

Argumentative Line for a Possible Reflection on the Relationship Between Epistemology of the Design Activity, Theoretical Body and Scientific Community

Acursio Ypiranga Benevides Júnior  ^{a*} | Sheila Cordeiro Mota  ^b

^a Universidade Federal do Amazonas/UFAM; Universidade do Estado do Amazonas/UEA; Centro Universitário do Norte/ UNINORTE. Manaus, Amazonas, Brasil.

^b Universidade Federal do Amazonas/UFAM. Manaus, Amazonas, Brasil.

* Corresponding author: acursiobenevides@gmail.com

ABSTRACT

It is often noted the tendency of academia and other systemic space, like legislative, to understand the theme of design activity not only as an activity of technical-practical reflection, but as an activity of social extract and, therefore, influencing policies, generating employment, income and content. The interdisciplinary involvement with other structured scientific branches, especially those of philosophical base, can elicit arguments favorable to reflections and understanding with a reasonable degree of acceptability for a possible consensus on the relation between epistemology of the theoretical body of the activity in design and scientific community? Through a theoretical review will be analyzed the work "The Structure of Scientific Revolutions," by Thomas Kuhn, combined with the proposition of Jürgen Habermas' dialogical argument and an interpretation of Georg Simmel's The Wing, to present an argumentative line of philosophical basis capable of offering a reasonable degree of acceptability to the consensus on the relationship between epistemology of the theoretical body of the activity in design and the scientific community. The method of analysis for the research is the phenomenological-hermeneutic approach, with the primacy of subjectivity, where the transcendental subject, integrity, owner and lord of self is the investigator coated with intentionality.

Keywords: Design, Scientific Community, Theoretical Body

INTRODUCTION

One notices the frequent and inevitable tendency of academia and other systemic spaces - legislative, for example - to address the theme of design activity not only as an activity of technical - practical reflection, but as an activity of social extract and, for that's right, policy influencer, generator of jobs, income and content. The question is: the interdisciplinary involvement with other structured scientific branches, mainly the philosophical ones, can raise arguments for reflection and understanding with a reasonable degree of acceptability

Benevides Júnior, A. Y. & Mota, S. C. (2019). Argumentative Line for a Possible Reflection on the Relationship Between Epistemology of the Design Activity, Theoretical Body and Scientific Community. *Strategic Design Research Journal*, volume 12, number 02, May – August 2019. 296-306. Doi: 10.4013/sdrj.2019.122.14

for a possible consensus on the relationship between the epistemology of the theoretical body of design and community activity. scientific?

Methodologically speaking, Thomas Kuhn's "The Structure of Scientific Revolutions" will be analyzed to extract important concepts in the understanding of science and epistemology. Next, Habermas' concepts of communicative action will be analyzed and, therefore, an interpretation of the ideas of Georg Simmel's "The Wing" will be exposed, seeking points of congruence with the theoretical body of design activity. Finally, we will try to present, as it is possible to present an argument capable of offering a reasonable degree of acceptability for the consensus on the relationship between the epistemology of the theoretical body of design activity and the scientific community.

1. METODOLOGY

The method of analysis for the research is the phenomenological-hermeneutic approach, with the primacy of subjectivity, where the transcendental, righteous, owner and master is the researcher clothed with intentionality. This intentionality is of consciousness that is always directed at an object. This tends to recognize the principle that there is no object without subject (TRIVIÑOS, p. 43).

According to Gamboa (2006, p. 22), when we investigate, we relate the subject and the object of knowledge and announce a world view, that is, we implicitly or occultly elaborate an epistemology. This epistemological approach is the very correlation between subject and object, which ends in philosophy, in the construction of science, of the totality to be answered and recovered invariant in relation to the environment, generating knowledge. The data were worked with the technique of direct documentation.

This general source material is useful not only for bringing background knowledge to the field of interest, but also for avoiding possible duplication and / or unnecessary effort (LAKATOS, 2010, p. 157). The direct documentation will be the bibliographic, confirming that the bibliographical research is not a mere repetition of what has already been said or written about a certain subject, but it allows the examination of a subject under a new approach or approach, reaching innovative conclusions (Ibid., P. 166), as intended in the theoretical review.

2. THEORETICAL BACKGROUND

The theoretical review will be based mainly on three thinkers in the field of science, such as Jürgen Habermas, Thomas Kuhn and Georg Simmel, in order to allow the emergence of

Benevides Júnior, A. Y. & Mota, S. C. (2019). Argumentative Line for a Possible Reflection on the Relationship Between Epistemology of the Design Activity, Theoretical Body and Scientific Community. *Strategic Design Research Journal*, volume 12, number 02, May – August 2019. 296-306. Doi: 10.4013/sdrj.2019.122.14

concepts and ideals for this work, based on philosophical rationality. to understand the reflection on epistemology, the theoretical body of the design activity and the scientific community.

Design will be the activity, according to the World Design Organization (OMD) which defines it as a strategic problem-solving process that drives innovation, develops business success and leads to a better quality of life through products, systems, , services and innovative experiences (OMD, 2017).

Process, by definition, is a set of activities. “Most definitions agree that design operates at the junction of these two levels, giving material form to intellectual concepts. Therefore, it is an activity that generates a project [...]” (RAFAEL CARDOSO, 2000, p. 16).

In the philosophical field, epistemology would be considered the advanced stage of scientific understanding in the face of the flight of ignorance and the overcoming of mere opinion.

The core of Aristotle's philosophy - Plato's disciple - about epistemology comprises a detailed description of nature and society. His contributions are present in biology, logic, physics and politics. In the field of logic, he established a set of principles and rules that resulted in a system that made it possible to discern false and exact conclusions.

However, the philosopher was not blunt for subjects of technical approach that mentions productive knowledge through skills (praxis). Praxis was not valued as much as theory. The theory was refined and prioritized by Aristotle.

In this way, the fields of knowledge that hold the practice have the opportunity, over time, to become more expressive in the context of the scientific community. Based on this premise, a culture was constructed in which the production of knowledge is a result of theory and practical activities rarely assume the value of scientific knowledge. Design, as a discipline of practical posture, has a very wide field for discoveries about its possibilities and epistemological contributions to the scientific world.

3. SCIENTIFIC SYSTEMIC WORLD FROM THE PHILOSOPHY OF SCIENCE

A systemic world, necessarily, can be considered any universe of dialogical relations justified by normative supports (Habermas 1989)

3.1. Scientific community and consensus

The Here comes the expression Thomas Kuhn's scientific community, because the impression one has of the studies carried out is that, politically, this is the target “persona” that matters, because science, by itself, does not define who can or cannot have communion with her.

What has been observed so far is that there is a systematized set of people and thoughts, a scientific community. And this is an important element interpreted from Kuhn's reading in the study of normal science, based on the assumption that the scientific community knows and understands how things are, the world, and many successes of endeavors derive from this community's willingness to defend these. assumptions, with considerable costs if necessary (KUHN, 1998).

The first step towards work before a scientific community and, therefore, a collective body, would be the consensus regarding the studied objects - how to have political force without consensus? - in order to extract a paradigm that would stimulate the respective test methods.

When there is no consensus, there is no acceptable activity of being scientific, as can be observed in history. By examining a sample of pre-Newton Physical Optics, it may be perfectly concluded that, although made by scientists, the net result of their activities was not necessarily science (Kuhn 1998). The author refers to the fact that, as far as the science of physical optics is concerned, the choice of observations and experiences supporting such a reconstruction was relatively free at the time, and there was no standard set of methods or consensus on a phenomenon that Optician scientists were forced to employ and explain (KUHN, 1998).

The fact that it is not a scientific activity would be due to the sovereignty, be it theoretical, procedural or ideological of the scholar in relation to the object, which would not subordinate him to a set of so-called scientific consensual tendency, because it lacks the collective element of community. .

So what would be the milestone for the beginning of this community? It is probably within the time frame in which consensus develops. And this consensus proposal requires a dialogic action, composing more than one individual.

Jürgen Habermas works on the structures of dialogical action aimed at mutual and rational understanding. His theory is that of Communicative Acting, through dialogical

Benevides Júnior, A. Y. & Mota, S. C. (2019). Argumentative Line for a Possible Reflection on the Relationship Between Epistemology of the Design Activity, Theoretical Body and Scientific Community. *Strategic Design Research Journal*, volume 12, number 02, May - August 2019. 296-306. Doi: 10.4013/sdrj.2019.122.14

comprehension linguistic actions, with the perspective of acting oriented towards a mutual understanding, where the subject "dominates the situations through imputable actions; at the same time, it is also the product of the traditions in which it finds itself, the solidarity groups to which it belongs and the socialization processes in which it is created" (Habermas 1989, p.166).

Contemporary German philosopher and sociologist, Jürgen Habermas, born in Düsseldorf in 1929, was part of the tradition of Critical Theory of Society (and has his project in the very construction of a theory of society) - responsible for the attempt to unite philosophy and sociology in society. analysis of society - through the trends of the Frankfurt School. He was assistant to the philosopher and sociologist Theodor W. Adorno. Jürgen Habermas is one of the leading representatives of the second generation of the Frankfurt School, between 1955 and 1959.

Habermas suggests the dialogical understanding between two or more subjects, which means that it offers the overcoming of the monological idea, idiosyncratic, because now there is the perspective of collective understanding, where subjects of a daily and, in fact, participatory discourse leads to mutual understanding to the degree of relevance, favoring reciprocal agreement.

Thus, to act communicatively, in order to reach a consensus, would, as a rule, be to admit that an agreement in the practice of daily communicative actions relies on an intersubjectively shared propositional knowledge - solidarity -, a normative agreement and a mutual trust (HABERMAS 1989).

In Habermas's communicative action there is the element of solidarity, linked to intersubjective responsibility. To this end, Habermas proposes the principle of universalization, legitimately grounded on the pragmatic assumptions of argumentation, combined with the meaning of pretensions of normative validity. Thus, the principle of universalization is the starting point for practical discourse. Thus universalistic morality would depend on "participants with a rationalized posture, which enable the intelligent application of universal moral insights and offer motivations for the transformation of insights into moral action" (Habermas 1989).

The fact that the individual acts before a scientific community forces the idea of acting in communication - or communicatively, as proposed by Habermas. This action is rational and presupposes convergent language systems. However, in fields where there are no universally

Benevides Júnior, A. Y. & Mota, S. C. (2019). Argumentative Line for a Possible Reflection on the Relationship Between Epistemology of the Design Activity, Theoretical Body and Scientific Community. *Strategic Design Research Journal*, volume 12, number 02, May – August 2019. 296-306. Doi: 10.4013/sdrj.2019.122.14

accepted principles, the question remains as to which path to take. “The history of electrical research in the first half of the eighteenth century provides an example of how science develops before it acquires its first universally accepted paradigm” (Kuhn, 1998).

It is to recognize the relevance of the sciences already structured in understanding and building concepts that lead to initial paradigms in the study of phenomena not yet covered by a specific scientific niche. Historically, the concepts of electricity belonged to other real theories, derived at least in part from experiences and observations that determined the interpretation of problems faced by research (Kuhn 1998).

Thus, it can be preliminarily understood that, politically, talking about science is talking about the scientific community and, in turn, it is influenced by rational patterns of consensus on a viewpoint about an achievement or, in other words, This paradigm and consensus on phenomena, observation paradigms or theories allow interdisciplinary solidarity with other areas of the scientific community.

4. THE PARADIGM AND ITS ROLE IN THE SCIENTIFIC COMMUNITY

Basically, for Kuhn (1998), science can be considered in its normal aspect and in an anomalous aspect. "Normal science" means research firmly grounded in one or more past scientific achievements (Kuhn 1998). That is, it is the science made within the harmonious scope of science itself, when there is no unsustainable crisis of consensus - paradigm - about the achievements. As an example, “the democratic rule of law is an achievement. It is, therefore, a paradigm, from which we understand the law (STRECK, 2014; p. 397) ”. Paradigm is a kind of observation criterion, from which requirements for justifications are drawn. In Kuhn's case, he calls it achievements.

These achievements are recognized for some time by some specific scientific community as providing the foundation for their later practice (Kuhn, 1998). The opposite of this, that is, the phase of science in which there is no consensus on achievements, is called anomalous science, which has nonrational means of solution, such as party means; However, such an aspect need not necessarily be regarded as negative, since it seeks to fill the divergence of realization which was now harmonized during the period of normal science.

When there is no consensus on a paradigm, “fact-gathering is much closer to a random activity than to those which the subsequent development of science makes familiar (KUHN, 1998, p.35)”, which brings indispensable utility, to science, from the activity of nature, preliminarily unscientific, coming from established trades (Kuhn, 1998). In addition to this

Benevides Júnior, A. Y. & Mota, S. C. (2019). Argumentative Line for a Possible Reflection on the Relationship Between Epistemology of the Design Activity, Theoretical Body and Scientific Community. *Strategic Design Research Journal*, volume 12, number 02, May – August 2019. 296-306. Doi: 10.4013/sdrj.2019.122.14

established field of practical crafts, Kuhn also extols technology as a source of facts that could not have been easily discovered. And this philosophical observation by Kuhn is very suggestive of design activity.

Some considerations are possible to draw from this thought. First, that there is scientific development without a paradigm, albeit in a non-informal way, according to community parameters, thus without consensus - although this is an indisputable factor of normal science; In this case, data collection can be glimpsed from random activities, or even about the daily life of professional trades.

Kuhn still externalizes the role of technology in the context of the emergence of new sciences. These points will be of fundamental importance in the next stages of the research, especially in the interpretation of Georg Simmel's *A Sa*.

5. RELATIONSHIP BETWEEN GEORG SIMMEL'S PHILOSOPHICAL ANALYSIS OF THE WING AND THE THEORETICAL BODY OF DESIGN ACTIVITY

The term “wing” found in Georg Simmel's work refers to the element “handle” or “handle” or “handle” that we find in ordinary pots, cups, and teapots. Here, in the proper translation made from a material in Spanish, we chose the expression handle, because it is more familiar in the national culture, including the branch of design. Mere matter of choice, or taste. It is understood that, in any case, the text would be perfectly interpreted.

There seem to be elements in Simmel's philosophical view that can politically represent a force capable of promoting a relevant degree of acceptability about topics studied in design activity.

In *The Wing*, Simmel works on the relationship of being - or even of soul - with the environment he experiences, especially with regard to the objects with which exchange takes place, whether in contemplation or practical function. Discussions that bring up an experience very close to the daily life of design activity scholars, such as usability or sociomateriality.

In describing the involvement of being, vessel, and art, Simmel sees the vessel with the premise of respecting the expectations of the two worlds in which it transits - art and utility - but vase was not thought of as an image for isolated intangibility, it must fulfill - symbolically - an end, because it is handled and inserted in the daily life (SIMMEL, 1924).

Benevides Júnior, A. Y. & Mota, S. C. (2019). Argumentative Line for a Possible Reflection on the Relationship Between Epistemology of the Design Activity, Theoretical Body and Scientific Community. *Strategic Design Research Journal*, volume 12, number 02, May – August 2019. 296-306. Doi: 10.4013/sdrj.2019.122.14

And that is exactly the reason for the existence of the handle - or the wing, in the original translation -, referring to the purpose of linking the object to the being who experiences it. For this reason, the handle, while being an element of attachment, is nonetheless communion, or even a state of belonging, with the vessel, being necessary to communicate with it through elements that transform them into unity.

Simmel works the handle as the element that projects the vessel to reality, which is not the case with the raw work of art, which is isolated and sufficient in itself. The handles, which link the vase to existence beyond art, are integrated in the artistic form and must, regardless of their purpose and practical sense, justify to constitute, with the body of the vase, an aesthetic view (SIMMEL, 1924).

For the author of A Asa, "this double meaning, which manifests itself with characteristic clarity, is what makes the handle one of the most valuable aesthetic problems of reflection" (Ibid., P.110).

Simmel seems to work with the fact that "existence beyond art" meant a responsibility for the subject's interaction or involvement, indicating that the handle, in its aesthetic nature, is a valuable aesthetic problem of reflection.

It suggests that the element that connects being with the object is the target of axiological reflexive and therefore philosophical effort. Moreover, the handle not only has to be able to effectively fulfill its practical function, but it must also be evident by its shape and appearance (SIMMEL, 1924).

Simmel goes further, seems to work on the nuances of the handle and its various relations as a sympathetic institute man's perception of himself, as an attempt to organize his involvement with the world through the laws that organize his own being, his own system. physiological.

Thus, the aesthetic unity is stronger with more organic forms, when the handle seems to emerge from the body of the vessel forming a circuit without interruptions and proceeding from the same forces that configure the body (SIMMEL, 1924), as if seeking a harmony that was condescending. itself, as the arms of the human being, which, arising from the same process of homogeneous organization as its trunk, constitute at the same time the mediating element of the total relations of being with the external world (SIMMEL, 1924).

Benevides Júnior, A. Y. & Mota, S. C. (2019). Argumentative Line for a Possible Reflection on the Relationship Between Epistemology of the Design Activity, Theoretical Body and Scientific Community. *Strategic Design Research Journal*, volume 12, number 02, May – August 2019. 296-306. Doi: 10.4013/sdrj.2019.122.14

When not to human nature itself, the author suggests this harmony with other living things, such as plants. An involvement situated in the process of life itself, according to parameters of laws established by existence itself in exchange with nature.

Sometimes flat vessels have a shape that, with the handle, resembles the leaf and its petiole. The unity of organic growth here is perceptibly linked to both parties (SIMMEL, 1924).

It further states that "they are both together and separate, and it is precisely what constitutes the indivisible secret of life" (Ibid., P.111).

One possible interpretation is the character of unity and the identification of what is being and what is the instrument in no way prevents them from looking at both as a unit in the process of reciprocal involvement, as if being were a substratum of unity that is completed with another substrate that is the instrument, which mediates with the world, making the process of involvement an indispensable effort for life itself.

These interpretations are close to contemporary studies in the field of sociomateriality, an area that even harmonizes with the field of design, as well as usability and ergonomics.

6. INTERPRETATIVE RESULTS

It is necessary to reflect if the interaction man, handle and vase, in the complex fields of life experience, can be considered a phenomenon, as presented in Kuhn's writings, susceptible of scientific investigations that consider, from the activity in design, theoretical and experimental resources, in the understanding of the forces inserted in this context, and in the identification of the laws that support it.

If this process of involvement can be the target of a convergence of efforts aiming at the definition of concepts that lead to the realization of one or more paradigms, capable of converging consensus on the theme of reflection involving the being and the mediation instruments with the world in which inserted, it would be rational to say that the design activity is one of the trades that are close to those identified by Thomas Kuhn, as fulfilling the parameters of the "already established trades", which is the case of the design activity and therefore subject to epistemology of the theoretical body and permanent solidarity with the scientific community.

Design activity, with its unique set of technologies, procedures and knowledge, contributes the data and facts needed to support this relationship of involvement between being and its experience mediator - in the case of Simmel's experience, the wing.

Benevides Júnior, A. Y. & Mota, S. C. (2019). Argumentative Line for a Possible Reflection on the Relationship Between Epistemology of the Design Activity, Theoretical Body and Scientific Community. *Strategic Design Research Journal*, volume 12, number 02, May – August 2019. 296-306. Doi: 10.4013/sdrj.2019.122.14

If the study of this relationship can be considered an autonomous scientific activity, or a branch of some established science, there are no instruments here to say it; However, it is believed that, as discussed by Thomas Kuhn's philosophy of science in this article, the tendency is to add politically to the understanding that design activity has the arguments to present data and facts in this investigation, in accordance with rational parameters. and normative consensus vis-à-vis the scientific community, which would end in strengthening the epistemology of the theoretical body of design activity.

While Simmel philosophically describes the relevance of two antagonistic worlds - art and utility - they are understood to be complementary worlds. They are parallel worlds and their existences are correlated.

Art is fundamental to human life, just as usefulness is in daily practical activities and is linked to the evolution of private and social well-being. Simmel described the integration of the handle with the vase container as both an artistic and a utilitarian phenomenon. In this paper, we note that distinct concepts may be present, without undercutting or devaluing each other, but suggesting another stage of essence. A stage that can - or is - faced daily by the militant professionals of the design office and the epistemology of the theoretical body that supports it.

7. FINAL CONSIDERATIONS

The argumentative line suggested for reflections on the epistemology of design activity and the scientific community is considered to have been presented objectively, despite the need for theoretical deepening.

The understanding is that, without deepening the reading of the presented theorists, the proposal would need other sources of analysis that may even be the subject of future studies, such as the analysis, *stricto sensu* of the epistemology of the theoretical body itself.

However, it was intended to continue the strictly theoretical discussions that underlie the practical investigation, so that, converging with traditional fields of the scientific community, this and other future dialogues can find political forces for the establishment in the various systemic worlds in which professionals of the activity. are involved, be they professional, academic, research or political worlds

The tendency is to continue studies on other interdisciplinary lines of argument for rational consensus on an epistemological point of view or methods concerning a paradigm - an achievement, according to Kuhn - that looks at the natural phenomenon of human adequacy

Benevides Júnior, A. Y. & Mota, S. C. (2019). Argumentative Line for a Possible Reflection on the Relationship Between Epistemology of the Design Activity, Theoretical Body and Scientific Community. *Strategic Design Research Journal*, volume 12, number 02, May – August 2019. 296-306. Doi: 10.4013/sdrj.2019.122.14

and exchange with its environment, for utility, Art and other relationships with reciprocal interaction tendencies contribute politically to a scientific understanding between the theoretical body of design and its solidary relationship with the scientific community.

It is understood that the actors responsible for this position along the line of argument, notwithstanding the profound relevance of each agent submitted or influenced by the design activity, correspond to those inserted in the administrative leaderships of intellectual clusters, such as postgraduate program coordinations, professional associations, union cells, members of institutional boards or committees, among others, because, politically, they constitute category representation.

REFERENCES

- Denis, R. (2000) *Uma introdução à história do design* [An introduction to the history of design]. São Paulo, Brazil. Editora Edgar Bücher.
- Gamboa, S. (2006). *Pesquisa em Educação: Métodos e Epistemologias* [Education Research: Methods and Epistemologies]. Campinas, Brazil. Editora Argos
- Habermas, J. (2004). *A ética da discussão e a questão da verdade* [The discourse ethics and the question of truth]. São Paulo, Brazil. Editora Martins Fontes.
- Habermas, J. (1989). *Consciência Moral e Agir Comunicativo* [Moral Concioussness and Communicative Action]. Rio de Janeiro, Brazil. Editora Tempo Brasileiro.
- Kuhn, T. (1998). *A Estrutura das Revoluções Científicas* [The Structure of Scientific Revolutions]. 5 Ed. São Paulo, Brazil. Editora Perspectiva.
- Lakatos, E.M. & Marconi, M. A. (2010). *Fundamentos de Metodologia Científica* [Fundaments of the Methodology of Scientific Research]. São Paulo, Brazil. Editora Atlas.
- OMD: ORGANIZAÇÃO MUNDIAL DE DESIGN [OMD: World Design Organization]. (n.d.). Retrieved February 02, 2019, from <http://wdo.org>
- Simmel, G. (1924). *Ensaio da Estética* [Essays on Aesthetics]. Ela Asa, Spain.
- Streck, L.L. (2014) *Hermenêutica em crise: uma exploração hermenêutica da construção do Direito* [Hermeneutics in crisis: a hermeneutic exploration of the construction of Law]. Porto Alegre, Brazil. Editora Livraria do Advogado.
- Triviños, A. N. S. (2010). *Introdução à Pesquisa em Ciências Sociais: a pesquisa qualitativa em educação* [Introduction to social science research: qualitative research in education]. São Paulo, Brazil. Editora Atlas.