Stéphane Vial, PROJEKT Lab, University of Nîmes, France

stephane.vial@unimes.fr

Viewpoint
A Look at Design Research in France through Design Journals: Building a Design Discipline

Introduction

Unlike Quebec or Switzerland, France has long remained unengaged in the advancement of international design research. There are two factors at the root of this indifference. First, art and design schools in France have not historically seen research and scholarly publishing as part of their mission — although recent developments in private design schools are encouraging. Second, French universities have yet to show much interest in design — or, at least, not in design research proper. French academic interest in design is what Gui Bonsiepe would call exogenous[1] — it comes from outside of design. Researchers take predominantly speculative approaches that are either aesthetic and art-based,[2] or technical and engineering based.[3] Nevertheless, the beginnings of a design research field have been emerging in journals since the 1950s.

What is a discipline? According to Gerda Gemser and her colleagues, "a scientific discipline is about theories and methods that accumulate through academic research and reflection."[4] Currently, design is not an *officially* recognized scholarly discipline in France. It is not listed on the national roster of university disciplines,[5] and universities are not yet allowed to deliver Ph.D. degrees in design.[6] At the same time, there are several universities working in the field of design at both the education and research levels.

Work by a handful of pioneers suggests that research related to design did exist before the mid-2000s. Among these are Abraham Moles, who began teaching in 1961 at the University of Strasbourg and the Ulm School of Design (HfGU); and Jocelyn de Noblet,[7] whose 1974 book inaugurated a "French historiography of design," says Alexandra Midal.[8] Danielle Quarante's[9] inspirational work in 1994 on industrial design at the Université de Technologie de Compiègne also stands out, as does Brigitte Borja de Mozota's[10] innovative work on design management in 1990. Stéphane Laurent's[11] 1999 research about applied arts education is also notable. Nevertheless, the field is based on individual efforts, rather than a structured community.

University courses and doctoral programs are not the only measures of a field. Journals present and can represent the character, scope, and reach of an academic discipline, and thus are critical levers for building and developing design in France. In this article, I will track the history of design journals in France and in Francophone countries to demonstrate the development of design as a research field, despite the lack of official recognition.

The First French-Language Design Journals (1951–2000)

Despite their lack of international visibility, French language design research journals are not as recent

as they might appear. Several remarkable initiatives are worth mentioning. However, some have since disappeared, lending to the idea of a French-language void on the subject.[12] Here, I have composed a fairly exhaustive list of these journals.

Esthétique industrielle (1951–1965)

Created in 1951, by Jacques Viénot, *Esthétique industrielle*[13] (Figure 1) was not a research journal per se. It nonetheless possessed a scholarly element. The journal was the voice of its founding institution, the Institut d'Esthétique Industrielle (Institute of Industrial Design), which federated design agencies — for example, Technès, industries — for example, Gaz de France, and scholars — for example, Étienne Souriau and Georges Friedman. It sought to inform industrialists, question public authorities, and provide publicity for agencies. The journal also included organizational information such as the minutes of Institut meetings, or details of the foundation of the International Council of Societies of Industrial Design (ICSID). Viénot was a lead cofounder. In 2017, the ICSID changed its name into World Design Organization (WDO). *Esthétique industrielle* also included product information, tests and evaluations, reviews, international updates on products, trade fairs, and notable designers, in addition to theory and critical reflection. In other words, the journal established a space for design thought. From the first issue, Viénot describes industrial design as "an art form dependent on neither fine arts, nor decorative arts, nor on pure technique alone."[14] He was among the first to assert the epistemological and cultural distinctiveness of design as field in its right. He did more than build and defend a profession. He championed the principles of industrial design itself, as a discipline of thought, a philosophical doctrine, and theory.[15] The Industrial Design Charter was a thirteen-point theoretical manifesto published in the seventh issue of the journal in

Figure 1   Cover shots of *Esthétique industrielle*. Copyright © 2017 by Jocelyne Le Bœuf.

1952. The manifesto bears witness to this rationale. In 1965, after 74 issues, the publication ceased under its original title and became *Design industrie.*

Culture technique (1980–1994)

In 1978, the Centre de Recherche sur la Culture Technique (Technical Culture Research Center; CRCT) was established in Neuilly-sur-Seine, a suburb west of Paris. The collective brought together a number of research and development leaders from French companies, foreign companies, and universities. Two years later, the CRCT launched its own publication, *Culture technique* (*Technical Culture*),[16] edited by Jocelyn de Noblet. Spanning over fourteen years and thirty issues, the goal of *Culture technique* was to promote the findings of the center. Though not technically a design research journal, its affiliation with the field is undeniable. The fifth issue, published in 1981, was dedicated to design.[17]

International Journal of Design and Innovation Research (1990–present)

In 1990, Confère, a cluster of schools that mostly specialize in engineering, founded *Design Recherche* (*Design Research*), now called the *International Journal of Design and Innovation Research*. When Confère temporarily branded the IJDIR as the *International Journal of Design* in 1998 — not to be confused with the present-day IJD — its content sat at the crossroads where science, product development, and design intersect.[18] Though printed at variable intervals, today's IJDIR continues to publish theoretical and applied research. Members of the editorial board are selected from French tertiary engineering schools and technology universities.

Informel (1990s)

At the beginning of the 1990s, a group of researchers from Quebec — whose ranks, led by Ron Levy and Pierre de Coninck, included Alain Findeli and Philippe Gauthier — launched *Informel* (*Informal*), "a publication devoted to design and culture assembled at the University of Montreal's School of Industrial Design."[19] The journal was active in the early 1990s, and sought to elaborate critical reflection around designing in general — as action — and thus contribute to the growth of industrial design. Alas, its circulation remained limited, and it ceased production after a dozen issues.

Azimuts (1991–present)

Azimuts (*Azimuths*) was founded in 1991 by postgraduate students at the École des Beaux-Arts de Saint-Étienne (the St. Étienne School of Fine Arts; in 2006, the
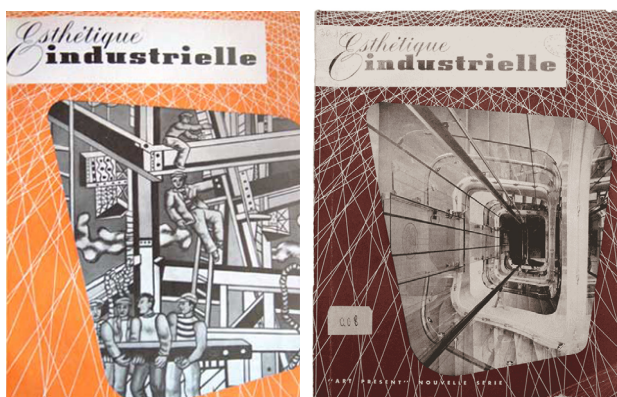
school changed its name to the St. Étienne Higher School of Industrial Art and Design).[20] *Azimuts* is a biannual, bilingual design and research journal published by the school and the Cité du Design, a bricks and mortar platform for collaboration between actors from the domains of higher education, research, economic development, and art and design. *Azimuts* aims to "initiate debate," and be "a space for reflection and exchange around design issues, a medium of graphic experimentation, and a platform for design project presentation and promotion."[21] To date, more than forty issues have been published. After many years as editor-in-chief, Constance Rubini recently handed the reins over to Marc Monjou. The journal does not use peer review.

Revue sciences et techniques de la conception / International Journal of Design Sciences & Technology (1992–present)

From 1992 to 1994, publisher Hermès Science published the *Revue sciences et techniques de la conception* (*Journal of Design Sciences and Technology*). The rights were transferred to Europia Productions in 1995. In 2001, the journal made the switch to English, changing its title to *International Journal of Design Sciences & Technology* (IJDST). With a focus on information and communication sciences, the journal supports the development of information and communication technologies, and their concrete function in all design disciplines related to the built environment, these include architecture, construction, civil engineering, urban planning, and industrial design. Its current editors-in-chief are Edwin Dado and Khaldoun Zreik.[22]

Towards a French-Speaking Design Research Community

Structuring the Movement (2005–2015)

For decades, the French-speaking design research community was more active outside of France than it was inside. For a long while, the School of Design at the University of Montréal was one of the most productive centers for design research, with one of the oldest Ph.D. programs in Design. This may also be due to language barriers between the French research culture, deeply rooted in French language, and the English-speaking international research community. Most of France's design researchers traditionally do not read, write, nor publish in English.

One of the key factors that helped to develop a structured design research movement in France occurred in the mid 2000s. A few French researchers who had authored papers for English language

journals and played a role in design journals decided to join forces. In 2006, at the University of Nîmes, they founded the international French language conference Les Ateliers de la Recherche en Design. The Ateliers de la Recherche de Design (Design Research Workshops; ARD) initiative was led by Alain Findeli and Brigitte Borja de Mozota, with help from Georges Schambach. Findeli was an editorial board member of *Design Issues*. Prior to joining the University of Nîmes — where he founded the design research program — he was Professor at the School of Design at the University of Montréal. Well known as a pioneer of design management research, Brigitte Borja de Mozota is a co-founder of The European Academy of Design, and the associated *Design Journal*. She was also Head of Research at Parsons Paris School of Art and Design.

ARD is the first international conference of French-speaking design researchers of its kind. It brings together a community of researchers who foster an endogenous[23] — from within — approach to design research with a focus on practice. The choice of the term *ateliers* — workshops or studios — to define the network's annual meeting (Figure 2) bears witness to this considered direction. (See Table 1.)

By 2014, the ARD had become the leading scholarly society[24] of French-speaking design researchers. Its creation has encouraged other initiatives, such as the email discussion list *Recherche-Design* established in 2013, which had in excess of nine hundred members as of October 23, 2017.[25] In the spring of 2013, the doctoral student working group *Design en recherche* (*Design through Research*) was founded. *Design en recherche* has grown into a solid network with more than forty graduate and postgraduate members from diverse backgrounds — sociology, history, anthropology, aesthetics, philosophy, engineering, management, information and communication technologies, and the plastic arts. Their transdisciplinary work focuses on methodological convergences and divergences, and the relationship between design research and practice. Their collaborative design projects aim to explore the issues related to design research.[26]

The French-speaking design research community progressively established and structured itself from 2005 to 2015. 2015 saw the premier issue of *Sciences du Design* (*Sciences of Design*) the first international, French language, peer-reviewed design research journal from a major publisher, Presses Universitaires de France. Its inauguration marks the completion of the first evolutionary stage and the beginning of another. With the support of three pillars — a research community formed through regular conferences such as

Figure 2   Workshop at the University of Nîmes during the 8th ARD in 2013. Copyright © 2017 by Stéphane Vial.

Table 1. List of the first ten *Ateliers de la Recherche en Design* (ARD).

Date	Edition	City	Website
2016, November	ARD 11	Beirut (Lebanon)	www.beyrouth2016.les-ard.org
2015, October	ARD 10	Montreal (Canada)	www.montreal2015.les-ard.org
2014, December	ARD 9	Liege (Belgium)	n/a
2013, June	ARD 8	Nîmes (France)	n/a
2011, November	ARD 7	Tunis (Tunisia)	n/a
2009, June	ARD 6	Paris (France)	n/a
2008, December	ARD 5	Tours (France)	n/a
2008, June	ARD 4	Nantes (France)	http://projekt.unimes.fr/files/2016/09/ARD_4_Nantes-1.pdf
2007, December	ARD 3	Bordeaux (France)	http://projekt.unimes.fr/files/2016/09/ARD_3_Bordeaux.pdf
2007, May	ARD 2	Nancy (France)	http://projekt.unimes.fr/files/2016/09/ARD_2_Nancy.pdf
2006, November	ARD 1	Nîmes (France)	http://projekt.unimes.fr/files/2016/09/ARD_1_Nimes.pdf

Les Ateliers de la Recherche en Design and other new events; a worldwide mailing-list, Recherche-Design. org; and an international peer-reviewed journal, *Sciences du Design*, together with other initiatives and journals—the French-speaking design research community has developed the tools to sustain a research field. Thus begins a new chapter in history.

In addition, there is now a legacy of published works. Original French language publications in design multiplied over the decade spanning 2006 to 2016. Books have been published in increasing numbers (Table 2). This demonstrates that the field of French-speaking design research is now lively.

Sciences du Design (2015–present)

Stéphane Vial and Alain Findeli founded *Sciences du Design* (*Sciences of Design*) in 2015. It is the first international, French language, peer reviewed design research journal from a major publisher. Non-specialist and pluralistic, it explores all aspects of design and aims to offer an open international forum for design researchers and practitioners. The journal seeks to promote design as a research discipline in its own right and welcomes the best French-speaking design research as well as international design research submitted in French. Supported by an editorial board and an international scientific committee with members from over 30 universities and research establishments around the world, it is published by the Presses Universitaires de France with the support of various universities and design schools. The journal is published twice yearly, with issues based on thematic calls and non-thematic spontaneous submissions. Designed in Switzerland, published in France, and printed in Belgium, *Sciences du Design* has a hybrid format, with print and digital versions available in bookstores and online.

To support new modes of scholarly publishing, *Sciences du Design* offers a unique Visualization section edited by David Bihanic, which is published in print and openly online.[27] The section presents research contributions in visual and graphic form—computer graphics, visual analytics, or data visualizations—in French or in English (Figures 3 and 4). Contributions are organized into collections that are tied to each edition of the journal. Each collection is published in full online, while a limited number of visualizations is selected and published in the printed version.

Table 2. List of original French language books about design published between 2006 and 2016, ordered by year.

Year	Author	Title	Publisher
2006	Jocelyne Le Bœuf	*Jacques Viénot (1893-1959), pionnier de l'Esthétique industrielle en France*	Presses Universitaires de Rennes
2006	Brigitte Flamand (ed.)	*Le design: Essais sur des théories et des pratiques*	Institut Français de la Mode et Éditions du Regard
2009	Alexandra Midal	*Design: Introduction l'histoire d'une discipline*	Pocket
2010	Stéphane Vial	*Court traité du design*	Presses Universitaires de France
2010	Lysianne Léchot Hirt	*Recherche-création en design*	MetisPresse
2012	Anne Beyaert-Geslin	*Sémiotique du design*	Presses Universitaires de France
2014	Bernar Darras & Alain Findeli (eds.)	*Design: savoir & faire*	Lucie éditions
2014	Pierre-Damien Huyghe	*À quoi tient le design*	De l'incidence éditeur
2015	Stéphane Vial	*Le design*	Presses Universitaires de France
2015	Antonella Tufano	*Faire des projets, Fabriquer des projets*	Presses Universitaires de Nancy, Éditions Universitaires de Lorraine
2016	Claire Leymonerie	*Le temps des objets: une histoire du design industriel en France (1945-1980)*	Éditions de la Cité du Design
2016	Benoît Drouillat	*Le design interactif: du web design aux objets connectés*	Dunod
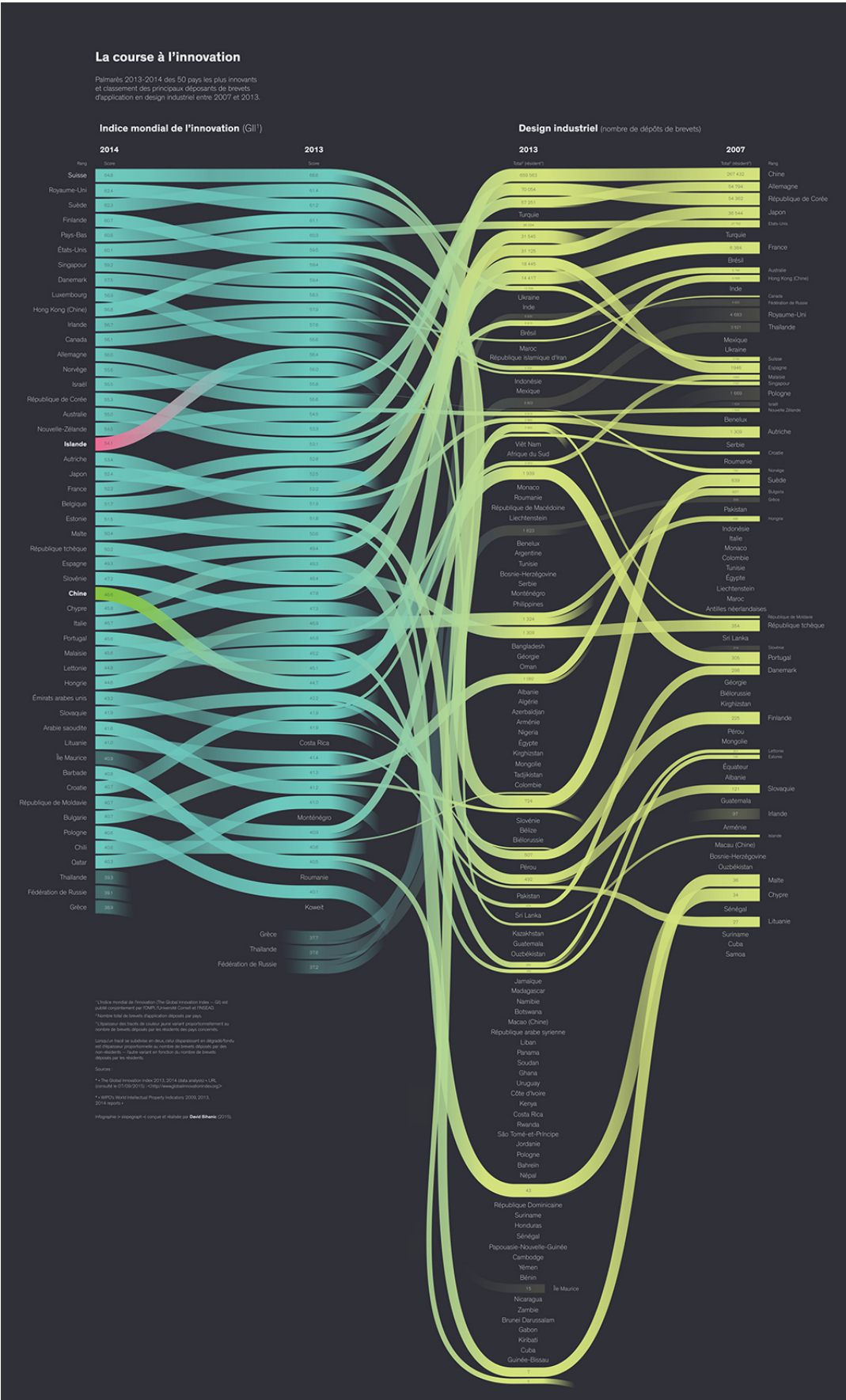
Figure 3 *La course à l'innovation*, by David Bihanic. Source: http://visu.sciences-du-design.org/1.html. Copyright © 2016 by Sciences du Design.

Figure 4 *Cloud Map*, by Ianis Lallemand. Source: http://visu.scienc-es-du-design.org/15.html. Copyright © 2016 by Sciences du Design.

Other Design Journals

Over the years, several initiatives have sought to develop design research journals. Not all qualify as scholarly journals, as they do not use peer review. Nevertheless, they bear witness to a French-speaking dynamic. Most are in-house publications from schools and universities. They are most often edited and produced without the support of an established publisher. The selective list provides an overview.

Mode de recherche (2004–present)

Created in 2004 under the editorial direction of Olivier Assouly, *Mode de recherche (Research Mode)*[28] was initially a twice-yearly publication from Institut Français de la Mode (French Fashion Institute; IFM) in Paris. Originally available in printed and online formats, it is now available solely online.[29] The journal offers information and analysis on fashion and the creative industries. *Mode de recherche* does not use peer review.

Échappées (2012–present)

Echappées (Breakaways) is an annual art and design journal created in 2012 by Chrystelle Desbordes and Corinne Melin, and published by the École Supérieure d'Art des Pyrénées–Pau Tarbes. The journal offers an uninhibited transdisciplinary approach, where diverse outlooks converge. It challenges the current distinction between theory and practice common in art schools. *Échappées* does not use peer review. The first issue was released in January 2013.[30]

Back Office (2016–present)

Co-founded in 2016 by Kevin Donnot, Élise Gay, and Anthony Masure, *Back Office* is a yearly bilingual research journal devoted to graphic design and digital technology. The journal features a different theme each year. Articles are published by invitation. Available both in French and English, in print and digitally, *Back Office* is co-published in Paris by Fork Éditions and Éditions B42. The journal does not use peer review.[31]

Obliquite (2016–present)

Founded in 2016 by Emile de Visscher, *Obliquite* (*Obliquity*) is a yearly design publication. Each issue is thematic, with a group of international designers offering questions, points of interest, and methods via essays, interviews, and graphic presentations. Writings by designers are rare, and this publication allows designers to have their say. By building a body of texts for and by designers, *Obliquite* aims to contribute to design culture from the inside. The journal does not use peer review.[32]

Building a Design Research Discipline in France

The process of establishing the *Sciences du Design* journal shows how a research discipline can develop. For example, choosing the name was crucial, but it was also tricky — it was, in itself, a kind of research question. After carefully considering the differences between design science and a science of design — in the sense of a design as a discipline[33] — I chose the name *Sciences du Design*, which literally translates as *Sciences of Design*. What does the title imply — especially for French speakers? And what notions of design as a discipline does it entail?

As Nigel Cross argues, "our concern in design research has to be the development, articulation, and communication of design knowledge."[34] To define a body of knowledge, we must trim the world down into categories of objects or phenomena that make up its field of study. Thus, how do we define the exact parameters of design knowledge? A number of approaches already exist; of these, I will consider two.

The first is that of Nigel Cross, whose work aligns with Bruce Archer's ideas.[35] According to Archer, "Design research is systematic enquiry whose goal is knowledge of, or in, the embodiment of configuration, composition, structure, purpose, value, and meaning in man-made things and systems."[36]

Cross widened this perspective to cover three aspects:[37]

1. Human knowledge, the knowledge of professional designers or of untrained designers. This involves knowing and understanding the human ability to design — the designerly ways of knowing. Cross calls this design epistemology;
2. Process-based knowledge related to design techniques — sketching and model-making in particular, especially in their digital form. Cross calls this design praxeology;
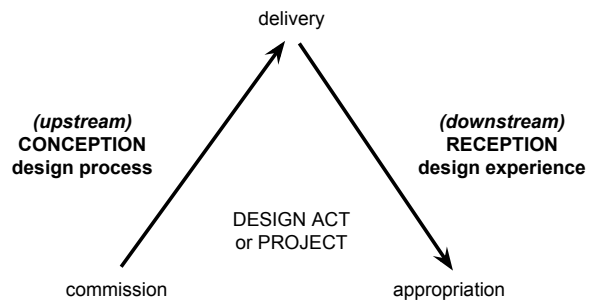3. Knowledge that rests in the products themselves — in the artifacts' shapes, materials,

Figure 5   Stéphane Vial's interpretation of Findeli's design act model. Copyright © 2017 by Stéphane Vial.

and details. Cross refers to this as design phenomenology.

Alain Findeli developed an alternate approach.[38] According to him, although Cross's approach is an extension of Archer's, it remains incomplete. It confines designing to project conception (processes) and fails to include reception (experiences). Kees Dorst also noted that "within design research, the emphasis on the process of design is still overwhelming."[39] Findeli's model integrates both (Figure 5). This expands the scope of design research as does that of the project practice.

From this perspective, design research — with the support of humanities and social sciences disciplines — generates knowledge on the design process (conception), as well as generating knowledge of the design experience in the world. "This amounts to considering design as a discipline on its own, capable of delivering valid and trustful knowledge about a part of the world considered as its specific field of knowledge."[40] What, then, is this part? According to Findeli, this part is the field of inhabitability,[41] the interaction between humans, as inhabitants of our world, and the natural and artificial environments that make up this world — a field consistent with human ecology.[42] Design research studies the interaction between humans and their environment in the sense that the research does not consider these interactions as objects of study but as design projects.[43] The crucial point is that the designer is a project-oriented planner.

"What fundamentally separates design from geography or sociology is that it sees the world as a *project* where other sciences see it as an *object*. The subject/object relationship is therefore radically modified by the fact that, in project-grounded disciplines, the subject is inevitably *engaged*, *situated* within its object."[44]

Figure 6 Findeli presenting his crown model in Tunis in 2011, during the 11th ARD. Copyright © 2011 by Stéphane Vial.

This leads Findeli to favor a type of research-through-design that he calls project-grounded research.[45] In this model, "research is accomplished within the process of a real professional project" that "serves as its 'field' [in the sense of fieldwork]," where the outdated applied theory model is transformed into "an engaged, situated theory implicated in a project."[46] One no longer "uses an experiment to validate a theory;" one "employs a theory within a project-field."[47] The vast framework surrounding the methodology of project-grounded research makes a detailed account impossible here. Nonetheless, let us simply note that it provides us with a circumscribed vision of design knowledge on an epistemological level. Hence the general definition

> "Design research is a systematic search for and acquisition of knowledge related to general human ecology considered from a designerly way of thinking, i.e. a project-oriented perspective."[48]

In the interest of assigning an institutionally viable French language term to this new research discipline, I chose *sciences du design*, or sciences of design—it endeavors to cover a field as wide as design studies.

The object of sciences of design is design, specifically designing as an act. It refers to the project as both a making process and a receiving process. The discipline can be illustrated according to Findeli's crown model (Figure 6). The heart of the discipline is project-oriented—the crown's center—which is surrounded by a trans-disciplinary periphery—the crown's circumference. According to Bonsiepe's distinction, the core represents endogenous design research—design research conducted by practitioners—grounded in concrete project experiences. The peripheral area represents exogenous design research, which studies designing as an act from the perspective of other disciplines.[49] The relationships and interactions between the core and the periphery create a wide area of knowledge that I call the sciences of design.

Thus defined, France's emerging field of *sciences du design* is related more to Cross's vision of design as a discipline, rather than a design science.[50] It differentiates itself from architecture and engineering, on the one hand, and the arts, on the other, given design's epistemological distinctiveness as an object of knowledge in and of itself ("design on its own," says Cross).

Figure 7 *Sciences du Design* journal covers. Copyright © 2015–2016 by Stéphane Vial.

The term *sciences*, in the plural, is similar to French-speaking university transdisciplinary uses such as management sciences, language sciences, education sciences, information and communication sciences, and sciences of the arts. That plurality establishes a new area of contemporary *épistémè*, in the sense of Foucault.[51]

The title *Sciences du Design* may strike some as austere. Nonetheless, it firmly anchors the journal in the realm of academic research—one distinct from the domains of media and advertising, which have transformed design into a trendy epithet. Our carefully considered generalist, pluralist, and open editorial approach aims to promote the recognition of design as a scientific discipline while rising above traditional divisions—universities vs. schools, designers vs. researchers, theorists vs. practitioners, creatives vs. marketers, and so on. (Figure 7.)

Conclusion

While the French design research community is relatively young, it is rooted in an established tradition of thought about design that started in 1951 with the journal *Esthétique industrielle*. After various attempts to build a specific design research field in France, the community began to take shape in the mid 2000s. It developed actively from 2005 to 2015, and has continued to do so. Although not yet officially recognized by French national university authorities, design research is now a structured research field with its own research community, tools, and journals. This shows in particular the important contribution design journals can make toward establishing design as a field.

1   Gui Bonsiepe, "The Uneasy Relationship between Design and Design Research," in *Design Research Now: Essays and Selected Projects*, ed. Ralf Michel (Basel, Switzerland: Birkhäuser, 2007), 32.

2   Pierre-Damien Huyghe, *À quoi tient le design* (Paris: De l'Incidence Éditeur, 2014); Pierre-Damien Huyghe, *Art et Industrie: Philosophie du Bauhaus* (Paris: Circé, 1999).

3   Armand Hatchuel, "Deconstructing Meaning: Industrial Design as Adornment and Wit," in *proceedings of the 10th European Academy of Design Conference: Crafting the Future* (Gothenburg 2013), also available at: https://hal.archives-ouvertes.fr/hal-00903421/document; Armand Hatchuel, "Quelle Analytique de la Conception? Parure et Pointe en Design," in *Le Design: Essais sur des théories et des pratiques*, ed. Brigitte Flamand (Paris: Institut Français de la Mode/les Éditions du Regard, 2006).

4   Gerda Gemser, Cees de Bont, Paul Hekkert, and Ken Friedman, "Quality Perceptions of Design Journals: The Design Scholars' Perspective," *Design Studies* 33, no. 1 (2012): 4, DOI: https://doi.org/10.1016/j.destud.2011.09.001.

5   Conseil National des Universités, "Liste des sections CNU," accessed October 24, 2017, http://www.cpcnu.fr/listes-des-sections-cnu.

6   Université de Nîmes, "Doctorats: la nomenclature générique (47 modalités)," accessed October 24, 2017, http://projekt.unimes.fr/files/2017/09/nomenclature-doctorat.pdf.

7   Jocelyn de Noblet, *Design: Introduction à l'histoire de l'évolution des formes industrielles de 1820 à aujourd'hui* (Paris: Stock/Chêne, 1974).

8   Alexandra Midal, *Design: Introduction à l'histoire d'une discipline* (Paris: Pocket, 2009).

9   Danielle Quarante, *Éléments de design industriel* (Paris: Polytechnica, 1994).

10 Brigitte Borja de Mozota, *Design Management: Using Design to Build Brand Value and Corporate Innovation* (Paris: Éditions d'Organisation, 1990).

11 Stéphane Laurent, *Les Arts Appliqués en France: genèse d'un enseignement* (Paris: Éditions du CTHS, 1999).

12 Stéphane Laurent, "Why a Culture of Design in France Never Took Off," *Design Issues* 28, no. 2 (2012): 72–77, DOI: https://doi.org/10.1162/DESI_a_00144.

13 "Esthétique industrielle" is a term coined by Jacques Viénot in order to translate into French "industrial design" but it rather means "industrial aesthetics."

14 Jacques Viénot, *Esthétique industrielle*, n° 1 (1951), translated by Jocelyne Le Bœuf, "Jacques Viénot and the 'Esthétique Industrielle' in France (1920–1960)," *Design Issues* 22, no. 1 (2006): 46, DOI: https://doi.org/10.1162/074793606775247781.

15 Ibid., 46–63.

16 First issue of *Culture technique* available at http://documents.irevues.inist.fr/handle/2042/28357.

17 Design issue of *Culture technique* available at http://documents.irevues.inist.fr/handle/2042/28754.

18 Homepage of *International Journal of Design and Innovation Research*, accessed October 26, 2017, http://ijodir.com.

19 This was mentioned on the front cover of the journal.

20 In 2006, the school was renamed the École Supérieure d'Art et Design Saint-Etienne (the St. Étienne School of Industrial Art and Design).

21 Cité du Design, "La revue Azimuts" (Azimuths, the Journal), accessed October 24, 2017, http://www.citedudesign.com/fr/editions/221112-la-revue-azimuts.

22 Homepage of IJDST, accessed October 26, 2017, http://europia.org/IJDST/.

23 Bonsiepe, "The Uneasy Relationship," 32.

24 For more information, see http://www.les-ard.org.

25 Homepage of *Recherche-Design*, accessed October 26, 2017, http://www.recherche-design.org.

26 Design en recherche, "A propos" (About us), accessed October 24, 2017, http://designenrecherche.org/a-propos.

27 Sciences du Design, "Visualisation," accessed October 26, 2017, http://visu.sciences-du-design.org.

28 In French, "mode" means "fashion," "style," or "custom." Here, the word "mode" means "manner" or "function," as in "sleep mode" on a mobile phone. The journal title is an obvious play on words.

29 Homepage of *Mode de recherché*, accessed October 26, 2017, http://www.ifm-paris.com/fr/ifm/mode-luxe-design/recherche/revue-mode-de-recherche.html.

30 Homepage of Échappées, accessed October 26, 2017, http://echappees.esapyrenees.fr.

31 Homepage of *Back Office*, accessed October 26, 2017, http://www.revue-backoffice.com.

32 Homepage of *Obliquite*, accessed October 26, 2017, http://www.obliquite.com/.

33 Nigel Cross, "Designerly Ways of Knowing: Design Discipline versus Design Science," *Design Issues* 17, no. 3 (2001): 49–55, DOI: https://doi.org/10.1162/074793601750357196.

34 Nigel Cross, *Designerly Ways of Knowing* (Basel: Birkhäuser, 2007), 124.

35 Bruce Archer, "A View of the Nature of the Design Research," in *Design: Science: Method: Proceedings of the 1980 Design Research Society Conference*, ed. Robin Jacques and James A. Powell (Guilford: Westbury House, 1981).

36 Ibid., 35.

37 Cross, *Designerly Ways of Knowing*, 125.

38 Alain Findeli, "Searching for Design Research Questions: Some Conceptual Clarifications," in *Questions, Hypotheses & Conjectures: Discussions on Projects by Early Stage and Senior Design Researchers*, ed. Rosan Chow, Wolfgang Jonas, and Gesche Joost (Bloomington: Design Research Network/iUniverse, 2010), 286–303.

39 Kees Dorst, "Design Research: A Revolution-Waiting-to-Happen," *Design Studies* 29, no. 1 (2008): 5, DOI: https://doi.org/10.1016/j.destud.2007.12.001.

40 Findeli, "Searching for Design Research Questions," 291.

41 Ibid., 292.

42 Ibid.

43 Ibid., 293.

44 Alain Findeli, "La Recherche en Design, questions épistémologiques et méthodologiques," in *La Critique en Design. Contribution à une Anthologie*, ed. Françoise Jollant-Kneebone (Nîmes: Jacqueline Chambon, 2003), 169.

45 Alain Findeli, "La Recherche-Projet: une méthode pour la recherche en design," paper presented at the Swiss Design Network: Erstes Designforschungssymposium, May 2004), 10. Available at http://projekt.unimes.fr/files/2014/04/Findeli.2005.Recherche-projet.pdf.

46 Findeli, "La Recherche en Design," 170.

47 Ibid.

48 Findeli, "Searching for Design Research Questions," 294.

49 Bonsiepe, "The Uneasy Relationship," 32.

50 Cross, "Designerly Ways of Knowing," 49–55.

51 Michel Foucault, *Les Mots et les Choses* (Paris: Gallimard, 1966).