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Drawing as language in design project: a course of analysis via Vesely and Perez-Gomez.

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Abstract

We propose drawing as design project process, regarded both as project's instrumental utility (technology) and condition for disciplinary reflection (art), considering drawing as language whose operability enables innovation in design.

At the production level (drawing), two cornerstone conditions are implied: 1. the instrumental ability (technology) and 2. its critical (semantical) evaluation.

As subject for analysis we present project drawings from widely recognized contemporary Portuguese designers.

We interpret design object as the project's overall communication exchange, questioning how drawing, as mediator for projectual practice in design, limits the object's creation and hence its existence as design language?

Our answer considers drawing: 1. mediator for representation (through technical expression), 2. classifying function (through program) and 3. interpretative mark of imagination (through authorship).

Keywords

Drawing, visual language, design process, design critic

Introduction

Our framework of analysis regards drawing as language whose operability enables innovation in design. This discussion stems from the study of images from design and architecture projects integrating an archive developed in the scope of research on the relationship between drawing and project practice in design. The drawings were collected, displayed and discussed with the authors.

Each drawing constitutes the design (or architecture) object's projectual mark, eventually before or beyond its accomplishment through the object's construction. Yet, the projectual circumstance was at all times present and the visual language

expressed in the drawing was physically accomplished and to our understanding symbolically interpreted.

We consider the object of design as derived from drawing, interpreted as visual language anchored in the artistic, particularly in the passage from modern to contemporary. At a time when art claims the symptom as a manifestation of the artistic, assuming the process in its full self-regulatory plenitude (eventually risking artistic autisms...), and thus temporarily discarding the project's idea and the idea of drawing as stemming act, drawing, removed from the mere sphere of need for representation, without the need for *other* (object to represent), to happen, will be subject to its full power, resulting in the possibility to be met through the project, itself engaging drawing in its construal.

Therefore, we propose the process of design project through drawing, interpreted both as instrumental utility (technology) and as a condition for disciplinary reflection (art), revealing the importance of drawing in design's projectual practice.

In this context, at the production level (to draw), there are two main conditions implied, possibly considered opposite from a strategic point of view: 1. the instrumental ability (technology) which places drawing 'in' the project, conferring it operational utility; 2. its critical (semantical) evaluation, in detriment of the material (practical) making of the object.

We propose considering design as the overall communication exchange in the project, questioning to what extent does drawing, as a mediator for design's projectual practice, limit the object's creation and hence its existence as language for design? To answer this question we will consider that drawing, as a language to materialize the project, is a mediator for representation (through technical expression), a classification function (through the program) and an interpretative mark of imagination (through authorship).

In this scope, we intend to address the following issues: 1. what is the relationship between drawing and the project, as a mediator for representation through technical expression; 2. what is the visibility of representation as classifying image through the program?; 3. what is the project expression (poetic) as an interpretative mark of imagination through authorship?

We aim to answer the aforementioned questions through two authors: Dalibor Vesely and Albert Pérez-Gómez, invoking the phenomenology of the project, its poetics and hermeneutics, and particularly the epistemological nature of representation, concerning paradigmatic change in projectual representation.

To understand how the contamination from drawing's language weighs on the process of design project involves the issue of drawing's relevance, through graphs, as a guarantee to transform the object into symbolic added value in the spatial-temporal context of the project.

A basic research, up to now inedited, was conducted subsequently to experiences incubated at the Facoltà di Design, Politecnico di Milano – tutoring the PhD Research from the Departamento de Comunicação e Arte, Universidade de Aveiro – (performed by Assistant Professor Graça Magalhães).

The drawing background, shaped around Drawing in the Facoltà di Design, Politecnico di Milano, focuses mainly on architectural and engineering practice, with an original mix between handmade sketches, computer aided design and rendering, and the construction of direct prototype models. (Brunetti, 2003).

Furthermore, significant research with recent methodologies was conducted to collect and preserve a modern repository of design Drawings, particularly in collaboration with the 'Biblioteca del Progetto' from the 'Triennale di Milano'¹.

The repository and collection of drawings from Portuguese designers have been emphasised as a core purpose for theoretical and stylistic assessment in original papers.

Classification standards were organized regarding Portuguese national parameters of cultural heritage² and other international standards, and a consistent method to scanner the drawings and agree upon copyrights with the owners was elaborated.

Obviously, all of these parameters connect to the taxonomical aim of the theoretical research, each criterion intended for clear, easy and sure finding and comparison of each particular case history.

1. What is the relationship between drawing and the project: as a mediator for representation through technical expression?

Design, in its surviving state, requires the need to look beyond itself, being recognized in a glance that includes other selves. The contradiction in the performance of a design project lies in the simultaneity of the desired technical/mechanical certainty and the inclusion of artistic derivation as a process towards the imagetic construal of the object. Projectual clearness, leading onto discovery of the new, is not an aprioristic premise but an achievement induced by drawing, in the visual field, as an operating mode in its relationship with the projectual action. Occasionally, the difficulty to accept what cannot be clear and unequivocal leads design to engage in rhetoric at the moment of projecting, rather easier than facing drawing's persuasive confrontation. Drawing's persuasion, its visibility, depends on its own rhetoric, on the fact that it exist as a physical object-drawing through the skills of the author (s).

It seems to us unlikely that designers may discard drawing, even if only to understand the expression of a stamina announcing projectual action. Drawing, in this case, is the presentation of the contradictory, an action's dialectic requiring the idea's representation while becoming an object.

The designer performs the object's drawing, which becomes design's subject. Drawing may be what renders the designer closest to the object's materiality, and may be revealed through the use of multiple techniques that idealize the object upon representation and make it the subject for its construal. This solitary act – individual or collective – that may or may not be communicated, seems to be necessary and even unavoidable. Drawing's denial, in authorship, seems to us more of a false modesty than ideology through drawing. The author endorses a commitment to the truth in which the object takes part. The condition of taking part in objectivising truth makes the object become the possibility for disciplinary uncertainty, upon which it relies, as a paradox, to ascertain itself. In the condition to exist through drawing, the object of design is close to art. Through the *approximation to art* the object of design contributes to uncover the lie that states the artistic as a place for ideological 'uncompromise'.

Project drawing is therefore an inventive making, with the designer as the *inventor at a distance* (since he usually doesn't fabricate/manufacture the object), whereas the constructive making is institutional. In this case, drawing represents the frailness of

¹www.triennale.org/index.php?id=35"; www.biblioteche.regione.lombardia.it/OPACRL/cat/SF

² www.ua.pt/sbidm/arquivo/default.aspx

invention in the presence of institution. According to Gianni Contessi, the truth of the drawing resides in its irresolvable and irreconcilable existence, in the fact that it is an instrument of inventive expression and simultaneously institutional representation.

“The irresolvable knot resides in the identity of the drawing, in the fact that it is the secular arm of figurative invention and, contrarily, the instrument of institutions that conventionally convey figurative knowledge. Hence, persuasion versus rhetoric.” (Contessi, 2000).

Drawing is performed through expression, which invents the idea through its institutional representation mode. In this case, it can be argued that persuasion is on the side of the drawing as an expression of the idea, versus rhetoric on the side of institutional representation. In fact, drawing’s irresolvable knot is even more complex, since the very persuasion depends on rhetoric, which is drawing’s own. In the case of an *external visibility* (drawn object), drawing privileges the *external* rhetoric (concept); in its *internal visibility* (object of drawing), drawing depends on *internal* rhetoric (marks, traits).³

At last, the following consideration: if there is a poetic thinking enabling poetic writing, there may also be a poetic thinking enabling poetic graphic imaging. Idealizing artefacts through image, the designer may perform according to such sort of thinking. In that case, he will be subject to poetic possibility. An attempt to interpret design excluding this possibility, refusing its interpretation through the embodied images, would add frailty to the discipline and their intervenient. Our view is, by the opposite, that this admittance is a possibility drawing *grants* to design.

We may therefore conclude that drawing is an action seeking the production of images whose being reflects onto *other* and whose range of action is forcedly limited. As action in the production of image, drawing can be considered in various ways: 1. as itself an image; 2. as a representation of a figure; 3. as a calling for other, appealing to memory.

As itself an image, the action of drawing undoes the symptom in the act of showing, that is, drawing is inscribed within the realm of art, being renumbered as an art object. As a representation of a figure – figure being idea or nature – drawing is project, the place of multiple – (or single!) – longing, whose rule holds the value of demonstration. In this case, drawing represents and self-represents according to the proposed disciplinary model. It will be ‘artistic’ when the model is art, it will be ‘technical’ when the model is engineering, or ‘scientific’ when the model is science.

When drawing appeals to memory, by calling upon other, the action of drawing develops the equivocal of demonstration.

When the model is being involved with the *other*, can drawing then be named ‘design’?

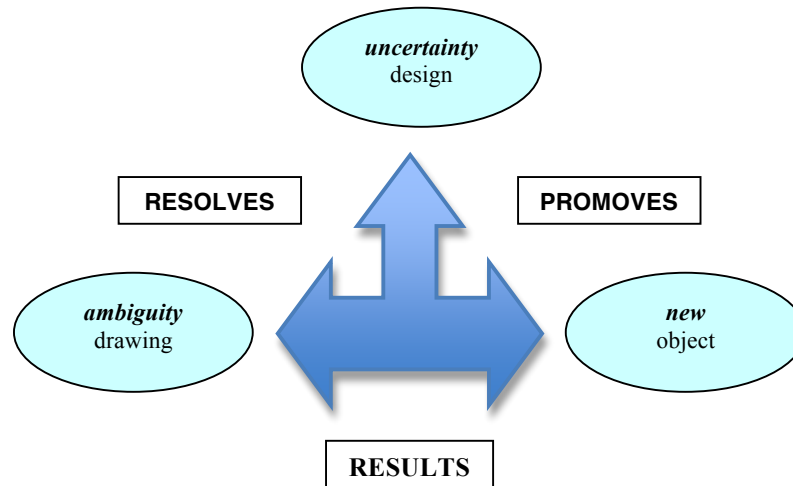
Being true that we can only discover what is already within us, such fact does not hinder the need for the other to be able to perform the action of such discovery and hence for that action to be able to constitute the *new*. In this case, drawing, in its multiple forms in the production of images, identifies with design as action to allow the appearance of the new as a result of the drawer’s experience.

In the course of the action of drawing, the mode to approach the object has an uncertain dimension, one impossible to value in concrete terms, there residing the value of project making.

³ Anyone operating drawings has been confronted with the experience of discovering marks (traits) in the drawing. Regardless of the themes referenced it is the drawing’s rhetoric that persuades us: traits, spots as unique inscriptions in the successive gestures of the author.

The exactitude of representation acquires meaning through the use of a graphic mode: 1- adopted by confronting representation codes; 2-criticizing its trend; 3- evaluating its efficiency in the projectual production of the object.

According to the Spencer's paradox (Spencer, 2000), the ambiguity of drawing, in its contingent mode of action, resolves the project's uncertainty, which through multiple possible answers to the program promotes the new object's emergence. Therefore, we add that the object promoted by project's uncertainty results from drawing's ambiguity.



<p>If ambiguity (of drawing) resolves the uncertainty (of the project), (paradox proposed by Spencer)</p>
<p>and, the uncertainty (of the project) promotes the encounter with the new (object),</p>
<p>then, the new (object) results from the ambiguity (of drawing).</p>

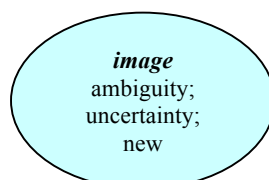
2. What visibility for representation: as classifying image through the program?

According to a mathematical-logical reading, if the ambiguity of drawing resolves the uncertainty of the project and the uncertainty of the project promotes the encounter with the new object, then, the new object results from the ambiguity of drawing.

How that visibility is developed through the act of representation is the subsequent issue.

Considering Spencer's paradox, the following scheme presents project progress through actual images manipulation subsequent to drawing's ambiguity, design uncertainty and the emergence of the new.

Such practice would be related to a creative possibility through representation visibility. In projectual practice, this process would classify a practice rather associated to poetics, in which the technical issue informs devoid of conforming.





While it is true that visual understanding occurs through the invisibility of things, we may conclude that the representation of the world is inevitably incomplete and that even the optimistic assumption on the scientific accuracy of representation is displaced from the world's mutating truth. Drawing attempts to represent the world and by that yearning nothing more is accomplished than the exposure of the impossibility to represent it globally. It does so by conquering part of its matter. Therefore, more important than the technical instrumentality of representation, what must be considered is the technical use of representation's symbolic articulation.

In the 17th century, the representation of the world was performed in a *parallel* manner, agglutinating both the intelligibility of science and debating its arguments, theological and metaphysically. Culturally, mathematical rules applied through geometry are sought to be the true representation of reality, and by applying those rules, geometry demonstrates the impossibility for a real commitment to such truth. Since then, science 'stands out' in the representation of the world and its practice will be instrumental according to the rationally established rules and knowledge. Conditions are set so that representation can be assumed in twofold manner: it will ascertain the intellectual knowledge geometry represents, and the degree of symbolic instrumentalization will be understood debating the arguments for its practice. Representation ranges between "(...) tensions and conflicts between experience, based on the continuity of tradition, and artificially constructed systems." (Vesely, 2004a).

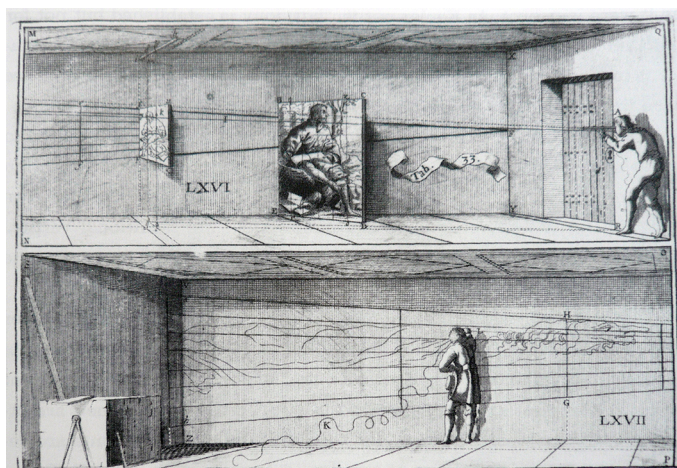


FIG:1: Jean-François Nicéron, La perspective curieuse ou Magie artificielle des effects merveilleux, 1638

Considering 17th century politics, philosophy, literature, visual arts and daily life, we may find a common quest for order, in an environment dominated by fragmentation, relativity of values, scepticism and pessimism. The radical response is based on a

dogmatic faith in a mathematical nature of the world order, which created, for the first time in human history, a mode of representation that simultaneously claimed to be fully independent and that could also be universally applied; “Because any representation, despite its claims to universality, is inevitably partial, there is always a residuum of reality left out, which has to define its own mode of representation.” (Vesely, 2004b).

The 17th century introduced modern scientific thought, whose rule is essentially mathematical. In this process, the experience becomes scientific and its method interprets and projects reality, leading it according to rules that are claimed to be true because they are justified. Confirmation takes on a leading role for the experience of project making. However, as Husserl states: “What in truth is merely a method and the results of that method [are] now taken for ‘real nature’; nature is reduced to a mathematical manifold.” (Husserl in Vesely, 2004c). Husserl draws attention to the *partiality* of sight proposed by the scientific method and to the instrumental condition presented along with it, as a power domain through representation. In this case, modern science mode of representation is neither demonstrative nor figurative but mainly productive; “Nevertheless, representation remains a problem in even the most abstract of sciences. The pure autonomy of science is a fiction which any genuine scientist would dismiss.” (Vesely, 2004d).

Assertively searching arguments for his thesis, Vesely quotes Max Planck in the following statement: “that a complete elimination of sense impressions is completely impossible – since we cannot shut off the acknowledged source of all our experience – in other words that direct knowledge of the absolute is out of the question.” He continues, stating that “what science represents is obviously determined both by the nature of scientific knowledge and by hermeneutical conditions – that is, the cultural context in which it is received and understood.” (Vesely, 2004e).

Science is therefore a partial representation of reality. Its accuracy through mathematical rules is a comprehensible part of reality that necessarily requires symbols in the need for a whole meaning. Consequently, scientific instrumentalization is only effective when identified with its perception as a sign. The contemporary consciousness cannot be detached from the harmony between symbolic consciousness (cultural) and the sign meaning (science) – that is, the search for meaning and knowledge.

In this context, instrumentation (*techné*) and symbolic representation (*poiesis*) do not set any kind of hierarchy – *techné* – instrumental ability – does not derive or exist upon subjecting *poiesis* – reality of the whole – but rather its existence refers to the complementarity of the whole: history transformed into theoretical understanding of form and form self-referenced by the corporeal immanence of its existence.

Scientific operation is mediated by the individual experience; therefore, “objectivity in science is in fact the product of human subjectivity.” (Vesely, 2004f). As a consequence, through perception, imagination and feeling, the project resists to standardization from scientific determinism.

As we aim to justify the duality of representation, its *frail totality* is proposed simultaneously by science and by philosophical and theological interpretation of the world. In the 17th century, Leibniz stated how the individuality of the senses might contribute to the perception of the world:

“The beauty of the universe could be learned in each soul, could one unravel all its folds which develop perceptively only in time. But as perceptions will embrace all the universe, the soul itself does not know the things which she perceives, except in so far as it has perceptions of them which are distinct and

heightened and it has perceptions in proportion to its distinct shape. Each soul knows the infinite, knows everything, but confusedly. (Leibniz in Vesely, 2004g).

This does not mean that drawing's artistic validity while aesthetic consideration in the project may override scientific truth as knowledge factor.

The idealization of the project, ranging from the subjectivity of experience to objective knowledge, historically resulted in various totalitarianisms of harmonious reconcile with the power. Instrumentalized symbolism, by force of historical manipulation through technological apparatus, has been over time displayed in the representation of power.

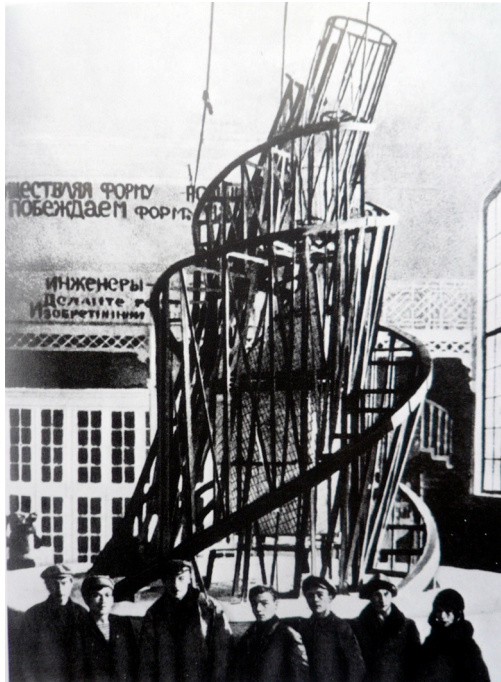


FIG.2: The Tatlin Studio Collective in front of the model of Tatlin's Tower, Petrograd, 1920

To our understanding, it is mainly in the constant conflict between parts rather than in the harmony of the whole that this reunion between the object and the place to which it belongs may occur. Drawing is, in this circumstance, the informal space of this conflict, a conflict that allows the transformation of programmatic content into formal content, through individual experience within a specific cultural context. At the best of its expression, drawing will grant the transformation of symbolic transcendence content into formal representation experienced and owned: an *object-figure*.

From the viewpoint of those who produce images (drawing) it makes perfect sense the reference to the experience Claude Monet told his friend, by the time his wife Camille died. He referred to his malaise as being 'prisoner of his visual experience', comparing his heavy pain to the weight of an animal pulling a mill wheel, because at the deathbed of his wife he perceived, before anything else, "the different colours of her young face"⁴.

The transformation of content into formal experience depends in this case both on the ability to interpret the transcendence of the meaning and on the ability to convert it into symbolic abstract meaning. The reality of the experience precedes the ability for

⁴ G. Clemenceau, *Claude Monet: Les nymphéas*. Paris: Plon, 1928, p.19-20

its critical evaluation. In the imagetic consideration of representation, the former is a constant and the later depends on the proposed iconography for each era.

“In Renaissance art, mathematics serves to approximate, mediate and symbolize. It still represents, on the one hand, the essential intelligible structure of reality, and, on the other hand, the visible manifestation of such structures.” (Vesely, 2004h).

Actually, the use of mathematics through perspective does not represent the pure objectivity of things, but instead the technical vision of the world. Perspective is placed as a possibility of technical knowledge through sight. What the Renaissance perspective represents is merely a new view on reality, depositing in the images the representative value of such reality. What that era sought was to associate technical images to the idea of a specific degree of productivity revealed by the knowledge of a method and its efficient ability for instrumentalization. The cognitive view on reality becomes mediated by technique, perceived as privileged for the act of representation. What is a mere technical tool becomes the instrument for reality representation. Is this not, even today, our heritage: the self-represented world through technology?

Nevertheless, individual movements of rational representation originate metaphorical meanings that are not technically explainable. Drawing unveils the weakness of the univocal representation of the world. The ambiguity of images, sometimes paradoxical, canvasses the cruelty of true representation. Perspective, focused on the point of view to achieve the understandable whole of the reality, unveils and demonstrates a merely contingent and partial view with which we struggle, the reality of fragmentation and the contingency of the parts. What becomes objective is the act of representation and not what it represents. The objectivity of drawing derives solely from figuration while object of the action to represent and not from what that object represents. What the drawing represents derives from the motion of the *object-drawing* in the act of representation, from the contingency of the metaphorical meaning that such motion acquires. The structure that defines the space-time of drawing is what lends the meaning. An individual time, referring to a collective space, is the structural mode of drawing. “The apparent objectivity of the picture is guaranteed not by reference to represented reality, but only by the objectivity of the representation.” (Vesely, 2004i).

Modern age, through scientific method, installed the meaning acquired by the fragment in the understanding of the whole, therefore demonstrating the meaning of the fragmented world. The modern paradox is manifest in the presentation of the fragment as an object-system to perform the representation of the partiality in which we perceive the whole. The symbolic meaning of the fragment has been increasing, since it embodies the very symbolic act. Such condition derives, as noted, from the fact that the fragment itself embodies the symbolic act but also from the decontextualization of reality henceforth regarded as the *true reality*. What was first the experience of the *part*, of the *element*, is now being experienced as being the reality. From its experience derives reality. The visual dominium is distinctively apt to represent the scope of fragmentation once it is much less explicit than the verbal domain, for instance. The overstated visual dominium of the world derives from the fragmentation technology exposed to us due to yearning for instrumental dominion. The conviction that representation, through a proper procedural dominion, may originate the true representation of the object is a false premise. In this case, drawing can only be proposed as a self-referential organism, exonerating what is external to it, being taken only as object of representation. The gap between the structural condition of technology and the context in which it operates reveals the *malaise* of contemporary representation exposing the inadequacy of meanings. The symbolic

character of representation conflicts with the instrumental character exposed by technology. In the worst scenario, it is assumed as an autonomous comprehension vehicle, dominating and controlling representation. Dominating the act of drawing, devaluing the contingency of action, temporal or spatially. In such case, the objects stem ‘*uprooted*’ and their appearance is not directly related to a condition. Apparently, the object circumstantially relates to the order through a dual narcissism that can only suit both parties. The illusion that we belong to the whole world is outsized and misleading. The speed in the access to the world has radically changed in the last decades, but still our biological body is not able to respond to such changes in the acceleration degree proposed by what is external. In other words, we may, due to necessity or enjoyment, travel around the planet within a few hours, but our physical ability of perception to apprehend the travelled places does not differ widely from a few centuries ago. The apprehension of the world through senses has not changed that much... Therefore, we can move from one place to another, and our anxiety, enhanced by what we *know to exist* is ever growing, we can undertake long journeys through different and faraway places but we cannot (at least for now) accelerate the absolute knowledge about them. We talk increasingly more through machines, mechanical, social, political, and ever less through the body. Contemporary style is a loquacious and strident one. In our opinion, drawing that acts attempts to oppose itself, as a possibility for a laconic response, paused and noiseless.

Contemporary style, individually luxurious, is culturally modest, often undifferentiated because problematically confused. “The current obsession with substituting a personal style for the richness and complexity of design demonstrates just how stifling this influence is.” (Vesely, 2004j). Vesely justifies the importance of considering style with the following statement from Kurt Schwitters: “The word ‘style’ is worn out but still it signifies better than anything else the type of artistic striving that is characteristic of our time.” (Vesely, 2004k). He continues stating that, “The dilemma at the heart of the modern notion of style is ultimately a problem of representation. Its source is the gray zone between symbolic and instrumental representation and the persistence, even in instrumental representation, of a certain residuum of derived symbolism. This residuum can be traced back to the history of character and the transformation of its symbolic content into formal aesthetic appearance.” (Vesely, 2004l).

Vesely seeks to clarify the latent importance of representation’s symbolic content even when it is hidden in formal aesthetic appearance, instrumentalized by technology. It regards the humanistic culture concealment, whose representative emphasis focused on communication, in combining skills and in the balance among different areas of knowledge. This tradition was sustained by the notion of *decorum*. *Decorum* as equivalent to *decor* in Vitruvius’ text is regarded as the “‘faultless ensemble of a work composed in accordance with precedent (*auctoritas*) of approved details”, and is described as based on convention (*statio*), custom (*consuetudo*), and natural circumstances (*natura*).» (Vitruvius in Vesely, 2004m).

However, what is rhetorically closer to the Latin *decorum* characterization may perhaps not be the Vitruvius’ explanation but the derived Greek notion of *prepon*: “such is its essential nature, that it is inseparable from moral goodness, for what is proper is morally right, and what is morally right is proper.” (Cicero in Vesely, 2004n). As noted by Vesely, the tension that exists in Latin *decor* and *decorum*, between ethical and aesthetic meaning, does not prevail in the Greek *prepon*. In Greek, what manifests as ethically perfect is aesthetically beautiful. *Prepon* would mean “(...) a harmonious participation in the order of reality, as well as the outward

expression of that order.” (Vesely, 2004o). *Decorum* tradition preserves in the derivation of *prepon* the notion of adequacy of representation to a harmonious conciliation with what is external. The ethical and aesthetic principles are compatible in the form. The *decorum* does not express representation but the associated truth. The association of the notion of *decorum* to representation is a factor of openness of the latter and in this case, as noted by Vesely intending to associate it to the Vitruvian definition of *decor* is “more of an obstacle than a help for any genuine understanding of representation.” (Vesely, 2004p).

Design or architecture “like any other art, is a representation of human praxis and not a direct representation of nature or abstract ideas. Praxis, situated between ideas and nature, serves as a vehicle of their unity.” (Vesely, 2004q).

The practical implementation (*praxis*) of the action of drawing gives form to the project. To execute the project is therefore to act through images. These will be what is probably nearer to communicative performance of visual ideas. Each projectual situation refers to a practical action in the visual sphere, that is, a practical operation turned concrete through images. The practical nature is revealed in *why* those images and mostly on the effectiveness of *how* they arise; the *how* concerns the practical nature of the action and that experience, besides exposing a way of making exposes a way of thinking. This is the particular aspect we are concerned with when qualitatively assessing project drawings.

3. What expression (poetic) for the project: as interpretative mark of imagination through authorship?

The projectual making of the object, turned concrete through drawing poetics, cannot be found in the rule definition – constructive or idealized. According to Perez-Gomez, in the level of making,

“[artistic] knowledge is corporeal, not a concept or an abstract idea. Inspiration cannot be achieved through method or theory. We cannot passively wait for it [...] it is always found *in action*. [...] The inspired work appears in the making process, keeping a *playful* attitude in creating and in the ability to respond to unexpected discoveries.” (Pérez-Gómez, 2006a).

The projectual process making, turned concrete through drawing, supposes an adherence to images as a way to access the object. “It is through the images that we can apprehend the objects” (Marsilio Ficino in Pérez-Gómez, 2006b). Visual consciousness is formed through images contemplation, the real nature of the projected object can only be approximately achieved through its image, and its critical development depends on the relationship we are able to establish among images. The project limit will then reside in the allure the projectual images create (even after the object is built).

The consciousness *work* is closer to images than to objects; therefore, drawing is the simplest way to make projectual ideas reach objects. The beauty operating through consciousness is immaterial. Unmeeting the materiality of the object, it reflects on it, through the *mirror* that its image is.

In Western culture, the characterization of beauty depends on immaterial aspects of the object, as their *proportion* (= proportion of the parts, relationship between quantity, volumes that limit the object), their *aspect* (= meaning the object acquires, not through materiality of form but through what is projected onto it, light and shadow, colour), its *composition/arrangement* (= full and empty – distance of parts, intervals between parts, spaces or elements). Mingling among aesthetic aspects allows

the object usefulness in its practical function but also its usefulness in terms of enjoyment and knowledge.

As pointed out by Pérez-Gómez, the Greek quality defined by *prepon* means “what stands out as good.” In Western culture it is associated to the artefacts’ regularity, defined by numeric proportion of geometric shapes. However, there are exceptions to this generalization. Giordano Bruno, in his individual peculiarity, states that “beauty is a secret communication that has nothing to do with the ‘prescribed proportion of parts’.” (Giordano Bruno in Pérez-Gómez, 2006c). Reporting to other cultures demonstrates that this association (of good to geometrically regular) neither assures aesthetic beauty concept nor ethical principle, as it is hardly true. For example in Japanese culture, the principle of harmony, whose meaning could be close to the Greek *prepon* is not linked to geometric balance as in the Western order. The balance of the artefacts depends much more of an internal arrangement – inner to the object and embodied in the action of the individual executing it⁵ – rather than on formal rules, with a mobile principle not set by order. This mobile principle is linked to rhythm, hidden movement, shadows evoking light, to the invisible appealing to the visible.

Equilibrium principles such as symmetry, equitative balance of weights and measures, and space arrangement according to geometric layouts are not rules that apply in the construction of Oriental culture artefacts.

However, the immutability of the rule that in Western culture derives from the positivist account of science, begun in the 17th century, certified in the following century and nowadays instrumentalized by technology, does not arrive straight from the Greek account, Vitruvius particularly, as he considers that the regularity of the artefacts stood out (in contrast) in the mutable context of the world.

“The core purpose of Vitruvius’ theory is not to establish a direct relationship between practice as a set of techniques (like those of modern theoretical discourse), but rather to understand the meaning of the discipline by meditating on the order of creation.” (Pérez-Gómez, 2006d).

In the Renaissance period, when projectual consciousness is autonomously outlined, according to Leon Battista Alberti, the object of architecture ceases to be a mechanical product, constituting a way of knowledge through the project. Contemplation, forming visual consciousness, is accomplished in a game of existential observation, hence fragmented, attempting to be an intelligent attitude by establishing an overview of the world represented through drawing. This attempts to be a global construction through the project as *lineamenti* of the object. *Lineamenti* according to Alberti would be the essential geometric ‘idea’ close to the concept of project. *Lineamenti* as: 1. derivation of the architect's thinking; 2. formalized in drawing; 3. conducted by the existence (construction) of the object.

According to Perez-Gomez,

“these drawings [lineamenti] were intended to be prophetic, not as systematic representation of future construction, but as poetic images that are truly mantic (term derived from *mania*, or ‘madness’): an architectural promise of future, divination, quest for perfect living.” (Pérez-Gómez, 2006e).

⁵ For example in Japanese culture, the manufacture of a dagger to offer implies a ritual that turns it into the *proper* dagger for a specific person. Therefore, one wishing to offer a dagger, besides buying, arranges a series of meetings with the artisan. The person to receive and the person to offer the dagger will be discussed, as the relationship between them and what may be subjectively and objectively involved in the offering.

Since its origin, such prophetic longing is destined never to be accomplished. “The truth in the prophecy and the excellence of poetry” will remain as projectual limit whose scope will never be fully reached by the object built. In this case, drawing will be the poetic proof of the transcendence longing and the object will be the mediation of the unmet transcendence.

The Renaissance perspective, as a longing for intelligible comprehension, 'limits' drawing by setting rules for comprehending and representing the world. The intelligible understanding and representation arguments will override contemplation, limiting the *idea*, rendering it appealing and understandable – in other words, profoundly instrumentalized. “He [Alberti] sought to create a ‘charm’ space (term derived from the Latin *carmen*, ‘enchantment’), a seductive depth that might make us aware of its potential totality.” (Pérez-Gómez, 2006f).

Giordano Bruno, another Florentine author of that period, states that nothing exists beyond experience, and proposes memory as the instrument for human experiences 'connection'. According to this author, the seductive ability of images would create a memorable experience that would allow their fixation, making them more operative. In this case, perspective has nothing to do with truth but rather with seduction inducing memory to relate images. Thus, the *disegno* identified with the current of images association may differ from *lineamenti*, ‘limited’ to the idea of project instrumental efficiency. Artists like Michelangelo, for example, seem not to be interested in *lineamenti*.

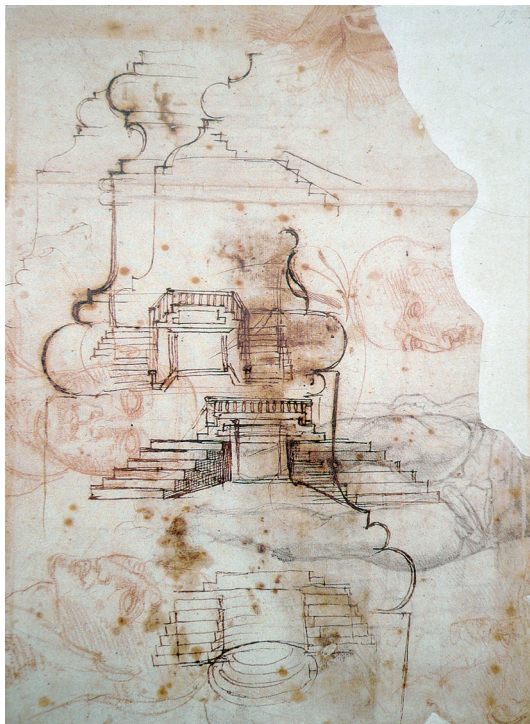


FIG.3: Michelangelo, Biblioteca Laurenziana drawing's, 1525(cc)

As an architect he does not practice *lineamenti* preferring the wider use of *disegno*. For example building paper templates for the projects of his architectural pieces. Or yet assessing the potential of the incomplete in his drawings, the ‘*deambulation*’ through the composition where forms ‘appear’ more through senses than through delimiting reason.



FIG.4: Andrea Pozzo, Affresco ceiling, Sant' Ignazio, Rome, 1685

Subsequent representations, particularly during the Baroque period, will use the senses as *practical reason* for representation. Perspective will be guided by multiple views, multiple vanishing points and from there onto their disappearance in the space of representation. Light will replace perspectival representation, carrying the vanishing point outside the frame. The perspectival composition, *quadratura*, “exploited a newly discovered human capacity for productive imagination – contrasting the literal *mimetic* imagination from previous eras – transforming geometric figures into architecture ‘projections’ launched to the light.” (Pérez-Gómez, 2006g).

This implies that the consideration of *disegno* as a representation wide view, proposed by the association of images, even from the standpoint of the project may be ‘superiorly’ addressed regarding the *lineamenti* understood as the representation of the regulating geometric ‘idea’. The *disegno* will impose, practical and ideologically, its acting force present in the projectual creation.

In the discipline of design, drawing, from *disegno*, as a tool, simultaneously involves conception (idea) and construction (technology) thus, operating the contradiction from which result design’s poetic images. Drawing longs to meet and preserve the culture to which it belongs and for which it is an instrument, under this condition it can only outdo itself technically. In the presence of its cultural imperative, drawing that operates is a language continuously engaged in self-enhancement. This is the paradox generating its fertility. Rhythms and movements that generate life experiences, which can never be fully translated but yet poetically experienced. Drawings that materialise the idea are only approximations to the object’s reality, from the viewpoint of the object they can never be completely deciphered, only made explicit in the confrontation with the object’s existence.

The object of design based on a project whose language is verbal risks being just ‘discourse’, more or less articulate but still essentially rhetorical. On the contrary, the object that stems from a drawn project, using image poetics and ethical representation, reveals its cultural farsightedness.

Conclusion

The origin of the relationship between Drawing and what nowadays is named Design can be particularly identified in the Italian Renaissance era. Diachronically, in Western culture, this was an outstanding period for graphic expression in scientific and artistic research on nature and men. Over that period, the art of drawing achieved notorious theoretical and methodological significance as a means to describe – as in figurative writing – the excellence of comprehending Nature. Images and texts integrated in common ‘templates’ would henceforth present the comprehension of Nature, prefiguring an abstract explanation of the scientific observation, incorporating artistic competence.

Nature’s representation and observation methods belong to that same level to the modern drawing of concepts and plans in architecture and in ‘design’. In fact, the same sharp intelligence activated through drawing regarding the survey of Nature’s forms was oriented towards designing plans for civil, military and naval architecture; the same painting practice, due to perspective algorithms, becomes a symbolic and explicit example of art and science concurring.

Obviously, the history of Design was officially updated later, but this historical and humanistic benchmark in the history of representation is commonly recognized in several countries. Other geometrical standards would be defined in the following centuries in order to organize architecture projects visualization modes.

The historical beginning of modern design is commonly placed in the second half of the 19th century, at the time of the Great Exhibition of 1851 in London. Thereafter, the development of contemporary Design in the Italy of the 20th century can easily be documented, visually, through the art and practice of modern architects’ drawing, talented craftsmen and post-war industry (not only furniture). In other countries, different cultural settings determined different paths towards the onset of a national identity in some recognizable sort of local design practice.

The development of Portuguese design, in particular, suffered the effects of a deep connection to drawing, due to teachers’ background training in the Fine Arts Academy. Therefore, a decorative and symbolic approach to the project is quite noteworthy in Portuguese design projects.

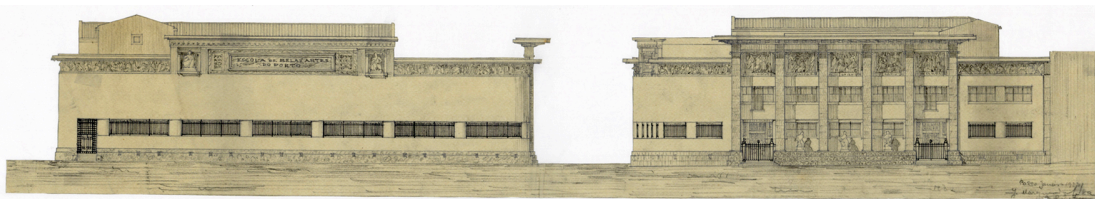


FIG.5: Marques da Silva, Escola de Belas-Artes do Porto, 1923

Design is essentially a visual discipline and therefore the verbal reasoning translated into projectual rhetoric will never grasp the object’s true reality. Drawing’s visibility becomes perceptual reality in the project. The 17th century’s perspective and overall scientific culture granted the project special visibility. However, and paradoxically, such visibility demonstrates the imponderability of the representation space, the unpredictability of the projectual form as well as the indeterminacy of its methodological resolution. Through drawing, the project’s cognitive instrumentality is questioned. Through projectual action, longing is transformed by drawing into designium from experience, whose reality is made concrete through the object.

The design object stems from a reconciliation between dream (from authorship) and reality (from the program) enabled by drawing as technical action transforming matter into image. Being so, drawing works as projectual metalanguage reconciling and/or confronting the parties, offering the project its possibility for uncertain resolution.

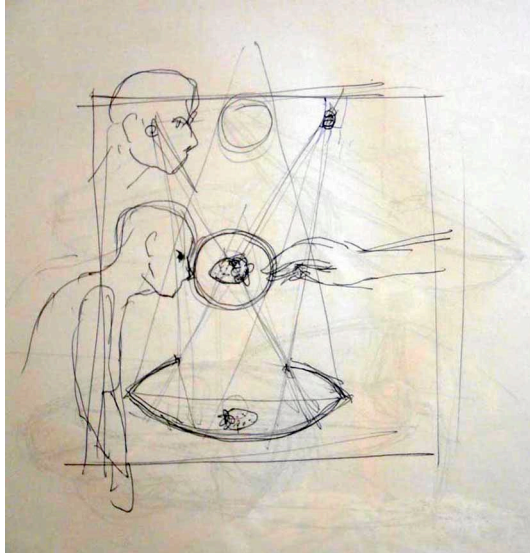


FIG.6: Francisco Providência, Exposição, 2004



FIG.7: Fernando Brizio, Viagem, 2005

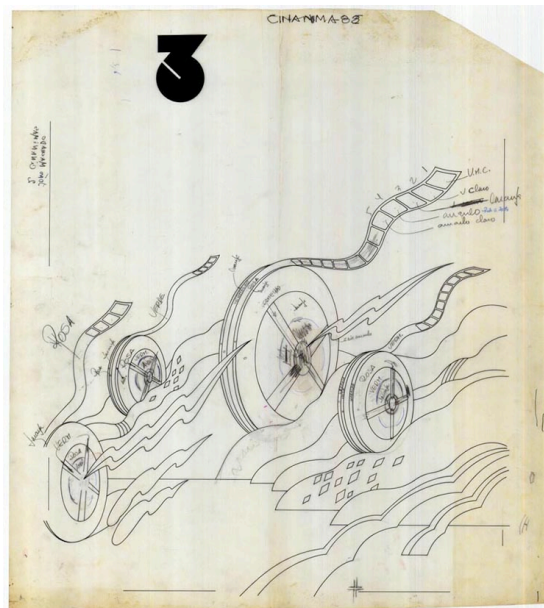


FIG.8: João Machado, Cinanima poster, 1988

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