Design and marketing: Intersections and challenges

Jörg Henseler[1,2] | Manuela Guerreiro[3]

[1]Department of Design, Production and Management, University of Twente, Enschede, The Netherlands

[2]Nova Information Management School (NOVA-IMS), Universidade Nova de Lisboa, Lisboa, Portugal

[3]Research Centre for Tourism, Sustainability and Well-being (CinTurs), Universidade do Algarve, Faro, Portugal

Correspondence
Jörg Henseler, Chair of Product–Market Relations, Department of Design, Production and Management, University of Twente, Drienerlolaan 5, 7522 NB Enschede, The Netherlands.
Email: j.henseler@utwente.nl

This editorial article reports on interdisciplinary research being conducted at the interface between the scientific disciplines of marketing and design. It reviews the 11 academic papers from the special issue situated at this intersection, thereby showing the richness of research happening in this liminal area. At the same time, the paper observes how the disciplines' different scopes as well as their different modi operandi inhibit the collaboration between marketing and design research. Whereas marketing largely follows the paradigm of empirical realism asking how the current world works, design largely follows the pragmatist paradigm asking how a future world can be shaped. Finally, this paper contains a number of suggestions on how to foster cooperation between the two disciplines.

KEYWORDS
design, empirical realism, interdisciplinary research, marketing, pragmatism, research projects

> The intellectual activity that produces material artifacts is no different fundamentally from the one … that devises a new sales plan for a company ….
>
> (Simon, 1969, p. 129)

1 | INTRODUCTION

Marketing is a business function that has an important impact on firms' success. According to the marketing concept, the key to achieving organizational goals is to be more effective than competitors in creating, delivering and communicating superior customer value to the selected target customers (Kotler & Keller, 2008). If firms employ concepts such as service quality and market orientation, they can expect more satisfied and loyal customers (Zeithaml, Berry, & Parasuraman, 1996) and ultimately increased profitability in their business (Narver & Slater, 1990).

However, marketing is more than just a value-generating business function; it is also a scientific discipline. Departing from its roots as a business practice, it became a profession in the mid-1900s (Brown, 1948) and soon turned into a science (Buzzell, 1963) of

which the scope can best be described as the 'science of exchange' (Bagozzi, 1975).

1.1 | Marketing borrows from and contributes to other disciplines

Marketing is widely regarded as a discipline of applied research, which borrows ideas and principles from other, often more fundamental disciplines (Hunt, 1994), and applies them in various contexts. For instance, a large part of marketing's methodological inventory has been imported from econometrics and psychometrics, the methodological branches of economics and psychology. But marketing's intersection with other scientific disciplines goes much further than that. Because the boundaries between disciplines have been identified as fertile grounds for new discoveries and solutions (Lakhani, Jeppesen, Lohse, & Panetta, 2007; Rylance, 2015), it comes as no surprise that more and more research attention is being devoted to these intersections.

Table 1 shows a list of neighbouring disciplines of which the intersections with marketing produce sufficient research to nourish at least one scholarly journal. Whereas in some instances, marketing clearly borrows from another field and in other instances, it clearly contributes, sometimes, both borrowing and contributing happen at

TABLE 1 A selection of marketing's neighbouring disciplines and journals covering the intersection

Discipline	Exemplary journal(s) covering the intersection
Economics	Quantitative Marketing and Economics
Education	Journal of Marketing Education, Journal of Marketing for Higher Education
Entrepreneurship	Journal of Research in Marketing and Entrepreneurship
Fashion	Journal of Fashion Marketing and Management, Journal of Global Fashion Marketing
Food	Journal of Food Products Marketing, Journal of International Food and Agribusiness Marketing
Health	Health Marketing Quarterly, International Journal of Pharmaceutical and Healthcare Marketing
History	Journal of Historical Research in Marketing
Hospitality	Journal of Hospitality Marketing and Management
Logistics	Asia Pacific Journal of Marketing and Logistics
Politics	Journal of Political Marketing
Psychology	Psychology & Marketing
Public Policy	Journal of Public Policy and Marketing
Religion	Journal of Islamic Marketing
Sports	International Journal of Sports Marketing and Sponsorship
Technology	International Journal of Technology Marketing

Note: Scholarly journals carrying the term 'Marketing' as well as an identifier of another discipline as listed by Scimago.

the same time. For example, there is marketing education (where marketing borrows from the field of education) and higher education marketing (where marketing contributes to the field of higher education).

Not all intersections where marketing and other disciplines meet are so large that they have a scholarly journal devoted to them. However, that does not mean such an intersection is negligible. For instance, research at the intersection of marketing and accounting (Hodge, Brown, & Lumpkin, 1991) or architecture (Brown, 1990) addresses important questions.

Some interdisciplinary research related to marketing is so new that the intersection is only just emerging. One such trending field is neuromarketing, which connects marketing to neuroscience. Another, at least as fruitful an intersection, is the one between marketing and design (Zhang, Hu, & Kotabe, 2011). This is what this paper and this special issue is about.

1.2 | Design and marketing

According to the Accreditation Board for Engineering and Technology, design can be defined as 'the process of devising a system, component, or process to meet desired needs. It is a decision-making process (often iterative), in which the basic science and mathematics and engineering sciences are applied to convert resources optimally to meet a stated objective'. Because needs are nothing but a human lack of satisfaction, that is, they are a human state, design can be seen as the human-centred approach to innovation (Gruber, De Leon, George, & Thompson, 2015). In this perspective, design turns a spotlight on the development of solutions that are meaningful to customers (Brown, 2008)—a perspective very similar to one held in marketing.

Researchers largely agree on the importance of design (e. g., Gemser & Leenders, 2001; Sarasvathy, Dew, Read, & Wiltbank, 2008; Ulrich & Eppinger, 2000). Similar to marketing, design is widely recognized as a success factor in firms, mainly because of its potential to boost a firm's competitiveness (Hertenstein, Platt, & Veryzer, 2013). Consequently, many companies have developed design capabilities to differentiate themselves from competitors.

Marketing and design not only share the characteristic of being business success factors; in fact, there are many more connections. Designers make use of marketing instruments such as human branding (Moore, Fernie, & Burt, 2000; Scheidt, Gelhard, & Henseler, 2020), and marketing is included in higher education industrial design curricula (Henseler, 2015; Wolff & Capra Galina, 2008). Not least, marketers and designers have similar assignments: marketers' tasks strongly resemble those of designers, and vice versa. Already in 1948, Banting and Ross (1973, p. 1) described a marketing executive's task as ' … a "mixer of ingredients," who sometimes follows a recipe prepared by others, sometimes prepares his own recipe as he goes along, sometimes adapts a recipe to the ingredients immediately available, and sometimes experiments with or invents ingredients no one else has tried'. In essence, this reiterates Simon's observation given at the beginning of this article.

Design, like marketing, is a relatively young scientific discipline. It is largely understood as having been brought into being by Herbert Simon's seminal monograph on the 'Sciences of the Artificial' (Simon, 1969), in which he distinguished between the natural sciences aimed at analysing the world and the design sciences aimed at shaping the world. The mission of design research is 'to produce knowledge for the design and realization of artefacts, i. e. to solve construction problems, or to be used in the improvement of the performance of existing entities, i. e. to solve improvement problems' (Aken, 2004).

Despite certain overlaps, there is a scarcity of research connecting marketing and design. Only recently, has there been an increasing interest in better understanding how design and design management contribute to marketing strategy (Bloch, 2011). We anticipate an important shift towards interdisciplinarity to result from design thinking entering the marketing discipline (Halstrick, Henseler, & Schmidt, 2020)—'a methodology that imbues the full spectrum of innovation activities with a human-centered design ethos […] powered by a thorough understanding, through direct observation, of what people want and need in their lives and what they like and dislike about the way particular products are made, packaged, marketed, sold, and supported' (Brown, 2008, p. 86).

1.3 | The different worldviews of marketing and design

One difficulty in the collaboration between marketing and design is their different worldviews. Srinivasan et al. (1997, p. 156) trace this difference back to how marketing and design experts are trained: 'Industrial designers are often trained to see a product and its environment as an integrated whole, a *gestalt*, so that the different product attributes, price, aesthetics, usability, and quality of manufacture are similarly aligned, thereby reinforcing one another. Consequently, designers and marketing researchers differ fundamentally in the level of trust they put in rationalist, decompositional techniques and statistical survey instruments for product development. This difference can cause tensions between the disciplines. We contend that the one discipline is weak where the other is strong and that these are complementary, rather than competing, inputs to the product design process.' As concrete manifestation of these tensions in practice, Bruce and Cooper (1997) mention low mutual respect between design and marketing, a lack of clear information supplied to design and marketing not understanding the design process.

A different worldview also becomes apparent in how each discipline formulates research questions and how they conduct research, each largely influenced by the scientific paradigm they pursue. Marketing research largely follows an empirical realist paradigm, trying to understand the current world and seeking the validity of its concepts in whether they exist. Design research largely follows a pragmatist paradigm, trying to shape the future world and assessing whether the designed artefacts are functional. Often, the pursued paradigm can be inferred from how the research question is formulated. Table 2 contrasts typical formulations of research questions under the empirical realist and the pragmatist paradigm.

So far, when marketing scholars reach out to design, they touch design topics without really engaging in design. For instance, Homburg, Schwemmle, and Kuehnl (2015) investigate whether product design exists, and Schnurr (2017) asks whether the extent of functional and aesthetic co-creation has an effect on customers' quality perceptions of the co-created product. None of them, however, (dare to) present a new artefact and then demonstrate that it works. Yet more designer-type questions are not far removed from marketing research questions, such as 'How can we facilitate the creativity of a new product?' as Kwon, Lee, and Kim (2015) asked. The question is directed towards the future and has a clear design focus.

TABLE 2 Typical formulations of research questions within different paradigms: Empirical realism versus pragmatism

Empirical realism	Pragmatism
How does …?	How can …?
How is …?	How should …?
Is there …?	Can we …?
What is …?	What is the best …?
How does … work?	How can we get … working?

2 | ELEVEN STUDIES DEALING WITH INTERSECTIONS OF MARKETING AND DESIGN

As a first endeavour to stimulate research on the interplay of marketing and design and to work towards a map of the area where the two disciplines intersect, the second author together with researchers from the Universidade do Algarve with a background in marketing and design organized the International Conference on Marketing and Design (ICMD 2018), held on 18 and 19 October 2018 in Faro, Portugal. A number of the conference's outstanding papers and additional submissions following CIM's open call for papers on the topic of 'Design and Marketing: Intersections and Challenges' ultimately resulted in the 11 papers published in this special issue.[1] Each of these papers takes its own perspective in their work on the interplay of marketing and design.

2.1 | Paper 1: Bridging the gap between design and behavioural research: (Re)searching the optimum design strategy for brands and new product innovations

Mulder-Nijkamp (2020) studies brand extension as a phenomenon in which the fields of innovation management, branding and design come together. Although all three fields are known to affect corporate success, we do not yet understand how they intersect. In particular, there is ample research on *when* brand extensions are likely to succeed, but on *how* to design brand extensions, scholarly literature leaves designers to decide this on their own. From the perspective of designers Mulder-Nijkamp (2020) investigates which design rules contribute to the success of brand extension. The empirical study relies on 81 designs of snow scooters designed by students and evaluated by 47 design professionals. The results show that designers should ensure fit with the parent brand and increase the novelty of the brand extension without sacrificing its typicality (level of familiarity).

2.2 | Paper 2: An investigation of the complementary effects of technology, market and design capabilities on exploratory and exploitative innovations: Evidence from micro and small-sized tech-enterprises in China

Besides technology, Xue and Swan (2020) identify design and the market as important driving forces in enterprise innovation activities. In order to better understand their combined effects on exploratory and exploitative innovations, the authors conduct survey research among 357 micro and small-sized tech-enterprises (MSTEs) in a fast-developing region of China. They find that the effect of design capabilities on innovation is not ubiquitously the same but is contingent on technology and the market. In particular, design capabilities' effect on exploitative innovation depends on the market, and their effect on exploratory innovation depends on both technology and the market.

2.3 | Paper 3: When external design and marketing collaborate to develop new products: Typology of patterns

Along with the rise of open innovation, external design has become an increasingly prominent management instrument. Hemonnet-Goujot,

Abecassis-Moedas, and Manceau (2020) study the collaboration between marketing and external design in the new product development process. In qualitative research using seven case studies, they propose a typology of three collaboration patterns between external design and marketing. The first type of collaboration is characterized by a strong marketing lead and relies on customer-based designers. The second type of collaboration is best described by a strong design lead and relies on process-based designers. The third type of collaboration makes use of co-branding with star designers. Similar to Mulder-Nijkamp (2020), Hemonnet-Goujot et al. (2020) emphasize the right balance between product innovativeness and brand consistency.

2.4 | Paper 4: Co-creation and co-design in pop-up stores: The intersection of marketing and design research?

Overdiek and Warnaby (2020) set out from the observation that although the concept of co-creation is covered in both the marketing and the design literature, there is surprisingly little connection or overlap between the two streams. Whereas co-creation in marketing refers to firms' active collaboration with their stakeholders in value creation, co-creation in design refers to design users participating in the design (research) process. Overdiek and Warnaby (2020) identify pop-up stores as a context in which both phenomena occur. The consumer/user engagement observable in pop-up stores gives marketers insight in what is meaningful to consumers and facilitates co-design. Two case studies illustrate how this dual form of co-creation can occur.

2.5 | Paper 5: The effect of 'co-creation with consumers' claims on purchase intention: The moderating role of product category performance information

Huertas and Pergentino (2020) investigate the extent to which the effect of a consumer co-creation claim on customers' purchase intention depends on context information related to the product's category performance. They conduct two experiments with consumers in which they manipulated both variables. Across studies, there is consistent empirical evidence that consumer co-creation claims have more impact under the contingency of negative information on product category performance.

2.6 | Paper 6: To what extent are digital influencers creative?

Brito and Guilherme (2020) assessed creativity and innovation in the profiles of digital influencers and developed an understanding of how they participate in the process of content creation shared with their partner brands. By means of in-depth interviews with digital influencers, they reveal that these respondents express not only four of the nine dimensions of creativity but also a new attribute that the authors dub 'originality'. Digital influencers seem to play a more active role in the co-creation experience than the scholarly literature has reported so far. Sharing creative, innovative, quality content, as well as being involved in content production with the brands during the different stages of message development, is pivotal for them.

2.7 | Paper 7: Struggles as triggers in a design thinking journey

Whereas the benefits of design thinking as an approach to developing innovations are widely recognized, it is also important to acknowledge the tensions the approach creates—particularly to design thinking novices. To shed light on these tensions, Coco, Calcagno, and Lusiani (2020) conducted a qualitative study focusing on the struggles that management students face during a design thinking innovation journey. Employing inductive reasoning, they organize the participants' experiences, opinions, feelings and cognition into three main categories of struggles and triggers, identified as destabilizing, non-deciding and abstracting. All of these struggles and triggers entail a cultural clash with the participants' educational background.

2.8 | Paper 8: From the classical art to the urban art infusion effect: The effect of street art and graffiti on consumers' product evaluation

The art infusion effect (Hagtvedt & Patrick, 2008) is a special kind of spillover effect according to which consumers' associations with (typically classical fine) arts are transferred to a product/brand if the art and the product/brand are jointly communicated. Baumgarth and Bahati Wieker (2020) investigate whether the art infusion effect can be generalized to urban art such as street art and graffiti. Based on a small survey, the authors can confirm such generalization. They find that urban art, particularly street art, is also perceived as art. A subsequent laboratory experiment provides evidence for an urban art infusion effect in the sense that the presence of urban art enhances a favourable evaluation of the product. However, mediation analysis shows that this effect is purely indirect, mediated by luxury perception, lifestyle perception and the fit between the art and the product.

2.9 | Paper 9: Post-adoption buffering effects of innovative product aesthetics

Nagel and Schumann (2020) investigate post-adoption buffering effects the aesthetics of innovative products can have, that is, how aesthetics influences consumer behaviour after the product has been adopted. Relying on a longitudinal study among early adopters of a battery-electric car model, they find that consumers' perceptions of innovative aesthetic value buffer the product-related hedonic experience's effect on attitudes towards the product. Additionally, they detect a moderating effect of innate consumer innovativeness.

2.10 | Paper 10: Creative heritage: Overcoming tensions between innovation and tradition in the luxury industry

The trade-off between product innovativeness and brand consistency is a recurring phenomenon in the intersection of marketing and design. This often leads to conflict between the two functions in innovation projects. Carvajal Pérez, Le Masson, Weil, Araud, and Chaperon (2020) notice that in luxury industries, these difficulties are exacerbated by tension between innovation and tradition, which can diminish originality and operational efficiency. In a qualitative study based on three design projects of a luxury champagne house, they discover a

cognitive resource type—creative heritage—that can help marketing and design teams in luxury organizations to address destructive and creative tensions and overcome the trade-off. This enables design originality that is coherent with tradition and operational efficiency.

2.11 | Paper 11: Design and the customer experience: The challenge of embodying new meaning in a new service

Innovation of meaning (Verganti, 2009) is an innovation strategy that entails conceptualizing new meanings consumers will attach to specific products and services. Artusi and Bellini (2020) seek a solution to the problem of how to embody new meaning in a new solution and present a method of developing new concepts aligned with the innovation of meaning framework's core principles. They examine the method's efficacy by means of an experiment among managers and find that the service concept must be simple and focused on one concrete element in the customer journey, the so-called moment of meaning.

3 | SYNTHESIS AND OUTLOOK

This paper started with recognizing the scarcity of research on the intersection of design and marketing. What does this intersection, where marketing borrows from design and design borrows from marketing, look like? As our walk through the 11 studies on this

intersection show, the truth regarding relevant research is much richer. Some of this richness can be inferred from Table 3, which lists the 11 studies alongside their research questions, the type of research and the unit of analysis.

First, the studies differ regarding which field they inform. Some studies inform design, some inform marketing and some inform a higher level interested in the cross-functional collaboration.

Second, the studies differ regarding the paradigm within which the research is conducted. Whereas any scientific research aims to advance knowledge (Bunge, 1967), the ways in which scholars accomplish this can vary considerably. Eight of the 11 studies we report seek to understand the world in which design and marketing operate. Using the formulation of their research questions (see Table 2) as a proxy, it appears that they largely follow the empirical realist paradigm. In Table 3, we classify them as 'research'. The remaining three studies seek to shape the intersection of marketing and design. According to the formulation of their research questions, they follow the pragmatist paradigm. In Table 3, we classify them as 'design'.

Third, the studies differ concerning their unit of analysis. Studies categorized as research predominantly look at the consequences design and marketing have. Unsurprisingly, their units of analysis are typically the entities and people that face the consequences of design and marketing: firms and their customers. In contrast, design studies focus on the levers that can bring about change. Accordingly, their units of analysis are levers, such as actors, activities and artefacts.

TABLE 3 Eleven studies on the intersection of marketing and design

Article	Research question(s)	Type	Unit of analysis
Mulder-Nijkamp (2020)	How can firms design a successful brand extension?	Design	Products
Xue and Swan (2020)	How does the interplay between different enterprise capabilities influence micro and small technology enterprises' exploitative and exploratory innovation, respectively?	Research	Firms
Hemonnet-Goujot et al. (2020)	What are the different collaboration patterns between external design and marketing in the new product development process? How do these 'design management' practices influence innovativeness in new products?	Research	Marketer–designer dyads
Overdiek and Warnaby (2020)	How can marketers profit from user feedback gathered through their participation in pop-up store experiences? How can co-design be facilitated through user participation and engagement in the 'pop-up' experience?	Design	Pop-up activities
Huertas and Pergentino (2020)	How does context information on the announced product category's performance during the exposition to an advertisement influence consumers' judgements and decisions?	Research	Consumers
Brito and Guilherme (2020)	Do digital influencers have creative attributes? Which creative attributes do digital influencers explicitly reveal in the discourse about their practice?	Research	Digital influencers
Coco et al. (2020)	What are the lights and shadows of design thinking revealed in the lived experience of participants?	Research	Design thinking novices
Baumgarth and Bahati Wieker (2020)	Do consumers perceive graffiti and/or street art as art? Is the art infusion effect also valid in the case of urban art? What are the drivers of the urban art infusion effect?	Research	Consumers
Nagel and Schumann (2020)	Is there a buffering effect of perceived aesthetic value that moderates the relationship between product experience and attitude in the post-adoption phase? Does this buffering effect vary in strength according to consumers' level of innate innovativeness?	Research	Early adopters
Carvajal Pérez et al. (2020)	How can a cognitive resource help marketing and design teams in luxury industries manage the innovation versus tradition tension, resolve destructive and creative tensions and contribute to originality and operational efficiency?	Design	Design projects
Artusi and Bellini (2020)	How can the service concept be shaped to effectively embody new meaning in a new service?	Design	Managers

Possibly the most difficult tension to overcome between design and marketing lies in the difference between the paradigms, because they entail fundamentally different understandings of what truth is. Whereas truth under the empirical realist paradigm is about existence ('Yes, this is how it is.'), truth under the pragmatist paradigm is about functioning ('Yes, it works like this.'). For research at the intersection of design and marketing to flourish requires openness towards different problems and puzzles, as well as mutual respect for researchers and their various research approaches.

From a research perspective, design and marketing can collaborate in various ways, but particularly along the lines of research for design versus research through design (see Frayling, 1993): first, marketing research can serve as scientific input for design endeavours and thus constitute research for design. Second, designed artefacts of marketing and innovation management, such as products, services, brands, strategies, processes or capabilities, need to be designed and should be subject to rigourous assessment in the sense of research through design.

ACKNOWLEDGMENTS

FUNDING INFORMATION

ENDNOTES

[1] Another six related papers published in a parallel special issue of the Review of Managerial Science on 'Marketing and Design': Chen (2021) investigates the cultural product innovation strategy of performing arts organizations; Motta-Filho (2021) introduces the concept of the brand experience manual; Palos-Sanchez, Saura, and Correia (2021) identify antecedents of tourists' acceptance of mobile tourism apps; Scholz, Redler, and Pagel (2021) explore the influence of shopping companions in retail sales conversations; Idemen, Elmadag, and Okan (2021) investigate the effects of designers as product cues; and finally, Schuberth (2021) presents confirmatory composite analysis as a multivariate statistical method that can combine behavioural and design research.

ORCID

Jörg Henseler 🔗 https://orcid.org/0000-0002-9736-3048
Manuela Guerreiro 🔗 https://orcid.org/0000-0002-6398-9712

REFERENCES

Aken, J. E. v. (2004). Management research based on the paradigm of the design sciences: The quest for field-tested and grounded technological rules. *Journal of Management Studies*, *41*(2), 219–246.

Artusi, F., & Bellini, E. (2020). Design and the customer experience: The challenge of embodying new meaning in a new service. *Creativity and Innovation Management*, *29*(S1), 152–161.

Bagozzi, R. P. (1975). Marketing as exchange. *Journal of Marketing*, *39*(4), 32–39.

Banting, P. M., & Ross, R. E. (1973). The marketing mix: A Canadian perspective. *Journal of the Academy of Marketing Science*, *1*(1), 1–11.

Baumgarth, C., & Bahati Wieker, J. (2020). From the classical art to the urban art infusion effect: The effect of street art and graffiti on the consumer evaluation of products. *Creativity and Innovation Management*, *29*(S1), 116–127.

Bloch, P. H. (2011). Product design and marketing: Reflections after fifteen years. *Journal of Product Innovation Management*, *28*(3), 378–380.

Brito, P., & Guilherme, G. (2020). To what extent are digital influencers creative? *Creativity and Innovation Management*, *29*(S1), 90–102.

Brown, L. O. (1948). Toward a profession of marketing. *Journal of Marketing*, *13*(1), 27–31.

Brown, K. O. (1990). Marketing for the architectural profession: Applying marketing principles to the business of architecture. (Ph.D. Thesis), Tucson, AZ.

Brown, T. (2008). Design thinking. *Harvard Business Review*, *86*(6), 84–95.

Bruce, M., & Cooper, R. (1997). Marketing and design: A working relationship, *Marketing and design management*, pp. 35–59.

Bunge, M. (1967). *Scientific research I: The search for system*. New York: Springer.

Buzzell, R. D. (1963). Is marketing a science? *Harvard Business Review*, *41*(1), 32–40.

Carvajal Pérez, D., Le Masson, P., Weil, B., Araud, A., & Chaperon, V. (2020). Creative heritage: Overcoming tensions between innovation and tradition in the luxury industry. *Creativity and Innovation Management*, *29*(S1), 140–151.

Chen, C.-L. (2021). Cultural product innovation strategies adopted by the performing arts industry. *Review of Managerial Science*, *15*(1). https://doi.org/10.1007/s11846-020-00393-1

Coco, N., Calcagno, M., & Lusiani, M. (2020). Struggles as triggers in a design-thinking journey. *Creativity and Innovation Management*, *29*(S1), 103–115.

Frayling, C. (1993). Research in art and design. *Royal College of Art Research Papers*, *1*(1), 1–5.

Gemser, G., & Leenders, M. A. (2001). How integrating industrial design in the product development process impacts on company performance. *Journal of Product Innovation Management*, *18*(1), 28–38.

Gruber, M., De Leon, N., George, G., & Thompson, P. (2015). Managing by design. *Academy of Management Journal*, *5*(1), 1–7.

Hagtvedt, H., & Patrick, V. M. (2008). Art infusion: The influence of visual art on the perception and evaluation of consumer products. *Journal of Marketing Research*, *45*(3), 379–389.

Halstrick, B., Henseler, J., & Schmidt, H. J. (2020). The use of design thinking within the brand management discipline: a literature review. *Forum markenforschung 2018*, pp. 213–228.

Hemonnet-Goujot, A., Abecassis-Moedas, C., & Manceau, D. (2020). When external design and marketing collaborate to develop new products: Typology of patterns. *Creativity and Innovation Management*, *29*(S1), 51–62.

Henseler, J. (2015). *Is the whole more than the sum of its parts? On the interplay of marketing and design research*. Enschede: University of Twente. http://purl.utwente.nl/publications/95770

Henseler, J. (2018). *Being rigorous and relevant: On the interplay of mar-*

keting and design research (keynote talk). Faro, Portugal: International conference on marketing and design.

Hertenstein, J. H., Platt, M. B., & Veryzer, R. W. (2013). What is "good design"? An investigation of the complexity and structure of design. *Design Management Journal*, 8(1), 8–21.

Hodge, T. G., Brown, M. H., & Lumpkin, J. R. (1991). The use of marketing plans and advertising among accounting firms: Is this profession a viable candidate for marketing? *Journal of Professional Services Marketing*, 6(1), 43–52.

Homburg, C., Schwemmle, M., & Kuehnl, C. (2015). New product design: Concept, measurement, and consequences. *Journal of Marketing*, 79(3), 41–56.

Huertas, M. K., & Pergentino, I. (2020). The effect of "co-creation with consumers" claims on purchase intention: The moderating role of product category performance information. *Creativity and Innovation Management*, 29(S1), 75–89.

Hunt, S. D. (1994). On rethinking marketing: Our discipline, our practice, our methods. *European Journal of Marketing*, 28(3), 13–25.

Idemen, E., Elmadag, A. B., & Okan, M. (2021). A qualitative approach to designer as a product cue: Proposed conceptual model of consumers perceptions and attitudes. *Review of Managerial Science*, 15(1). https://doi.org/10.1007/s11846-020-00381-5

Kotler, P., & Keller, K. L. (2008). *Marketing management* (13th ed.). Upper Saddle River, NJ: Pearson Prentice Hall.

Kwon, J., Lee, M., & Kim, H.-R. (2015). Does a creative designer necessarily translate into the creative design of a product? Exploring factors facilitating the creativity of a new product. *Creativity and Innovation Management*, 24(4), 675–692.

Lakhani, K. R., Jeppesen, L. B., Lohse, P. A., & Panetta, J. A. (2007). The value of openess in scientific problem solving. (07-050), HBS Working Paper. Boston, MA: Harvard Business School.

Moore, C. M., Fernie, J., & Burt, S. (2000). Brands without boundaries: The internationalisation of the designer retailer's brand. *European Journal of Marketing*, 34(8), 919–937.

Motta-Filho, M. A. (2021). Brand experience manual: Bridging the gap between brand strategy and customer experience. *Review of Managerial Science*, 15(1). https://doi.org/10.1007/s11846-020-00399-9

Mulder-Nijkamp, M. (2020). Bridging the gap between design and behavioural research: (Re)searching the optimum design strategy for brands and new product innovations. *Creativity and Innovation Management*, 29(S1), 11–26.

Nagel, C., & Schumann, J. (2020). Post-adoption buffering effects of innovative product aesthetics. *Creativity and Innovation Management*, 29(S1), 128–139.

Narver, J. C., & Slater, S. F. (1990). The effect of a market orientation on business profitability. *Journal of Marketing*, 54(4), 20–35.

Overdiek, A., & Warnaby, G. (2020). Co-creation and co-design in pop-up stores: The intersection of marketing and design research? *Creativity and Innovation Management*, 29(S1), 63–74.

Palos-Sanchez, P., Saura, J. R., & Correia, M. B. (2021). Do tourism applications' quality and user experience influence its acceptance by tourists? *Review of Managerial Science*, 15(1). https://doi.org/10.1007/s11846-020-00396-y

Rylance, R. (2015). Grant giving: Global funders to focus on interdisciplinarity. *Nature*, 525(7569), 313–315.

Sarasvathy, S. D., Dew, N., Read, S., & Wiltbank, R. (2008). Designing organizations that design environments: Lessons from entrepreneurial expertise. *Organization Studies*, 29(3), 331–350.

Scheidt, S., Gelhard, C., & Henseler, J. (2020). Old practice, but young research field: A systematic bibliographic review of personal branding. *Frontiers in Psychology*. Advance online publication. https://doi.org/10.3389/fpsyg.2020.01809

Schnurr, B. (2017). How my product works and how it looks: Effects of functional and aesthetic co-creation and the role of product expertise. *Creativity and Innovation Management*, 26(2), 152–159.

Scholz, T., Redler, J., & Pagel, S. (2021). Re-designing adaptive selling strategies: The role of different types of shopping companions. *Review of Managerial Science*, 15(1). https://doi.org/10.1007/s11846-020-00385-1

Schuberth, F. (2021). Confirmatory composite analysis using partial least squares: Setting the record straight. *Review of Managerial Science*, 15(1). https://doi.org/10.1007/s11846-020-00405-0

Simon, H. A. (1969). *The sciences of the artificial*. Cambridge, MA: MIT Press.

Srinivasan, V., Lovejoy, W. S., & Beach, D. (1997). Integrated product design for marketability and manufacturing. *Journal of Marketing Research*, 34(1), 154–163.

Ulrich, K. T., & Eppinger, S. D. (2000). *Product design and development* (2nd ed.). Boston, MA: McGraw-Hill/Irwin.

Verganti, R. (2009). *Design driven innovation: Changing the rules of competition by radically innovating what things mean*. Boston, MA: Harvard Business Press.

Wolff, F., & Capra Galina, A. (2008). Marketing and design management in design education: A Brazilian research, *International DMI education conference*.

Xue, J., & Swan, K. S. (2020). An investigation of the complementary effects of technology, market and design capabilities on exploratory and exploitative innovations: Evidence from micro and small-sized tech-enterprises in China. *Creativity and Innovation Management*, 29(S1), 27–50.

Zeithaml, V. A., Berry, L. L., & Parasuraman, A. (1996). The behavioral consequences of service quality. *Journal of Marketing*, 60(2), 31–46.

Zhang, D., Hu, P., & Kotabe, M. (2011). Marketing–industrial design integration in new product development: The case of China. *Journal of Product Innovation Management*, 28(3), 360–373.

AUTHOR BIOGRAPHIES

Jörg Henseler is full professor and holds the Chair of Product–Market Relations in the Faculty of Engineering Technology at the University of Twente, the Netherlands. Additionally, he is Visiting Professor at NOVA Information Management School, Universidade Nova de Lisboa, Portugal, and Distinguished Invited Professor in the Department of Business Administration and Marketing at the University of Seville, Spain. His broad-ranging research interests encompass empirical methods of marketing and design research, as well as the management of design, products, services and brands. He is co-inventor of consistent partial least squares (PLSc), the heterotrait–monotrait ratio of correlations (HTMT) and confirmatory composite analysis (CCA). He is a highly cited researcher according to Web of Science; his work has been published in *European Journal of Information Systems*, *International Journal of Research in Marketing*, *Journal of the Academy of Marketing Science*, *Journal of Supply Chain Management*, *MIS Quarterly*, and *Organizational Research Methods*, among others. He chairs the Scientific Advisory Board of ADANCO, software for composite-based structural equation modelling (https://www.composite-modeling.com).

Manuela Guerreiro is Assistant Professor in the Faculty of Economics, University of Algarve, Portugal. She is Co-coordinator of the Research Centre for Tourism, Sustainability, and Well-Being

(CinTurs), where she is also an integrated researcher. She is the Programme Leader of the Master of Marketing Management and a member of the Board of the Master in Tourism Organizations Management at this institution. Her PhD is in Economic and Management Sciences, and she holds an MSc in Cultural Management from the University of the Algarve. She graduated in Communication Sciences at Lisbon University (ISCSP). She has published several articles in scientific peer-reviewed journals, books and international book chapters. Her current research interests include Marketing and Design, Consumer Behaviour, Consumer Experiences, Brand Management, Social Media Marketing, Arts and Events Marketing, Destination Management and Marketing, Destination Branding and Destination Image.