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Current challenges in design teaching

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ABSTRACT
This analysis responds to the thinking of a humanist current regarding understanding and its links with praxis, focused on design. It is unavoidable that designers in training are widely aware of their teaching that encourages reflection on themselves, their temporality and spatiality, their context and the important role that knowledge and research play in this. To understand design as theory, as a process and as a result, the unconscious vestiges must be reviewed, since research is unquestionably found in each of the actions of a designer.

Keywords: Design, Research, Understanding, Education.

1 INTRODUCTION

As designers, we are constantly in contact with the world. These correspondences emanate from the creation and representation of the environment that surrounds us, always responding to questions and needs for communication or the solution of problems of formal configuration.

From a critical design perspective, research emanates and this is not generated about design, but in and for design, this means that, based on concrete experience, the intention to search for all the parameters involved in practice is conceived to translate them into the various theories necessary to understand design.

Research thus implies leading to reflection and sustaining the foundation of all design praxis. As Vieira (1961) mentions, there are two aspects of design, that of the representation of the facts that occur in the project process in their causal and circumstantial correlations on the one hand, and on the other hand, that of a naïve consciousness that conceives itself superior to the facts, pretending to dominate design from the outside. According to the latter, designers consider themselves free to understand what is designed as they like.

This dissertation is based on considerations by Paulo Freire, for whom every understanding always corresponds to an action. Having grasped an epistemological challenge, man acts. Thus the nature of action corresponds to the nature of understanding, if the latter is critical, the action will also be critical. If we want to allude to a "magical understanding", the action will also be magical. (Freire, 1994, p. 97-113)

2 UNDERSTANDING ISN'T EVERYTHING FOR DESIGN

On the basis of the premises set forth above, the discussion about understanding and comprehension is opened. Used synonymously, understand and comprehend are terms that operate on different levels of knowledge; the first refers exclusively to the realm of the making of design, the naked doing, without attributes; that of its causal or pragmatic determinations; the second alludes to the designer and the value of his conduct.

Understanding is an act of intelligence, an act of knowledge, of insertion of the being of design, of grasping or apprehending its internal determinations and its external relations. Like any act of knowledge, the result of research, it is a relationship between concepts and objects. To understand is to explain, to unfold being, to specify its content, to know its meaning. Human beings understand when we recognize the meaning of what we have some kind of knowledge, even if it is only descriptive.

When propositions are explored, the understanding begins with their interpretation, which implies a threefold determination, corresponding to the dimensions of every sign:

- Semantics, concerning the relation of the proposition to the reality to which it refers.
- Syntactic, relating to the internal meaningful structure of what is proposed.
- Pragmatic, linked to the recipient or receiver and the scales of capture of what has been received in a sign exhibition. (Morris, 1994)

The planes of the sign shape epistemological and logical aspects of interpretation. Consequently, understanding involves a twofold process concerning the meaning of what the suggestions say and concerning any corrections made to the propositions.

Epistemology establishes rules of relation between object and concept, and logic establishes rules of relation between concepts in meaningful propositions. The first orders the world, the second thought. Knowledge is, in essence, the ordered relation of concepts. The act of knowledge is, above all, conceptual praxis, operating on concepts, relating them, which implies investigating. To act with concepts means to relate them, and this is only possible when one investigates systematically.

Design propositions are fundamentally, but not exclusively, prescriptive, ordering behaviors. A communication system emanating from design is a set of prescribed behaviors, ordered behaviors. Every design structure includes definitions and statements, which are essential to specify the scope and conditions of application of the standards.

Design is understood when it is possible to identify the delimited behavior and its conditions of possibility; when the requirements for the application of certain guidelines are determined, and the conduct is recognized in advance. However, it is not enough to understand in order to recognize the design, it is necessary to understand it.

To understand is, in addition to penetrating design, to go beyond its forms and take it, to gird it, to embrace it, to make it intimate and one's own, to unite it within oneself, to merge it, to share it; It

is an act of reason that not only explains; it also justifies, attends to the hidden motives of human behavior, which learns in its evaluative dimension and judges designs in order to make them visible from other points of view, to accept them and to share or reject them; It decides on the foundations of what is known.

The ability to comprehend a theory, a person or a piece of knowledge determines the measure of the rationality of the object that is understood and of the subject that does so.

Comprehension imports the evaluative factors of a domain that is not exhausted in the explanation centered on human action, it implies considerations of an ethical, social, cultural, political, religious, aesthetic nature, etc., conscious or unconscious, integrated or not in a conceptual system that constitute what with greater or lesser precision and at different levels of knowledge is called worldview. spirit, object, ideology, etc.

Understanding is the totalizing task of knowledge, it is the final mission of the unity of knowledge, it demands the maximum rational effort to which man's knowledge can aspire. To understand is the work of the intellect, to comprehend is the work of reason, while the former divides men, the latter unites them; The first identifies in order to distinguish, the second in order to integrate, is consolidated with research processes and is understood as a critical understanding of reality. (Santos, 2008)

The principle of rationality of doing – and of knowing – presupposes that all the differences, the contradictions that occur in reality, are part of the same world in which they find accommodation, governed by the same laws and common to all. The attribute of comprehension is, in this world, the supreme desire of human wisdom and can only be accessed through research, despite the fact that, according to Gómez and Lambuley (2006, p. 79), we come from a city culture that pays frank homage to the laziness of thinking and investigating.

3 CRITICAL DESIGN THINKING IN RESEARCH

In another order of ideas and with a similar sense, as in the practice of the act of design, in order to apply any model of design teaching, a reflection on the meaning of research in this discipline is required, to define what it is and what it means for professional communities. What is most worrying in this regard is the lack of consensus on how we identify the contents of the projects and how they contribute to the real purposes of this activity. Richard Buchanan states that:

> Behind the discussions, there are fundamental differences in vision and philosophical perspective. Possibly we will have major consequences in the development of design research for a certain period of time, but there will be consequences, affecting both the practice and education of design. Changes are coming sooner than we expect. [The author expresses concern] about how we will train the next generation of students who will have to understand the legacies of design and raise the challenges of new learning. (Buchanan, 2001, p. 23)

It must be recognized that design does not have a theme in the traditional sense that other disciplines and fields of learning conceive. The characterization of this task is linked to the conception, planning and creation of objects with various purposes, and this sequence is considered to meet personal, professional and collective objectives. Many theorists conceive design in terms of a project, which do not reach the theoretical essence or the proposal of a set of taxonomic categories with which a structure can be accessed from which new proposals of knowledge arise.

When we talk about research in design, ideas are directed towards what is designed, which makes it difficult to delimit research to an infinite number of material objects and the immaterial conceptions they imply. It is for this reason that it is convenient to make a distinction between the way in which research is constituted for the design design process, and the subject matter that is linked to the discipline itself.

When we study design, we are linked to a human action emanating from identifiable socio-cultural factors. According to constructivists, society itself is a phenomenon whose structure and organization, like what is designed, is carried out by human beings, not arises from nature; Thus, there is the possibility of carrying out cultural studies on what design has been in the past, what it is today and what it could be.

> The fundamental principle of critical thinking receives in the problematization, the questioning of what is given and established through a social-historical integration of concrete phenomena in order to understand them in the framework in which they arise, operate and acquire their significance; A perspective that aims to elucidate, in the cultural field, which tendencies attend symbolic products, whether progressive or conservative, those that resist and dispute the power of the day, or those that naturalize their possession and ways of exercising it. (Margiolakis & Gamarnik, 2011, p.104-105)

What this reflection leads to is that in order to understand design, numerous disciplines are required to study its various aspects, and to understand that it is an area whose understanding cannot remain in the reductionism of the production, distribution and consumption of objects, design recognized as a discipline is much more extensive, vast and abundant in its cognitive conditions. and it is the duty of research to delve into them in order to increase the intelligible corpus of an activity so important to civilized life.

There are many possibilities to investigate both the causes and the socio-cultural effects resulting from this human intervention recognized as design. Sadly, we do not have paradigms for the research of the discipline, although it is not a discrete and stable phenomenon, while its knowledge can be considered considerably cumulative.

4 THE PROBLEM OF DESIGN RESEARCH

Nor is there any acquiescence (acceptance, conformity) on the applicable criteria of the multiple methods with which one can approach the various values of design. The interventions that are carried

out always have productive intentions and the projects that are carried out based on them generally remain at very basic levels of research, they only provide generic or discursive characterizations and in the best of cases leave some objectual testimony in which the circumstantial usually has greater transcendence than the conceptual.

In order to expand the accumulated knowledge on design, it is essential to identify research problems that advance the epistemological *corpus*. Likewise, it is urgent that research translates into the formation of communities of researchers who work in relatively defined periods on a set of epistemological territories for which there is scarce literature, insufficient authors and incomplete theories.

Every year, numerous opportunities for project funding or funds allocated to research grants are lost due to the lack of support from a guild that, to date, has not been able to bring together the most outstanding experts in interdisciplinary searches. Although it seems that the dissemination of the results of research projects only has an impact on academic communities, it is inevitable to observe the detriment that there is in the concentration and materialization of design that we see daily. The resources of appropriation, imitation, plagiarism and copying have become a recurrent practice, as well as repetition and stylistic recycling, which do not have the validation of the unpublished.

Despite the fact that postgraduate courses in design are not recent, and that their fundamental principles have been known to all: the training of teachers and researchers, these purposes have not yielded the results that could be expected. One of the main problems is that there is no articulation of convenient routes that serve as guidelines for teachers, students, professionals, researchers, and even for the development and evolution of curricular maps in teaching programs.

There are authors such as Víctor Margolin (2010: 73-74) who harshly question the purpose of opening up doctorates in design, since, according to him, the orientation is unclear. The author speaks of a dissociation between research design and the design professions. It also highlights the fact that local and international design associations such as ICOGRADA (International Council of Graphic Design Associations), ICSID (International Council of Industrial Design Societies), AIGA (International Association of Design Professionals) and IASDR (International Association of Research Design Societies), have little or no connection to the world of design research.

Consequently, the general field of practice is not called upon to serve a specific purpose at another level, and the consequence is that there is no formal relationship between the design research community and those who design.

5 THE ISOLATION OF RESEARCH COLLECTIVES

There are other interesting phenomena, the first of which lies in the amount of design research carried out by experts from other disciplines, who ignore the field of design and its specific patterns, even though they bring interesting elements that underlie both interdisciplinary theory and practice.

The second lies in the international recognition of important research niches carried out by designers, a case in point is Finland with the Cumulus programme (2018), with more than two decades working with universities around the world on projects in the different areas of design. Although they have made efforts to disseminate the results of their efforts, and that they are accessible on the Internet, the language barrier is a major impediment for researchers in Ibero-America.

In addition to the international program, Aalto University in Helsinki, (A!, 2018) has managed to transdisciplinarily merge arts and design with economics in technology, planning advanced studies in fields related to the various options of design in the firm idea that innovation is possible based on interaction. Unfortunately, the research carried out on this site is the property of the industry and is not part of the achievements that the international design community can benefit from. There is no way to access the theoretical underpinning, the process or the results of the projects.

A second singular case is the Massachusetts Institute of Technology (MIT), which has opened the doors for experimentation, taking risks in solving problems together with designers and artists, understanding that its interdisciplinary laboratories cannot leave out creative professionals. Media lab graduates are well prepared to carry out design-related tasks of an advanced nature, however, they are trained for working life and often find their career path in large corporations. Likewise, MIT has been committed to maintaining the publication of important journals on the history and general culture of design for decades (MIT, 2016).

It is also worth mentioning the efforts of the University of Palermo which, through its annual congresses, encourages both students and teachers to get involved with research and, contrary to the criteria of many universities that profit from their publications, the *Design Proceedings* (UP, 2018) and other titles are available as open knowledge on the Internet. These types of actions allow the formation of important research groups to work for and for the generation of knowledge about design, "knowledge is an attribute of the human being. [It is important] to detect, observe, describe, compare, define, classify, argue, explain, reproduce and create [...]" (Morán & Alvarado, 2010, p. 3-5)

This is how we find these islands of knowledge, which do not even communicate with each other. They find around them groups whose language is absolutely technical and in general the discussion and literature on how to establish better relationships between the fields of research and their improvement, have a minimal audience.

Third, and no less important, is the lack of focus on research, as is done in other disciplines. Generally, universities, when they have a faculty, open separate departments for areas of knowledge

as the optimal front to specialized problems and projects. This does not happen in design, faculties tend to present a single parapet, without looking for the different fields of competence of the discipline.

Not even in postgraduate studies are there specialization, the propensity is to call them master's and doctorate in design. At most, in some universities it is indicated that the level refers to graphic design, industrial design, architectural design, etc., but it is still too broad a panorama. It is expected that in the future it would be possible to find master's degrees and doctorates in interaction design, mobility design, proxemic design, sustainable design, to mention a few specialties.

6 EDUCATION AS A TERRITORY OF RESEARCH

Graduate programs should be referred to as well-identified generic problem areas of research, thus giving students certainty about the direction of research that is feasible to undertake. It is also possible to suggest interdisciplinary postgraduate degrees, e.g. master's or doctorates in design history, design pedagogy, sociology of design, etc. It must be assumed that "learning in universities, in this sense, is an intellectual and professional experience, but also a personal, social and ethical one." (Medina & Mendoza, 2009, p. 56)

In this way, research streams would be opened with topics in which experts from other areas, interested in design, would participate. This is what constitutes the content of research recognized as the study of design, to distinguish it from research on design processes.

To clarify the areas of research and design teaching at the graduate level, it would be important to: distinguish between design research and design studies; delimiting the role of practice in research projects; differentiate the kinds of practice from design, so that at least the lines of research can be developed based on well-identified domains; Make an effort to circumscribe the practice of design and clarify the distance it maintains with other types of analogous practices.

Bruce Archer (1995, p.11) recommended for decades the construction of research nodes, which would be representative of the formulation of interrelated research activities, he is credited with the first organized attempt to establish the conditions of design research, based on a tripartite scheme: *research about practice, research for the purposes of practice, and research to support practice*tags. This resulted from the need to approximate the meaning and value of projects, as well as their potential, to the interests of others. When researchers in a field are clear about what they do, such nodes emerge easily.

Design research is international, although the communication of its results is obstructed by the lack of a common language among researchers. There are specialists in Brazil, Japan, Korea, the United States, Mexico and other countries whose work is not known outside their own territory. This is particularly evident in the history of design, where much research published in non-Spanish-speaking languages is unknown to Ibero-American researchers.

The need to review research trajectories and identify seminal texts that have been published in different areas, whether in the form of books or articles, is transcendent to provide feedback to education. It is not possible to demand advances and changes in the teaching of design, if there are no shared efforts in research initiatives and the exposure of diverse interests in projects.

> Research is educational to the extent that it can be related to the practice of education [...] two points: first, teachers must be intimately involved in the research process and second [...] action theory is clearly testable by action research. (Stenhouse, 2007, p. 42-49)

Recovering the literature of the discipline is one of the emerging tasks, since alternatives can be extracted from it to reconsider the lines of research of a postgraduate degree. Design knowledge is the heritage of students, teachers, researchers and professionals in the discipline.

According to Robyn Tudor, educational support through research into the interactive and socially situated nature of creativity as a higher-order human capacity, can be found in the "cycle of imagination" proposed by Vygotsky. (Tudor, 2008, p.11) This notion of creativity implies an intentionally generative form of productive learning that activates the search for new knowledge. This is easily distinguished from traditional forms of reproductive learning that aim to merely replicate established knowledge and skills. Vygotsky's (Lindqvist, 2003, p. 245-251) view of creativity emphasized human inventiveness and focused on the ability of individuals to speculate and foresee the future. This includes anticipating change, while at the same time participating in the present without forgetting that the past is a guide that inspires moving forward.

Research contributes to the teaching of design, insofar as it engages with the multiplicity and integration of important ways of signifying visuality. Research is a way to focus on the realities of growing local and global diversity, integrating its results into multi-literacies. It is an approach to the cultural differences that have become the center of the designer's pragmatics.

A good part of the transformations in design comes from the contributions of new technologies, with which research must interact at subtle levels of cultural insertion, since change also obeys new cognitive and social relationships. This translates into hybrid forms and informal writings, which are found on the web and are part of the *body* of knowledge that comes from particular research. There are therefore many reasons why research must change if it is to respond to the new demands of knowledge, helping students to have access to contemporary theories and thought.

As Cazden (1996, p. 64-72) mentions, institutionalized schooling is still the most important crucible of research, and at the same time fulfills the function of assimilating the results of this into teaching.

To be relevant, teaching-learning processes need to incorporate the ideas of different objectivities, subjectivities and intersubjectivities. To this end, the resources provided by research projects are fundamental, design cannot do without them.

6.1 RESEARCH AS A WAY OF APPREHENDING CONTEMPORARY DESIGN OR *EPISTEMOLOGICAL METAMORPHOSIS*

The variety of epistemological and axiological conceptions, which have proliferated as fashions in the last decade and affirm in all tones and for all reasons, the impossibility of values, adds to the wide diversity of reasonable arguments. The multiplicity of currents, ethical, social, political, economic, etc., that shape the underlying interests and aspirations in everyday life, as well as the language and average culture of society, allow us to understand design in very different ways.

These versions of design, design and designers, coexist and merge into more or less conscious eclecticisms, making them more difficult to understand. However, it is not permissible to renounce it, because the risk is to accept any order as legitimate, in times when the criteria of truth seem to have lost rational foundations, this is where research is the great mediating task.

In times when the language of knowledge is common and evaluative tendencies are expressed in it, the profound aspects of understanding underlie the homogeneous background against which debates of the theoretical and practical problems that confront each other take place. In times like the present, characterized by the fragmentation and randomness of knowledge, we reach the point where over-specialization reaches fundamental categories and disappears from the sciences into the common language. The impossibility of posing and solving problems with the prevailing models of knowledge makes the theme of the need for conscious research recurrent, so that understanding rises to the foreground and exposes the intellectual and evaluative difficulties that are proper to it.

During the Middle Ages, the language of Aristotelianism and Christian theology provided the common ground on which Augustine of Hippo (1946), capturing the spirit of the age, asserted in his *Sermon 43* that one need only believe to understand. This orientation makes possible systems of thought and intense debates on the subject. The profound divergences between the intelligences of the time do not, on the contrary, impede the understanding of the common world, as designers do today.

The change of times is announced, in that same world, during the thirteenth century, by Abelard, the great persecuted, who inverts the formula and claims the need to understand in order to believe, avoiding words devoid of intelligibility and reasoning. (Abelard, 1983) Today, the diversity of languages and methods, as well as the multiplicity of conceptually unrelated subjects, make such possibilities unthinkable. Fragmentation has reached such levels that any attempt in this direction requires the reconstruction of language if it is not to serve to hide and disguise reality and pervert thought and the reunification of the world and disciplines such as design; conditions that highlight the problems of perception and the role of reason in the so-called tendencies that obey only the superficial and ephemeral.

These are days of transition in which, the deployment of intelligence, is followed by the withdrawal of reason; days when knowledge gathers about itself and recounts the achievements of its

expansion. For design, immersed in an acute crisis of identity, efficacy and validity, it is time for redefinitions because it can never be the same as it was in the world that gave rise to it, where it was identified, effective and valid, because that world has disappeared. The chrysalis of design culminated its development phase more than two decades ago and it is unquestionable to complete its metamorphosis, epistemologically speaking.

The present world is no longer one of compositional and formal regularity for which the law is an adequate formula of expression, today's world is a more flexible and mobile one. We evolve in a changing present at the speed of electronics, where compressed time and space demand immediate normative proposals, not typical of the slow design process, but of the dependent decision expressed in the available codes, agreements, alliances, consents, etc., that make up the daily applause.

The generality of the approval has become a point of reference and is no longer, on many occasions, the measure to resolve and identify the particularity. The variety of social and cultural relations demands norms that are less and less precise, more individualized, and difficult to derive from general theoretical contents.

The rational imperative has ceased to be "let us reflect" to give way to "let us proceed", in the face of which design has lost its guiding capacity, in the same way that what is designed has ceased to be the result of a design project and, therefore, of a research project, given the multiplicity of doctrinal currents that prevent its unity. Freire's (1994) formula, according to which action derives from understanding, is thus destroyed; Design is no longer a challenge to reason, and its nature no longer corresponds to the principles of reason.

It cannot be otherwise, the variety of knowledge models, -central subject of epistemological debates in design-, also implies diversity of projects, leading design along paths in which it has lost its authority and with it, the ability to orient its guidelines based on methodological normativity.

Design has ceased to respond to its old conception of general regulation and lacks defined criteria for establishing particular regulations demanded by current social relations. Both the design and its foundations, immersed only in their practical effects, lack the principles and criteria of validity that allow establishing the paths in which a future horizon of the profession is regulated, despite the fact that its formal categories and discursive developments are feasible due to technological resources.

In design, as in medicine, the efficacy of the general formula manifests itself and makes full sense in each particular case to which it is applied. It is not enough to know the general measures that are thought to be suitable for the desired purposes; neither laws nor prescriptions are sufficient or expedient in all cases in which they apply; Like human organisms, each social relationship has its peculiarities and demands, as in medicine, special treatment in order to achieve the goal demanded by discourses, genres and messages. This requires an effort of research, of understanding, of intimate, intense and precise knowledge.

The idea of the mechanical reality of the world presupposed not only the general validity of technology, but also its strict efficiency and adequacy to each case included in it, as well as the possibility of applying the general formula to each problem automatically, through the operation of a strictly formal deductive reasoning. However, just as physical phenomena presented so many small deviations from the calculations in the laws, that not even the most complex artifices could correct or explain, and a new interpretation of the world and the movement of bodies became necessary, a circumstance that gave rise to Einstein's Theory of Relativity; Thus, the twenty-first century has demonstrated, due to the lack of research and reflection, the insufficiency of formal deduction and the impossibility of conjecturing all the social variants regulated by design. Unfortunately, design is still awaiting its revolution and its understanding has become increasingly difficult, imprisoned in the artifices of the complexity of the current regulatory regimes.

The problem of understanding design is a problem of rationality, not just of intelligence, which means a reasoned world, a mediated reality that is constructed from intellection. There is no given reality, reality always presupposes the judgment that determines, defines and identifies it, every reality is in itself its judgment, its critique and therefore also its negation. (Del Palacio, 1991)

The world created by the reason of the Enlightenment, that of mechanical reason, has been transformed; but design continues to think of it as if in essence it had not changed, as if it had not been altered in any way by cybernetics or electronics, as if it had remained a given... And the design with which it is intended to be regulated, according to its own formulas, overwhelmed by social relations, has become a "whitewashed sepulchre", the office of Pharisees whose demand for attachment to individuality has deprived it of its meaning, which is fulfilled in every act of its application, so much so as to inspire phrases such as "*I am not surprised that you do not like my work, I'm surprised you like yours"* This is an indicator of the arrogance that can be reached with the deification and fatuity that we suffer in design.

Understanding design requires investigating it in the world created with its help, taking into account all the social factors that determine its form and content, according to the cultural patterns that promote its conditions of validity and effectiveness, as well as the specific circumstances of the relationships in which it is objectified and actualized. Design belongs to the intimate sphere of the human being, and in it is found the sphere of action that is proper to it and defines it.

7 CONCLUSIONS

In the most recent decade, it was stated at the 2016 Cumulus Conference (Kung, 2017), that the nature, practice, and production of designs have undergone fundamental changes in response to the challenges posed by the speed of change in convergence with technology, politics, sustainability, poverty, terrorism, and emerging revolutionary cultures. In the same way, tradition, methodology,

pedagogy, thoughts and concepts of life, humanity and design, compete towards the creation of a new and never before imagined aesthetic, questioning the needs of beauty itself.

In such a dense and intense society, we are intimately confronted with these social, economic, and cultural upheavals that arise from the legacy of our colonial culture, the persistent psychosis of survival in a transient society without identity, idealism, or reason.

The theme *of "open design from research to everything*" emerges as a contextualized answer to a global question, a question that resonates as the path of the fusion of cultures and peoples, but more importantly, alludes to the new universal possibilities of design at a time when clashes and exchanges between cultures, Ideologies, peoples and society reaches a new level of noise and savagery, demanding new poetics of creativity, and ethical and sustainable solutions as well as new expectations of process design and participation.

Research in open design opens up at least six transcendent themes: education, empathy, engagement, environment, ethnography, and experiment. Through research and discussions, perspective and rational horizon, researchers help rekindle the original purpose and the transcendent place of design in an increasingly complex but interdependent world that demands an unprecedented set of solutions and processes in the near, accessible and achievable future.

To Maritza Ramírez, who taught me that words have more power than images and that mental blindness is more harmful than physical blindness and can lead us down uncertain and wrong paths.
Today I know that it is difficult not to count on the eyes, but it is possible to "see" in a different way and for this reason, I value the word in all its dimensions.
I had forgotten to listen, convinced that vision is a priority. Now I am aware that there are thirty-two senses, maybe more... And I recognize that one word can convey much more than other resources.

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