

Leete, A., 2021. Editorial Impressions: Ethnography and Metaphors. Journal of Ethnology and Folkloristics, 15 (1), Pp. i-vi.

Salama, A.M., 2020. Shaping the future of research in art, architecture, and spatial design fields. Journal of Arts & Architecture Research Studies, 1 (2), Pp. 14-31.

Zhao, Y., Muhamad, M.M. and Mustakim, S.S., 2022. English Teaching Objectives from the Perspective of Bloom's Cognitive Domain: A Case Study of Yuxi Normal University, China. Journal of Positive School Psychology, 6 (3), Pp. 5622-5635.