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Service Design as Formgiving

Breaking Free from the Marketing-Dominant Logic

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Service Design as Formgiving: Breaking Free from the Marketing-Dominant Logic

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1   Raymond P. Fisk, Stephen W. Brown, and Mary Jo Bitner, "Tracking the Evolution of the Services Marketing Literature," *Journal of Retailing* 69, no. 1 (Spring 1993): 61–103, https://doi.org/10.1016/S0022-4359(05)80004-1.

2   Several reviews of the service design literature have been published in the past. For recent ones, see Eun Yu, "Toward an Integrative Service Design Framework and Future Agendas," *Design Issues* 36, no. 2 (Spring 2020): 41–57, https://doi.org/10.1162/desi_a_00589; Qian Sun, "Towards a New Agenda for Service Design Research," *Design Journal* 23, no. 1 (January 2020): 49–70, https://doi.org/10.1080/14606925.2019.1694808. None of these reviews are sufficiently comprehensive to be called authoritative. The following publications provide good partial, if sometimes outdated, reviews covering the topics of interaction design, see Stefan Holmlid, "From Interaction to Service," in *Designing Services with Innovative Methods*, ed. Satu Miettinen and Mikko Koivisto (Helsinki: University of Art and Design, 2009), 78–97; for participatory design, see Stefan Holmlid, "Participative, Co-Operative, Emancipatory: From Participatory Design to Service Design," in *Proceedings of the ServDes. Conference 2009* (First Nordic Conference on Service Design and Service Innovation: DeThinking Service ReThinking Design, Oslo, 2009), 1–14; for sustainable design, see Elena Pacenti and Daniela Sangiorgi, "Service Design Research Pioneers: An Overview of Service Design Research Developed in Italy since the '90s," *Design Research Journal* 1, no. 10 (2010): 26–33; for academic curricula, see Stefano Maffei, Nicola Morelli, Elena Pacenti, and Daniela Sangiorgi, "The Introduction of Service Design within Industrial Design Curricula: Comparison of Three

Introduction

The influence of marketing on the discipline of service design runs deep and cannot be negated. Long before researchers from design-related disciplines started to pay attention to services, service design—broadly understood as the invention, development, and commercialization of new services—was a recognized topic in marketing research.[1] The topic remained underdeveloped until the 1990s and 2000s, when practitioners and researchers coming from the design disciplines helped galvanize various developments outside of service research into what is now known as the discipline of service design.[2] But even after that, and up to today, design researchers have continued to look to marketing in search of a foundational understanding of service.[3] In this article, I question whether this reliance is hindering the evolution of design by preventing a deeper reflection on services and their materiality.

The title of this article reveals the two adversarial standpoints chosen to develop my argumentation. Both G. Lynn Shostack's article "Breaking Free from Product Marketing" and Stephen Vargo and Robert Lusch's article "Evolving to a New Dominant Logic for Marketing"[4] represent groundbreaking moments in the history of marketing. These publications have exerted a far-reaching influence that extends across numerous areas of service research. Underlying these views, I maintain that one finds the same logic whereby services are reduced to immaterial entities founded either on production processes (following Shostack) or on human knowledge and skills (following Vargo and Lusch). When applied to design, this marketing logic tends to devalue the role that materiality has in giving form to service exchange. When this logic comes to dominate conceptions of service, as it apparently does today, it can cast a shadow on alternative approaches to service design that are predicated on materiality.

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Design Approaches and Educational Experiences," in *Design Education, Tradition & Modernity: Scholastic Papers from the International Conference* (International Conference on Design Education: Tradition and Modernity, Ahmedabad: National Institute of Design, 2005), 56–66; for consulting businesses, see Bill Moggridge, *Designing Interactions* (Cambridge, MA: MIT Press, 2007), 383–447; for academic-industry networks, see Stefan Moritz, "Service Design: Practical Access to an Evolving Field" (London, University of Applied Sciences Cologne, 2005).

3   Yu, "Toward an Integrative Service Design Framework"; Mauricio Manhães, "Service Design and Service-Dominant Logic: A Perfect Match," in *This Is Service Design Doing: Applying Service Design Thinking in the Real World*, ed. Marc Stickdorn, Markus Hormess, Adam Lawrence, and Jakob Schneider (Sebastopol, CA: O'Reilly Media, 2018), 29–31; Jeanette Blomberg and Chuck Darrah, "Towards an Anthropology of Services," *Design Journal* 18, no. 2 (June 2015): 171–92, https://doi.org/10.2752/175630615X14212498964196; Katarina Wetter-Edman, Daniela Sangiorgi, Bo Edvardsson, Stefan Holmlid, Christian Grönroos, and Tuuli Mattelmäki, "Design for Value Co-Creation: Exploring Synergies Between Design for Service and Service Logic," *Service Science* 6, no. 2 (June 1, 2014): 106–21, https://doi.org/10.1287/serv.2014.0068; Francesca Foglieni, Beatrice Villari, and Stefano Maffei, *Designing Better Services* (Cham: Springer, 2018), https://doi.org/10.1007/978-3-319-63179-0; Josina Vink, Kaisa Koskela-Huotari, Bård Tronvoll, Bo Edvardsson, and Katarina Wetter-Edman, "Service Ecosystem Design: Propositions, Process Model, and Future Research Agenda," *Journal of Service Research* 24, no. 2 (May 2021): 168–86, https://doi.org/10.1177/1094670520952537; Kaisa Koskela-Huotari and Josina Vink, "Tracing the Systems Turn in Service Design and Innovation: Convergence Toward Service System Transformation," in *The Palgrave Handbook of Service Management*, ed. Bo Edvardsson and Bård Tronvoll (Cham: Springer, 2022), 531–53, https://doi.org/10.1007/978-3-030-91828-6_27; Anna Meroni and Daniela Sangiorgi, *Design for Services, Design for Social Responsibility* (Aldershot: Gower, 2011); Yoko Akama

I take issue with this marketing-dominant logic and highlight another perspective founded on the long-standing tradition of formgiving in design. In the next section, I start by recalling an old and often overlooked definition proposed by Tomás Maldonado—put simply, to design is to materialize forms that mediate systems of production and consumption. Then I review the service design literature to examine the applicability of Maldonado's definition to ongoing discussions about the design of services. Following that, I turn to marketing theory and dispute the privileged position of immateriality in Vargo and Lusch's service-dominant (SD) logic. In the final section, I argue that service design must break free from the marketing logic to appreciate the distinctive forms of services, especially those related to face-to-face exchanges, which pose new challenges for formgiving.

Maldonado's Definition of Design

In the first chapter of *Disegno Industriale: Un Riesame*,[5] Maldonado offers the following definition of design in terms of formgiving:

> to give form means to coordinate, integrate, and articulate all those factors that, in one way or another, take part in the process of constituting the form of a product. . . . More precisely, the allusion is both to factors related to use, fruition, and individual or social consumption of the product (functional, symbolic, or cultural factors) and to those related to its production (technical-economical, technical-constructive, technical-systemic, technical-productive, and technical-distributive factors).[6]

Maldonado immediately observes that the generality of this definition can be seen as a weakness. However, he argues that it remains valid, provided it is adapted to "particular contexts in which the activity [of constituting the product form] develops." One of Maldonado's specific aims with this definition is to expose the mutual influence between formgiving and the modes of production and consumption that always regulate design activity. As he explains, because there "exists, or should exist, in all socioeconomic context, a peculiar way to tackle the problem of the 'form of the commodity,'" as modes of production and consumption change from one context to another, the forms conferred to products should change as well. In a specific socioeconomic context, technical-economic factors may be preferred over functional ones,

and Alison Prendiville, "Embodying, Enacting and Entangling Design: A Phenomenological View to Co-Designing Services," *Swedish Design Research Journal* 1, no. 1 (September 2013): 29–41; Nicola Morelli, Amalia de Götzen, and Luca Simeone, *Service Design Capabilities* (Cham: Springer, 2021), https://doi.org/10.1007/978-3-030-56282-3; Lucy Kimbell, *The Service Innovation Handbook: Action-Oriented Creative Thinking Toolkit for Service Organizations* (Amsterdam: BIS, 2014).

4   G. Lynn Shostack, "Breaking Free from Product Marketing," *Journal of Marketing* 41, no. 2 (1977): 73–80; Stephen L. Vargo and Robert F. Lusch, "Evolving to a New Dominant Logic for Marketing," *Journal of Marketing* 68, no. 1 (January 2004): 1–17.

5   Tomás Maldonado, *Disegno Industriale: Un Riesame* [Industrial Design: A Reexamination] (Milan: Feltrinelli, 1976). Although available in languages other than Italian, this book has apparently never been translated into English. A second Italian edition appeared in 1991, with minor revisions to the introductory chapter and significant revisions of other chapters. In the introduction, Maldonado notes that his definition elaborates on a previous one presented at the 1961 ICSID Congress in Venice and subsequently adopted by that institution. With support from the ICSID Archive of the University of Brighton Design Archives, we were able to locate a paper by Tomás Maldonado titled "Industrial Design: Training and Alternatives of a Profession" (Second General Assembly, Venice, ICSID Archive, University of Brighton Design Archives, Catalog Number: DES-ICD-3-1-1, 1961), 1–11. In that paper, we find the full version of the abridged definition that ICSID later adopted, with minor stylistic changes, from 1969 onward, according to the WDO (https://wdo.org/about/definition/industrial-design-definition-history/, accessed June 16, 2022). This is the same definition that is sometimes mentioned by design scholars, for example, Jocelyne Le Boeuf, "Jacques Viénot and the 'Esthétique Industrielle' in France (1920–1960)" [Jacques Viénot and the 'Industrial Aesthetics' in France], *Design Issues* 22, no. 1 (Winter 2006): 46–63; Barbara Predan, "Design Theory in Slovenia: Mapping the Field," *Design Issues* 22, no. 4 (Autumn 2006): 35–47.

symbolic factors preferred over techno-distributive ones, and so forth. Moreover, design itself must be reinterpreted depending on changing contexts: "It is evident, for example, that industrial design cannot be the same in a highly industrialized society or in a developing country."[7]

At the same time, Maldonado explains that the socio-economic context does not fully determine the forms that are created by designers because the materiality of products cannot be disregarded in formgiving practices. He discusses this in terms of the degree of complexity exhibited by designed products, which can lead to some factors not being "felt in the same way and . . . with the same intensity" in every product.[8] As Maldonado explains—although this specific example does not strike me as particularly convincing—a piece of cutlery with "low complexity" can lead to symbolic factors being underplayed by designers over constructive ones, whereas that will be more difficult in the case of a car, owing to its "high complexity."

Nonetheless, he concludes that irrespective of the context, the role of design "is substantially the same . . . to mediate dialectically between needs and objects, production and consumption," and he clarifies that in these relations, design "intervenes . . . as an authentic productive force . . . that contributes to the organization (and therefore to socialization) of other productive forces with which it contacts."[9]

Although more space would be needed to properly contextualize Maldonado's analysis and explore its evolution over the years, these brief citations allow me to extract some key insights. First, his analysis is unique when compared to other approaches to formgiving in that it relates design practice to the socioeconomic mode of production and consumption, and more especially, it identifies the designed product as mediating between producers and consumers.[10] Second, whereas Maldonado highlights that material factors influence formgiving, he does not determine what particular form these products should have in any particular socioeconomic context. Considering the historical period of his writings and the examples covered in the book, the focus is clearly on forms typically associated with the notion of industrial goods. But even if Maldonado takes these for granted, in principle, his definition does not preclude an application to services. This is precisely what I seek to do in the next section, by revealing how service design researchers have since the inception of the new discipline been discussing formgiving in line with the definition just expounded.

In the search at the ICSID Archives, we also found a bibliography by Misha Black mentioning that the paper read by Maldonado during the 1961 ICSID congress was titled "Industrial Design: The Formation of a Profession." See Misha Black, *Education for Industrial Design*, First Seminar Bruges 1964, Catalog Number: DES-ICD-13-1-1. Because this second paper could not be located in the archive, I conclude that the one that we found corresponds to the one referenced by Maldonado later in his book. The difference in titles, however, raises doubts about whether we currently have access to the final version that he presented.

6   Tomás Maldonado, *Design Industrial* [Tomás Maldonado, Industrial Design] (Lisboa: Edições 70, 2006), 14. This and all subsequent quotes are my own translations from the Portuguese version of the book's second edition.

7   Maldonado, *Design Industrial*, 15. Likewise, in the 1961 ICSID paper, he writes that in "non-competitive societies," that is, socialist countries, design is given possibilities that are "different," not necessarily better or worse than in "competitive societies."

8   Maldonado, *Design Industrial*, 15. Although there is some lack of clarity about what complexity means exactly, in the 1961 ICSID paper Maldonado mentions "the structural and functional complexity of the objects to be designed" as one issue that needs to be considered when interpreting and practicing industrial design. In other parts of this same text, he associates the terms "structural" and "functional" to the properties of products from the perspective of an embodied user. Thus, it seems warranted to interpret the product's complexity as referring to aspects of its materiality, as I understand this concept in the present article.

9   Maldonado, *Design Industrial*, 16–17. Here, Maldonado is echoing his views, heavily debated during the Ulmian years, that industrial designers should use their distinct (technoscientific) expertise to be "partners of industry" and "coordinators" who work in close collaboration with different specialists. See Paul Betts, "Science, Semiotics and Society: The Ulm Hochschule Für Gestaltung in Retrospect" [Science, Semiotics and Society: The Ulm School

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Formgiving is not usually made explicit within service design. In one of the rare instances where it was discussed, which is also one of the founding contributions for the new discipline, Michael Erlhoff, Birgit Mager, and Ezio Manzini noted, "it was and is so obvious that services . . . are always designed and are to be designed, so they should be structured and formed."[11] In that same volume, calling for more attention on the part of designers to the form of services, Mager observed: "Simple services have advanced to the stage of service products. And yet these very important and highly necessary products have come to reveal fundamental issues of form."[12]

It was not through clear references to the industrial design discourse, though, that formgiving was to be elaborated by service design researchers in subsequent years. Instead, the topic became associated with the concept of service interface, or the material domain of interaction among producers, consumers, or any stakeholder who jointly create a service.[13] This concept had been first delineated in the field of marketing by Shostack, who coined the term "tangible evidence" to bring attention to the fact that services always have a material dimension, which is what enables them to be experienced by consumers—in her words, "the things that [consumers] can comprehend with [their] five senses."[14] Shostack identified different types of tangible evidence that should be carefully managed to create the right service "image" in people's minds, including physical environments and products, media, and even other people.

Elena Pacenti was perhaps the first design scholar to offer an alternative to the Shostackean conception of service interface.[15] Drawing on the emerging discipline of interaction design, Pacenti created an analogy between tangible evidence and the notion of user interface. She then turned Shostack's approach to service design on its head. Whereas Shostack made the design of tangible evidence secondary to the design of intangible production processes that were "hidden" from users,[16] Pacenti held that designing the service interface took precedence over the organizational structure in the background of users' experiences. Pacenti further identified several characteristics of the service interface that would continue to be discussed in later years by design researchers. She not only described it as comprising a "varied mix of elements," like what Shostack had done, but also noted how it required new design

of Design in Retrospect], *Design Issues* 14, no. 2 (Summer 1998): 67–82, https://doi.org/ 10.2307/1511852.

10 Consider, as a contrast, the contemporary craft-inspired approach for dealing with digital materials originating from the fields of human–computer interaction and interaction design. Mikael Wiberg, "Methodology for Materiality: Interaction Design Research through a Material Lens," *Personal and Ubiquitous Computing* 18, no. 3 (March 2014): 625–36, https://doi.org/10.1007/ s00779-013-0686-7; Marco C. Rozendaal, Maliheh Ghajargar, Gert Pasman, and Mikael Wiberg, "Giving Form to Smart Objects: Exploring Intelligence as an Interaction Design Material," in *New Directions in Third Wave Human-Computer Interaction: Volume 1: Technologies*, ed. Michael Filimowicz and Veronika Tzankova (Cham: Springer, 2018), 25–42, https://doi.org/10.1007/978-3-319-73 356-2_3; Anna Vallgårda and Tomas Sokoler, "A Material Strategy : Exploring Material Properties of Computers," *International Journal of Design* 4, no. 3 (2010): 1–14.

11 Michael Erlhoff, Birgit Mager, and Ezio Manzini, eds., *Dienstleistung Braucht Design: Professioneller Produkt- und Marktauftritt für Serviceanbieter* [Service Needs Design: Professional Product and Marketing Presence for Service Providers] (Neuwied: Luchterhand, 1997), xi. I thank Lara Nettesheim and Dirk Snelders for their help translating this quote into English.

12 Birgit Mager, "Service Macht Karriere," in *Dienstleistung Braucht Design: Professioneller Produkt- und Marktauftritt für Serviceanbieter*, ed. Michael Erlhoff, Birgit Mager, and Ezio Manzini (Neuwied: Luchterhand, 1997), 3–19. The citations included in this article come from the English translation of this German original, which was later reprinted in Birgit Mager, *Service Design: A Review* (Cologne: Köln International School of Design, 2004), 19.

13 Fernando Secomandi and Dirk Snelders, "The Object of Service Design," *Design Issues* 27, no. 3 (Summer 2011): 20–34, https://doi. org/ 10.1162/DESI_ a_00088. Later reprinted in *Design Issues* 30th Anniversary Collection. Bruce Brown, Richard Buchanan, Carl DiSalvo, Dennis Doordan, and Victor Margolin,

competences to orchestrate multiple disciplinary perspectives into a coherent vision, also drawing attention to the cultural, relational, and temporal dimensions of the service interface.

Pacenti's conception of the service interface was later criticized within service design for being limited and not considering the entire organizational and sociocultural environment it was embedded in.[17] A recent proposition aligning with this criticism is that service design "materials" (i.e., symbols, artifacts, activities, and relations) are representatives of underlying institutional structures (i.e., rules, norms, and beliefs) of broader service ecosystems.[18] Yet, other authors have argued that from the situated standpoint of producers and consumers, service systems—including their organizational and sociocultural environment—cannot preexist independently but must be constituted through experiences of material interfaces.[19] For this reason, Secomandi and Snelders state that mediating interfaces are the ultimate object of service design.[20]

A special challenge for approaching the service interface as a designed "product" comes from Carla Cipolla and Ezio Manzini.[21] These authors hold that some services, especially those involving human-to-human interaction, build on "relational qualities" that cannot be objectified and manipulated by designers without losing their essence. Design interventions should be targeted "behind or beyond," but never precisely "at" the service interface.[22] Somewhat differently in another article, Cipolla acknowledges that "enabling artifacts" could be designed to indirectly shape relational encounters and even suggests "body" and "touch" as two such kinds of artifacts.[23] More directly, Lara Penin and Cameron Tonkinwise assert that service design is primarily about the "design *of* people, rather than the design of things, environments, or communications *for* people."[24] Noting how services are politically charged human performances, they call on designers to appropriately guide the actions of clients and providers at the service interface, while never restricting individual autonomy. Dirk Snelders and colleagues adopt a similar line of reasoning and suggest that the level of control over human relations by designers should depend on the type of service concerned and the predisposition of the people involved in accepting such an influence.[25] The possibility of designing human-to-human service interfaces is addressed once again by Fernando Secomandi and Frederick van Amstel,[26] who hold that certain aspects of human bodies are special types of mediating interfaces that can both design and be designed. In

"Introduction," *Design Issues* 30, no. 1 (Winter 2014): 1–2, https://doi.org/10.1162/DESI_e_00243.

14 Shostack, "Breaking Free from Product Marketing," 77.

15 Elena Pacenti, "Design Dei Servizi," in *Design Multiverso: Appunti Di Fenomenologia Del Design* [Multiverse Design: Notes on the Phenomenology of Design], ed. Paola Bertola and Ezio Manzini (Milan: Edizioni POLI.design, 2004), 151–64.

16 See Secomandi and Snelders, "The Object of Service Design."

17 For an extended appraisal of Pacenti's conception of service interface and critiques to it, see Fernando Secomandi, "Thinking through the Service Interface: A Study of Philips DirectLife," *Design Philosophy Papers* 11, no. 1 (2013): 65–88.

18 Josina Vink and Kaisa Koskela-Huotari, "Social Structures as Service Design Materials," *International Journal of Design* 15, no. 3 (2021): 29–43; Vink et al., "Service Ecosystem Design."

19 Secomandi, "Thinking through the Service Interface"; Lucila Carvalho and Peter Goodyear, "Design, Learning Networks and Service Innovation," *Design Studies* 55 (March 2018): 27–53, https://doi.org/10.1016/j.destud.2017.09.003.

20 Secomandi and Snelders, "The Object of Service Design."

21 Carla Cipolla and Ezio Manzini, "Relational Services," *Knowledge, Technology & Policy* 22, no. 1 (2009): 45–50.

22 Cipolla and Manzini, "Relational Services," 50.

23 Carla Cipolla, "Designing for Vulnerability: Interpersonal Relations and Design," *She Ji: The Journal of Design, Economics, and Innovation* 4, no. 1 (March 2018): 111–22, https://doi.org/10.1016/j.sheji.2018.03.001.

24 Lara Penin and Cameron Tonkinwise, "The Politics and Theatre of Service Design," in *IASDR 2009 Proceedings* (Seoul: Korean Society of Design Science, 2009), 4327–38.

25 Dirk Snelders, Evelien Van de Garde-Perik, and Fernando Secomandi, "Design Strategies for Human Relations in Services," in *Proceedings of the ServDes. Conference 2014* (Lancaster: Linköping Electronic Conference Proceedings, 2014), 133–42, http://www.ep.liu.se/ecp/099/013/ecp14099013.pdf.

another article, the same authors argue that human existence is collectively shaped through embodied interactions that can take place at the service interface.[27]

All in all, the service interface concept remains the cornerstone of many lines of service design research. It pervades the mainstream discourse popularized by several textbooks, such as the one by Lara Penin, who argues that "interactions are the core of services."[28] It also occupies large swaths of published pages in conference proceedings, edited volumes, and journal articles describing methods and tools (e.g., blueprints, desktop walkthroughs, and bodystorming) that can be used to represent service interfaces throughout the design process.

The service interface marks more specialized contributions in the field as well: it is at the center of calls for citizen-led reform of public services;[29] it serves to structure patient-centered codesign methodologies in health care;[30] it is part of complex social organizations in systemic conceptualizations of services;[31] it is expanded in terms of cultural meanings and value systems by integrating anthropological knowledge;[32] and it embodies the promising social innovations found in local, community-led solutions that designers try to scale up to attain sustainability.[33]

It thus appears that formgiving, in the distinct material and socioeconomic framing articulated long ago by Maldonado, is alive and well in current service design discourse. Design researchers have built on marketing's original insight regarding the role of materiality in service exchange but went beyond it and significantly enriched the debate. As Daniela Sangiorgi and Alison Prendiville concluded, designing interfaces "is still the core quality of service design around which the field builds its legitimacy and differentiation."[34] In my view, this is why we must remain cautious with proposals that build on marketing theory to posit that service design has "evolved" past its early "reductionist" views associated with Shostack.[35] Indeed, Shostack's approach cannot provide a solid foundation for service design, but this is not because newer marketing views on service offer necessarily better alternatives. It is because, as already shown elsewhere,[36] Shostack ultimately reduced the materiality of services to the alleged immateriality of their production processes, thereby making the design of the service interface ancillary and insufficiently elaborated on in her approach. Following this understanding, then, what is needed to really surpass Shostack is an approach that gives service materiality due attention and makes the form of service interfaces the primary concern for designers.

26 Fernando Secomandi and Frederick M. C. van Amstel, "Human Bodies," in *The Materials of Service Design*, ed. Stefan Holmlid, Simon Clatworthy, and Johan Blomkvist (Cheltenham: Edward Elgar, 2023).

27 Frederick M. C. van Amstel and Fernando Secomandi, "Collective Embodiment in Service Interfaces," in *Handbook of Service Design: Plural Perspectives and a Critical Contemporary Agenda*, ed. Daniela Sangiorgi, Lara Penin, and Alison Prendiville (London: Bloomsbury, forthcoming).

28 Lara Penin, *An Introduction to Service Design: Designing the Invisible* (London: Bloomsbury, 2018), 37–43.

29 Sophia Parker and Joe Heapy, *The Journey to the Interface: How Public Service Design Can Connect Users to Reform* (London: Demos, 2006).

30 Paul Bate and Glenn Robert, *Bringing User Experience to Healthcare Improvement: The Concepts, Methods, and Practices of Experience-Based Design* (Abingdon: Radcliffe, 2007).

31 Mieke van der Bijl-Brouwer, "Designing for Social Infrastructures in Complex Service Systems: A Human-Centered and Social Systems Perspective on Service Design," *She Ji: The Journal of Design, Economics, and Innovation* 3, no. 3 (September 2017): 183–97, https://doi.org/10.1016/j.sheji.2017.11.002.

32 Blomberg and Darrah, "Towards an Anthropology of Services."

33 François Jégou and Ezio Manzini, eds., *Collaborative Services: Social Innovation and Design for Sustainability* (Milan: Edizioni POLI.design, 2008).

34 Daniela Sangiorgi and Alison Prendiville, "Introduction," in *Designing for Service: Key Issues and New Directions*, ed. Alison Prendiville and Daniela Sangiorgi (London: Bloomsbury, 2017), 2.

35 Koskela-Huotari and Vink, "Tracing the Systems Turn"; Vink and Koskela-Huotari, "Social Structures as Service Design Materials."

36 Secomandi and Snelders, "The Object of Service Design."

37 Robert F. Lusch and Stephen L. Vargo, eds., *The Service-Dominant Logic of Marketing: Dialog, Debate, and Directions* (London: Routledge, 2006); Stephen L. Vargo and Robert F. Lusch, "Service-Dominant Logic 2025," *International Journal of Research in Marketing* 34, no. 1 (March 2017): 46–67, https://doi.org/10.1016/j.ijresmar.2016.11.001.

I turn to Vargo and Lusch's SD logic, marketing's dominant logic of the day, because from here originates the strongest arguments used by those who are against design approaches focused on giving form to the service interface. By scrutinizing its theoretical foundation, I show how the SD logic reiterates the same misguided belief about the primacy of service immateriality held by Shostack in the past.

A Critique of SD Logic

Introduced in 2004, Vargo and Lusch's SD logic became influential in service research around the same time that service design was consolidating as a subfield of design. It is not possible or necessary to review the copious SD logic literature that appeared since then and track its evolution in response to alternative viewpoints and toward different "levels of aggregation and abstraction."[37] The critique presented herein refers to a core of SD logic that has remained mostly unchanged over the years.

It should be noted from the start that SD logic does not contain or even strive to develop an explicit theory about materiality. On the contrary, its premise is to transcend materiality by incorporating it into a comprehensive logic for economic exchange founded on immaterial knowledge and skills (i.e., service). However, if close attention is paid to the materiality of economic exchange, then SD logic's internal consistency could be called into question.

To prove that, let us look at the paradox created by the collision of two of SD logic's foundational premises: "Goods are distribution mechanisms for service provision" and "Value is always uniquely and phenomenologically determined by the beneficiary."[38] In what follows, I demonstrate that goods cannot be reduced to distribution mechanisms for service if value determination by end-beneficiaries is described from a phenomenological perspective.

> Starting with the first premise, Vargo and Lusch explain: Goods are appliances (tools, distribution mechanisms), which serve as alternatives to direct service provision. Service, then, represents the general case, the common denominator, of the exchange process; service is what is always exchanged. Goods, when employed, are aids to the service-provision process.[39]

The subordination of goods to services should not suggest that goods are not valued at all in SD logic. They are still useful and necessary for economic exchange, for instance, as "substitutes

38 Stephen Vargo and Robert Lusch, "Service-Dominant Logic: Continuing the Evolution," *Journal of the Academy of Marketing Science* 36, no. 1 (March 2008): 1–10.

39 Stephen L. Vargo and Robert F. Lusch, "Why Service?," *Journal of the Academy of Marketing Science* 36, no. 1 (March 2018): 26, http://doi.org/10.1007/s11747-007-0068-7.

40 Vargo and Lusch, "Evolving to a New Dominant Logic for Marketing," 9.

41 Vargo and Lusch, "Service-Dominant Logic," 4.

42 Vargo and Lusch, "Evolving to a New Dominant Logic for Marketing," 2.

43 Ibid., 2–3.

44 Ibid., 3, 8.

45 Stephen L. Vargo and Fred W. Morgan, "Services in Society and Academic Thought: An Historical Analysis," *Journal of Macromarketing* 25, no. 1 (June 2005): 51, https://doi.org/10.1177/0276146705275294.

46 Vargo and Lusch, "Evolving to a New Dominant Logic for Marketing," 3.

47 This premise was not part of SD logic's original framework and was added in response to early critical commentary. Stephen L. Vargo and Robert F. Lusch, "Service-Dominant Logic: What It Is, What It Is Not, What It Might Be," in *The Service-Dominant Logic of Marketing: Dialog, Debate, and Directions*, ed. Robert F. Lusch and Stephen L. Vargo (London: Routledge, 2006), 43–56. Later the statement was upgraded from an SD logic premise to an axiom. Robert F. Lusch and Stephen L. Vargo, *Service-Dominant Logic: Premises, Perspectives, Possibilities* (Cambridge: Cambridge University Press, 2014), https://doi.org/10.1017/CBO9781139043120.

48 Vargo and Lusch, "Service-Dominant Logic," 7. Other researchers have addressed this gap by elaborating on the notion of customer experience and referencing earlier phenomenological studies in the field of marketing. Although these views represent some advances, especially in explaining customer experience as being inter-subjectively constituted through social relations, they also conform to SD logic's framework and do not question the downplaying of materiality in customer's determination of value, as I do here. See Anu Helkkula, "Characterizing the Concept of Service Experience," *Journal of Service Management* 22, no. 3

for" service: wheels and pulleys can replace physical skills, computer applications can replace accountants' expertise, and so forth.[40] However, this functional equivalence should not denote symmetrical roles in economic exchange. This is because, according to SD logic, goods cannot effectuate the exchange only by themselves. As Vargo and Lusch note, "even when goods are involved, what is driving economic activity is service—applied knowledge."[41]

Although Vargo and Lusch never put it exactly like this, the issue boils down to the difference between operant and operand resources.[42] As they explain, operant resources can be "employed to act on operand resources (and other operant resources)," whereas operand resources are those on which an "act is performed to produce an effect." Because only operant resources can "produce effects," they are considered primary in SD logic.[43] Vargo and Lusch define operant resources as "often invisible and intangible" and represented in "specialized knowledge, mental skills, and, to a lesser extent, physical labor (physical skills)."[44] This knowledge and these skills can be "transferred directly" without the intermediation of goods, as in service situations that involve direct face-to-face interaction. Alternatively, they can be embodied in goods, which then become "intermediate artifacts of service provision that allow the indirect transfer of specialization [i.e., knowledge and skills]."[45]

Hence, when Vargo and Lusch hold that goods are distribution mechanisms for service provision, what is highlighted is their essence as operand resources. Deprived of the operant resources that must act on them to provide service, goods subsist as innocuous brute matter. This interpretation is supported by Vargo and Lusch's definition of the microprocessor—an item most will associate with goods—as an operant resource, only to immediately deconstruct it as "silica embedded with knowledge through human ingenuity."[46]

To provisionally conclude, I have explained how materiality (related to goods) is subordinated to immateriality (related to services) in SD logic because of how operand and operant resources are said to interact in service exchange. I now turn to the second premise regarding the phenomenological determination of value by service end-beneficiaries.[47]

It is troubling that Vargo and Lusch never provide references for their usage of the term "phenomenologically," ignoring the obvious allusion to one of the most important philosophical movements of the twentieth century. They only state that the term is meant to stress the customer's active role in value determination, as

well as the "idiosyncratic, experiential, contextual, and meaning-laden" nature of that process.[48] To verify this premise, I draw on a published phenomenological case study of a self-tracking service called DirectLife, commercialized by Philips from 2009 to 2016.[49]

From the standpoint of DirectLife's end-beneficiaries (i.e., users), the service consisted of three main interfaces: (a) the activity monitor, which was a wearable device embodying an accelerometer and networking technologies to monitor users' activity patterns and upload these data to a website application for further processing; (b) the history view, the central functionality of the website application, where users tracked their recorded levels of calorie expenditure and compared those measures against targets set for them by the system as part of a 12-week activity improvement program; and (c) the coaching e-mails, which were personalized one-to-one communications with human coaches intended to motivate users to commit to weekly targets and assume more physically active behaviors.

An analysis of this case inspired by SD logic would roughly imply defining the three DirectLife interfaces as surrogates for the application of immaterial knowledge and skills pertaining to service providers and users. More specifically, the service provider's knowledge and skills for motivating healthier behaviors by technological means would be described as effecting service provision by "acting on" the activity monitor, history view, and coaching e-mails. The value created as an outcome for users would be determined by the application of their personal knowledge and skills for adopting healthier behaviors when interacting with those service interfaces.

A phenomenological description of DirectLife enables us to understand, instead, how human knowledge and skills could never have an impact on service provision—nor exist as part of the service, for that matter—independently from the material interfaces. Assuming the situated perspective of users, for example, coaches only came into existence for them through the reading of e-mails. Users carefully inspected details in terms of syntax, punctuation, and numerals included, to determine that the e-mail was not automatic but indeed produced by someone who manually investigated recorded data patterns before returning with personalized advice. In turn, users could not know to be physically active only through introspection. Instead, they depended on how their bodily behavior and physical performance were visualized at the history view interface. Moreover, the DirectLife service interfaces influenced users' self-knowledge in ways that were completely unexpected by

(January 2011): 367–89, https://doi.org/10.1108/09564231111136872; Anu Helkkula, Carol Kelleher, and Minna Pihlström, "Characterizing Value as an Experience: Implications for Service Researchers and Managers," *Journal of Service Research* 15, no. 1 (February 2012): 59–75, https://doi.org/10.1177/1094670511426897.

49 Secomandi, "Thinking through the Service Interface"; Fernando Secomandi, "Service Interfaces in Human-Technology Relations: A Case Study of Self-Tracking Technologies," in *Postphenomenological Methodologies: New Ways in Mediating Techno-Human Relationships*, ed. Jesper Aagaard, Jan Kyrre Berg Friis, Jessica Sorenson, Oliver Tafdrup, and Cathrine Hasse (Lanham, MD: Lexington Books, 2018), 83–102. The analyses presented in these empirical investigations draws on postphenomenology, one of the contemporary approaches in the philosophy of technology associated with an "empirical turn" of the field to concrete technological artifacts and human experiences. See Hans Achterhuis, ed., *American Philosophy of Technology: The Empirical Turn* (Bloomington: Indiana University Press, 2001); Evan Selinger, ed., *Postphenomenology: A Critical Companion to Ihde* (Albany: State University of New York Press, 2006); Don Ihde, *Postphenomenology and Technoscience: The Peking University Lectures* (Albany: State University of New York Press, 2009); and Robert Rosenberger and Peter-Paul Verbeek, "A Field Guide to Postphenomenology," in *Postphenomenological Investigations: Essays on Human-Technology Relations*, ed. Robert Rosenberger and Peter-Paul Verbeek (Lanham, MD: Lexington Books, 2015), 9–41.

them and unintended by designers. One example was when the activity monitor was forgotten inside a pajama pocket and followed the user into bed, giving him surprising readings of physical activity overnight and counterintuitively associating sleep time with the ability to succeed or fail in reaching weekly targets.

In short, the analysis of this case shows that the knowledge and skills of DirectLife users and providers were not preexistent and simply transferred by the activity monitor, history view, and coaching e-mails. What these service interfaces did was to materialize knowledge and skills in the human experiencing, and in so doing, co-constitute users and providers in non-neutral ways. Coaches appeared to users as knowledgeable and skillful only to the extent that, and precisely in the way that, their human work could be read through e-mails. In turn, how users came to understand their own knowledge and skills depended on the peculiar ways their bodies were manifested onscreen as subject to continuous, minute-by-minute surveillance and quantification of physical behavior. The material non-neutrality of service interfaces is especially evident in occasions such as that of the user who noted unforeseen outcomes from the activity monitor after going to sleep while still carrying it.

In line with SD logic terminology, it was as if the material interfaces "acted on" the knowledge and skills of users and providers in providing the service. In other words, the "driving" force of the exchange could not be attributed to humans only, because it was shared with nonhumans as well. SD logic ignores this reality of distributed agency and imposes a dichotomy founded on the difference between operant resource—that which has full human agency—and operand resource—that which does not have any agency at all. It then draws a line: on one side, there is the human knowledge and skills, acting; on the other side, there are nonhuman material interfaces, to be acted on. The first side is labeled "service," and the second side is labeled "goods." For SD logic, economic exchange is a zero-sum game where the immateriality of service captures all agency in value creation while the materiality of goods is left with none.

In sum, SD logic is based on an inaccurate account of how value is phenomenologically determined by end-beneficiaries, and this undermines the claim that goods are mere distribution mechanisms for service. By privileging the agency of immateriality and making it impervious to that of materiality, when SD logic is applied to service design, the tendency is to support conclusions that appear

senseless from a formgiving perspective. Devising a scalpel for surgical operations, for example, becomes the same as devising a remotely controlled robotic system for that same task. After all, eventual differences between these forms at the material level would be deemed irrelevant, as both are purportedly unable to produce effects by themselves but only exist as substitutes for the direct exchange of service. Hence, any special formgiving challenges pertaining to these cases must be encountered, not in the materiality of scalpels or robotic arms but in the knowledge and skills that are applied by the humans involved.

In the next section, I elaborate on the implications of SD logic's limitations for design by returning to Maldonado's definition and calling for more careful reflection on the distinctive materiality of services.

Formgiving in Postindustrial Design
More than half a century has elapsed since Maldonado advanced his account on formgiving, and so much has changed in the world of design in terms of its objects, tools, participants, places, motives, imaginaries, and so on. In 2015, the World Design Organization (WDO, formerly ICSID) unveiled a new definition of industrial design that expands its scope beyond products to systems and experiences, as well as to services.[50]

Is it anachronistic to revisit Maldonado's definition today to learn something original about service design? I think not. As seen in the literature review, this definition helps expose a tradition of formgiving that is still replenishing the contemporary debate about service design (even if some think of it as an undercurrent). Moreover, Maldonado's definition elevates formgiving as the point toward which design activities ultimately converge, while highlighting the role of designed forms in mediating production and consumption systems. We now know that the exchange of services represents a major source of value creation in postindustrial societies.[51] Therefore, analyzing service design from a formgiving perspective helps explain the extraordinary influence that this activity can have on the world economy.

In my view, what is needed to rejuvenate formgiving as a useful epistemological category to interpret service design is to let go of old-fashioned conceptual framings that reduce materiality to the notion of an object devoid of agency, to be acted on by humans, as SD logic has it. Obviously—and this we can derive from Maldonado—the material form of services cannot be simply

50 See WDO, "Definition of Industrial Design," https://wdo.org/about/definition/ (accessed June 10, 2022). The extended version of the definition reads: "Industrial Design is a strategic problem-solving process that drives innovation, builds business success, and leads to a better quality of life through innovative products, systems, services, and experiences. Industrial Design bridges the gap between what is and what's possible. It is a trans-disciplinary profession that harnesses creativity to resolve problems and co-create solutions with the intent of making a product, system, service, experience, or a business, better. At its heart, Industrial Design provides a more optimistic way of looking at the future by reframing problems as opportunities. It links innovation, technology, research, business, and customers to provide new value and competitive advantage across economic, social, and environmental spheres." This definition is aligned with an earlier one presented by Buchanan in an often-cited paper. Richard Buchanan, "Design Research and the New Learning," *Design Issues* 17, no. 4 (Autumn 2001): 3–23, https://doi.org/10.1162/074793 60152681056.

51 See Jean-Claude Delaunay and Jean Gadrey, *Services in Economic Thought: Three Centuries of Debate* (Dordrecht: Springer, 1992), 75–101.

equated to that of goods, nor can formgiving practices be the same in service design as they are in industrial design. Designed form is never one but many; this is true even when industrial goods are considered. During the expansion of capitalism in manufacturing industries in the United States, the conventional form was a highly standardized object, composed of interchangeable parts devised for machine manufacturing and line assembly, to be distributed in mass markets. In Western Europe, around the time that Maldonado was perfecting his definition of design, the forms given to the same types of objects had to be different, among other reasons, to reflect the miniaturization of electronic machinery and to express symbolic values alluding to quality production that could sustain an international competition, but not based on lower prices.

Moving into present-day, service-intensive socioeconomic systems, the forms that can mediate production and consumption must continue to change and adapt, but never irrespective of the material dimension. This fact was already intuited in the 1980s by early thinkers of the postindustrial age in design.[52] Abraham Moles and David Jacobus opened their article eloquently: "An immaterial culture is emerging. *It exists only because a heavily material base supports it and makes it possible.*"[53] At the same time, these authors did not leave unremarked the apparent "dematerialization" of design processes and objects owing to the information-based and computation-enabled technologies that were then supporting the postindustrial turn.

With this article, I hope to show that service design research can also contribute to updating present notions of materiality, for instance, when describing service interfaces as comprised of a "varied mix of elements." I believe, particularly, that there is a special element among these that must not be overlooked but is yet to become a topic of sustained analysis in the history of design, and that is the face-to-face human interactions happening at the service interface. Through interpersonal encounters, human bodies—themselves—can materialize service exchange. This is key to the concept of service as actualized in its various archetypes throughout history, from ancient, forced labor to contemporary industrialized services.[54]

Hence, the forms assumed by human bodies in service encounters should be of central concern for designers. Sociologists who study interactive service labor warn that in activities such as waitressing, nursing, and teaching "the embodied attributes of workers . . . their height, weight, looks, attitudes are part of the exchange."[55] Mager, a service design pioneer, similarly underscores

52 Marco Diani, ed., "Designing the Immaterial Society," special issue, *Design Issues* 4, nos. 1–2 (Autumn 1988); Abraham A. Moles and David W. Jacobus, "Design and Immateriality: What of It in a Post Industrial Society?," *Design Issues* 4, nos. 1–2 (1988): 25–32, https://doi.org/10.2307/1511384.

53 Moles and Jacobus, "Design and Immateriality," 25; emphasis added.

54 Miso Kim, "An Inquiry into the Nature of Service: A Historical Overview (Part 1)," *Design Issues* 34, no. 2 (Spring 2018): 31–47, https://doi.org/10.1162/DESI_a_00484.

55 Linda McDowell, *Working Bodies* (Chichester: Wiley-Blackwell, 2009), 9.

that from a formgiving standpoint "service products evolve from the interaction between people and gain their form and quality through this encounter."[56] Her remarkable insight is to note how "form issues" in interpersonal services do not arise only from the commodification of the embodied performance of traditionally undervalued workers. These issues can also result from the struggle of highly esteemed professionals in making themselves part of reciprocal exchanges with customers because they negatively associate a "serving attitude" with dependability and submissiveness:

> Numerous professions in the service sector have turned the tables on this unpleasant aftertaste left by servility … [they] pronounce with supreme self-assurance—or so it seems—to be of the executive order: lawyers, doctors, insurance companies, banks, educational institutes, and public agencies. They all have completely blotted out any service characteristic and barricaded themselves behind power affectations only made possible through legislative regulations implemented by the monopolistic forces in power. With nearly unlimited self-satisfaction, these companies considered "customers" petitioners dependent on and submissive to their unattainable competences. Not but a few years ago, these "form issues" had never been surfaced in these sectors, since—according to them—their professions were not about customer-orientated services. It is important to note that present deregulation and internationalization of markets have sharply jeopardized this position. It takes great effort to break bad habits and instill a modern service mentality—a mentality which very often lacks the competence to posit form into service thinking.[57]

Observations like these, which explore the intersection of form giving with political economy and ethics, raise interesting questions that sit beyond the scope of this article. I want to suggest, though, that decisive advances in the matter of designing face-to-face encounters are significantly hampered when the SD logic is adopted. This is because of the necessary reduction of human bodies to either operand or operant resources. But if the body is treated as an operand resource, we must dismiss the agency that all humans genuinely possess. Treating the body as an operant resource presumes a freedom to influence service exchange according to one's own will that humans often lack in real life, either because of material constraints or because they find themselves in oppressive relations with other humans.

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56 Mager, *Service Design: A Review*, 23.
57 Ibid., 22.

Beyond what SD logic may or may not be able to offer in this case, interpersonal encounters remain a vexing issue for service design. As seen in the literature review, various perspectives are advanced by researchers, certainly without exhausting the debate or reaching a consensus. This issue nonetheless conceals one of the most significant contributions that service design could make to the broader field of design.

Conclusion

I have shown that the logic of service immateriality represented by the SD logic is untenable under rigorous phenomenological analysis and unable to establish a solid basis for addressing important challenges that face the discipline of service design. With this critique, I do not pretend to somehow be able to redress SD logic, nor do I believe that it will be easy to accommodate this critique into SD logic by eventually turning attention to materiality at a "microtheoretical" level of analysis.[58] Legitimating the material agency of nonhumans, and consequently flexibilizing human agency, would compromise the main axioms and premises of SD logic and undermine the explanatory power of its central claim that immaterial knowledge and skills are the foundation of economic exchange.

The alternative I put forward is to critically assess the tradition of formgiving in design. Specifically, I believe that Maldonado's account provides a useful starting point to reconsider, from a formgiving perspective, a substantial part of contributions being made in the discipline of service design. This is not to say that service design must accept previous conceptions of form linked to industrial goods, nor that designing services should closely resemble industrial design practices of formgiving. Rather, service design should continue to expand in promising new directions and integrate perspectives from other disciplines, eventually from marketing, too, to the extent that it can overcome its fixation on service immateriality.

Irrespective of the way forward, it is impossible to escape the fact that economic exchange must be realized through some form of mediating material, something that correlates with the corporeality of the human beings involved in those exchanges. Instead of overlooking this reality or taking it for granted and then searching elsewhere for a foundation for service design, we should embrace design's historical role in materializing economic exchange and promote a thoughtful appraisal of that role in view of the uniqueness of service-related modes of production and consumption. We must remain open, especially, to the idea that giving form to face-to-face service exchange might require radically overhauling present notions of what it means to design.

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58   Vargo and Lusch, "Service-Dominant
       Logic 2025."

Two decades ago, as service design was emerging as a new discipline, it might have seemed promising to adopt the marketing-dominant logic for service. Continuing to do so today should come with the realization of limitations imposed by this logic. It is necessary to break free from such dominance, unless we are satisfied with service design becoming an applied subfield of marketing.