



Contents lists available at ScienceDirect

Australasian Marketing Journal

journal homepage: www.elsevier.com/locate/ausmj

Invited Paper

When nothing is what it seems: A digital marketing research agenda

Ko de Ruyter^{a,b,*}, Debbie Isobel Keeling^c, Liem Viet Ngo^b^a King's Business School, King's College, London, United Kingdom^b School of Marketing, UNSW Business School, UNSW, Sydney, Australia^c School of Business, Management and Economics, University of Sussex, Brighton, United Kingdom

ARTICLE INFO

Article history:

Available online 9 August 2018

Keywords:

Digital marketing strategy

Research agenda

Surrealism

ABSTRACT

Digital breakthroughs continue to challenge prevailing understandings of markets and marketing practices, bringing exciting opportunities to reimagine our offerings. Looking through the lens of digital surrealism, we identify key trends emerging in the field: (1) Is AR (Augmented Reality) for real?; (2) There is no better PR than GDPR (General Data Protection Regulation); (3) A persona is not a persona; (4) Min(e)d your language, and; (4 ¾) Raise your voice. Maybe. Based on these trends we develop an agenda for future research that enables the realization of the opportunities that the digital space offers.

© 2018 Australian and New Zealand Marketing Academy. Published by Elsevier Ltd. All rights reserved.

CHINESE ABSTRACT

数字化的突破不断挑战人们对市场和营销实践的普遍认识, 让我们抖擞雀跃重新构想我们的产品。透过数字化的超现实主义, 我们看到该领域的主要新兴潮流: (1) 被夸大的现实是否真实? (2) 通用数据保护条例 (GDPR) 就是最好的保护条例; (3) 个体并非个体; (4) 小心 (挖掘) 您的语言; 以及 (4 ¾) 提高您的音量。也许吧。根据这些趋势, 我们制定了未来研究的日程, 以实现数字化世界所提供的机会。

© 2018 Australian and New Zealand Marketing Academy. Published by Elsevier Ltd. All rights reserved.

Framing the picture

Rene Magritte, painter, philosopher and marketer *avant-la-lettre*, is perhaps most famous for his series of paintings called the Treachery of Images. The centerpiece of the series is a detailed picture of a pipe and has as its pay-off slogan, "*Ceci n'est pas une pipe*" (This is not a pipe). This masterpiece of Surrealism that challenges the convention that objects correspond to words and images invokes the tensions between life and art, truth and fiction, and reality and irreality. In today's digital marketing landscape, Magritte's insistence that nothing may be what it seems is perhaps more important than ever. The growing momentum of digitization and the scale of disruption associated with it have had a profound impact on current marketing practice. Both as a painter and advertising executive, Magritte would argue that Uber is not a taxi company, Airbnb is not a hotel, Bitcoin is not a bank, Cleo (.com) is not a person and that YouTube is not TV. These observations reflect that

firms have embraced interactive technologies to engage with their customers and disintermediation has shortened the distance and time-to-market, while increasing the scope for one-to-one communication on a mass scale, deploying Big Data analytics. In turn, social media-empowered consumers are now connected to other consumers and co-create and distribute branded content which is increasingly visual and selfie-centered. The reality of customer experiences is augmented and most consumers are happy to suspend their disbelief when chatting with virtual employees powered by machine learning.

This digital surrealism comes with its own tensions. Firms are still locked into annual planning cycles for strategy development with a habitual execution phase by the end of Q3. Consequently, only a small minority feels that their current business models meet the agility and flexibility needs of a marketplace that keeps digitizing at lightning speed. At the same time, advances in knowledge struggle to keep up with the accelerating complexity of marketing practice. There is a paucity of paradigms that can help guiding digital marketing strategies, to sketch where marketing is going and what firms and researchers should focus on as a result. In view of the changing strategic context, it is important that both practitioners and researchers learn to navigate the reality of a marketing landscape that is increasingly virtual. To see what

* Corresponding author at: King's Business School, King's College, London, United Kingdom.

E-mail addresses: ko.de-ruyter.1@city.ac.uk, ko.de_ruyter@kcl.ac.uk (K.d. Ruyter), D.I.Keeling@sussex.ac.uk (D. Isobel Keeling), liem.ngo@unsw.edu.au (L.V. Ngo).

lies ahead. To deal with issues that have already arrived on their doorstep. To survive.

Admittedly, there is no shortage of digital marketing trend reports, most of which are produced over the Christmas holidays. More often than not, however, these consist of hyperbolic, click-bait headlines that are heavy on speculation but thin on evidence. This treachery of trends, much like Magritte's pipe that cannot be stuffed, lacks actionable stuff on how marketing theory and practice can work together in the light of the accelerating complexity of digital marketing. Therefore, we set out to identify 4 ¼ trends (one theme is not quite ready for the full trend treatment) that are poised to widen the gap between digital marketing theory and practice. Partly this means revisiting trends again. But now with feeling. So that the digital marketing groove is not disturbed. Consequently, contribution of this paper lies in outlining how marketing practitioners and scholars can collaborate on closing this gap by identifying an agenda containing pertinent research opportunities to co-create strategic capabilities for the digital marketing space.

Trend 1: Is AR for real?

Well, the answer is both a firm 'No' and 'Yes'. To start off, no, the projection of a holographic, 3D couch in a customer's living room with IKEA's Place app, *ça n'est pas un FÄRLÖV canapé!* But, yes, Augmented Reality (AR), is enhancing online and offline customer experiences (Hilken et al., 2017). It does so by overlaying virtual content (e.g., text, graphics, or audio visuals) into a person's perception of the physical world, e.g., (a picture of) one's living room. This real-time and interactive blend of virtual and physical information results in a compelling experience of spatial presence that momentarily suspends the disbelief that the virtual object is not for real. As customers now get a better feel for digital offerings, choice stress, as well as shopping cart abandonment and product returns are decreasing sharply, while online sales are up (Janakiraman et al., 2016). Alternatively, AR can empower consumers by filtering out distracting information and highlighting healthy food choices.

Across a variety of contexts, companies such as IKEA, L'Oreal, Zara, Allianz and PepsiCo have added AR applications to their frontline service delivery. Industry surveys forecast a formidable growth for AR-based retail solutions. Technology firms, such as Apple, Samsung, Microsoft and Google are aggressively acquiring AR start-ups, following Apple CEO Tim Cook's assertion that AR will allow their clients to have a "a more productive conversation" with their customers (CNBC, 2016). As a caveat, however, inflated functionality expectations, platform launch failures (e.g., Google Glass), and growing privacy concerns amongst consumers are potential barriers for this trend to survive the hype-cycle and there is a pertinent need to gain a more in-depth understanding how AR can result in real benefits for companies as well as customers and become a strategic differentiator.

To deepen our knowledge base, a number of issues need to be addressed, presenting ample research opportunities. Firstly, AR is in fact a class of technologies that makes use of a variety of modalities. Research is needed to identify which AR configurations are optimal for what business or customer experience challenges. For instance, research needs to assess the diagnosticity of different types of information formats (such as star-ratings, verbal comments or numerical information).

Secondly, more information is needed on understanding the meaningful benefits of an AR-based customer experience and how to translate these into actionable value propositions. Research should explore the fit between a variety of offerings and functional, hedonic, social and/or epistemic value-creation. On the other hand, research should expand our knowledge by taking consumer

decision-making styles (e.g., verbalizers vs. visualizers) to assess which type of customers benefits most from AR-based experiences.

Thirdly, companies need to experiment with different ways in which AR apps can be extended to enable the full conversion funnel. For instance, the Converse Sampler app allows customers to select footwear from a catalogue, point their phone towards their feet to see how the (virtual) shoes will look and then click to place an order. When exploring AR's sales conversion potential research should not only focus on technology features, but also by tracking and monitoring consumer decision-confidence and -comfort into account.

Fourthly, and given that consumer purchase decisions are increasingly based on social media interactions, research needs to explore shared decision capabilities and AR's suitability for co-creation. For instance, Akzo Nobel's 'Visualizer' app enables customers to jointly decide on what color to paint a living room by changing and exchanging pictures and color choice recommendations.

Finally, extending AR's role as a shared decision support tool, research is needed to assess whether vertical channels can be integrated to become more customer-facing. For instance, Mosa, a Dutch manufacturer of kitchen and bathroom tiles offers an AR-based online design tool that brings together architects, designers, builders and end-customers to create mood boards or create technical drawings and specification lists for tilers.

Trend 2: There is no better PR than GDPR

With the emergence of new technology platforms, social channels, location and person-based metrics and games the scale of data keeps dramatically increasing. Healthcare data, for instance, is reaching incredulous sizes like 750 quadrillion bytes every day, as it includes 'lab tests, medical images, genetic profiles, liquid biopsies, electrocardiograms, medical claims, clinical trials, prescriptions and academic research' (Fortune, 2018). The scope for interpreting personal data and supporting decision-making is fuelled by AI-based analytics and machine learning. However, Big Data's scope is also increasingly determined by regulatory constraints and public outrage. Digital marketing has issues, and so has Facebook. In Magritte's terms, Facebook is not a friend and likes are turning into yikes. Nothing is what is seems in the music industry as trolls are used to write and share positive album reviews and stories about moving meet-and-greets. Insurance company BUPA recently lost 500,000 customer records, while Uber has been reported to lose even more. These companies did not get a mention in the Guinness Book of Records as theirs were easily overtaken by the volume of Big Data that is voluntary shared by Internet users so that they can be targeted by 'native' ads and 'location-based' content.

In Europe, the General Data Protection Regulation (GDPR) has been introduced and it marks a heightened privacy consciousness among businesses and their customers. Ultimately, it is expected that the principles of GDPR will go global, which means that firms around the world, big and small, need to reflect on what the new model of data protection will mean for their business. While the new privacy regulations will initially be the concern of legal teams, several opportunities for digital marketers are on the horizon.

One opportunity is around the newly coined buzzwords 're-engagement' and 're-permissioning'. There is a need for substantive research that widens the scope of the widely used engagement construct. As the conceptualization has branched out to behavioral engagement, disengagement and unengagement, development of measurement instruments for a reliable and valid capture of the essence of re-engagement and its unique predictor variables are warranted. Similarly, conceptual development of digital strategies

for dealing with potential privacy backlash in combination with risk registers should be undertaken as well.

Secondly, as existing permission and opt-in processes are being reviewed, research that focuses on message framing to see how customers can be motivated to update or refresh their contact and communication preferences. Theoretically grounding framing designs in regulatory fit theory (Motyka et al., 2014) can assist in guiding research design choices. Additionally, and as an integral part of exploring different framing strategies, issues of timing and channel or touchpoint choice should be taken into account.

Thirdly, research needs to re-evaluate the hard and soft benefits and their associated incentive structures as terms of engagement and endearment in terms of the valuable relationships in which roles are re-defined as data-exchange partners. Specifically, it should be acknowledged that a re-permission is freely given and that it is not conditional on a certain reward. Positioning incentives as tokens of appreciation about re-affirming the relationship or offering rewards for a fast response (whether this is an opt-in or opt-out) are issues that need to be addressed.

Finally, research should evaluate which endorsement strategies (e.g., celebrity vs. social influencers) are another aspect of the GDPR puzzle. When it comes to presenting GDPR as a PR execution there are inspirational examples that can serve as a case in point. Manchester United FC brought GDPR to their world-wide fan-base with a campaign labeled 'Stay United'. Their strategy consists of a short video clip with 'an important message from Manchester United'. After explaining that the law has changed, and that the club wants their fans to be the first to know about it, they are asked whether they would want to stay in touch and (animated versions of) club icons and star players are used to explain the benefits of staying in the loop by refreshing their email preferences. Early respondents (regardless of whether they opt-in or out) are entered into a prize draw for a Megastore voucher or a shirt signed by one of the top players. If not-for-profit is your business then UK-based MacMillan Cancer Support Organizations campaign ('Can we stay in touch?') might prove a useful launching pad for ideas.

Trend 3: A persona is not a person

There is lots of noise in the digital space and companies tend to underestimate that consumers receive increasingly large numbers of commercial messages on any given day. The sharp increase in personal data accessibility, mobile device ubiquity (Kleijnen et al., 2009) and AI-based diagnosticity have been driving the personalization trend for some time. Seventy-three percent of C-suite executives believe that personalization should enjoy a bigger priority within their company that it currently does (Researchscape International, 2017). As a continuing and annual carry-over trend, companies report measurable improvement in performance due to increased personalized real-time, outbound marketing strategies. Companies like Amazon and Netflix thrive on using data-driven, personalized, predictive and responsive analytical strategies to personalize the interaction with their customers through the creation of intuitive, individualized and, therefore, more compelling content. At the same time, dynamic platform routing is now widely deployed to improve inbound personalization tactics. For instance, this means that depending on an inventory of personal background attributes, which are often compiled in carefully crafted personas or emblematic representations of a category of customers, consumers are presented with different information on websites, apps and social media platforms. However, a persona is not a person. This cornerstone of digital surrealism presents another range of pertinent research opportunities.

In the first place, there is a need for scholarly work that validates the fairly optimistic view presented in recent market surveys

which conclude that (1) 40% of consumers buy more from retailers who personalize; (2) 56% of consumers are more likely to shop with a good personalized experience and (3) 76% of consumers will share personal information for a better experience (Caplan, 2018). Concept and scale development of personalization-readiness as attitudinal construct could address this issue.

Secondly, and for those consumers that are ready to engage with 1:1 marketing tactics, it should be explored how customer journey touchpoints can be tied in with access to micro moments for on-the-spot consumer decisions. Vitally, research needs to ascertain that there are no gaps between firm-scripted journeys and the journey experienced by customers. Or, perhaps more realistically, how gaps come about and how these can be dynamically flagged and addressed by managing so-called micro moments.

Thirdly, studies need to extend the small but growing body of knowledge on consumers' perceptions of AI. Taking a step back from the awe with which this class of technologies is sometimes approached, research should assess how AI translates into the Attention and Interest that is just right, as we need to move on from the user to the personal experience.

Fourthly, we need research to ascertain what makes customers suspend their disbelief when engaging with an AI-based chatbot to create a personalized experience that offers a return on interactivity (Kohler et al., 2011). This requires experimentation or 'personalization growth-hacking' at the cross-section of predictive analytics, natural language processing and dialogue management through dynamic routing of content and virtual service employees.

Finally, as the focus on personalization becomes clearer, research needs to continually revisit the personalization–privacy paradox within a GDPR context. After all, much of the personalization trend is driven by targeting on the basis of demographic, behavioral and psychographic criteria and since the demise of Cambridge Analytica we know that this is an ethical minefield and that the risk of backfiring is very real in the case of personalization.

Trend 4: Min(e)d your language

A key characteristic of the digital space, often attributed to platforms like Facebook, LinkedIn, and Twitter are online conversations as people communicate and interact with friends, family, colleagues, complete strangers, and, yes, businesses. Marketers have had to change the way in which they listen to the voice of the customer, as the large majority of the data is unstructured (i.e., verbatim and increasingly visual) and firms are reliant on the development of new analytical methods to decode 'social speak' (Ludwig and de Ruyter, 2016). The good news is that most of the data is both more readily accessible and that the diagnosticity of these methods is superior to that of old school data collection methods, such as surveys and experimental designs. More good news is that text analytics is definitely a research domain that is in constant progress, as machine learning procedures are now elevating the level of analysis from word to sentence to post or tweet level to handle the complexities of natural language and increase its predictive power (Villaruel Ordenes et al., 2017).

Moreover, as online transactions and job applications are increasingly digital, the 'language in use' is rapidly becoming the currency of personal selling for a growing population of freelancers in what is sometimes referred to as the Gig Economy. As social speak is an area that is very much in flux, there is a need for insights that provide direction. Finally, a recent development is that social conversations are increasingly expressed in the language of images, as platforms like Instagram and Snapchat have been adopted as the preferred social channel by large segments of online consumers. For instance, on Instagram alone over 40 billion images have been shared and 95 million images are shared daily (Hootsuite, 2018). On social platforms, images that are

Table 1
Research Agenda for Digital Marketing

Trend	Research Questions
Is AR for real?	<ul style="list-style-type: none"> • Which AR configurations are optimal for what business or customer experience challenges? • How can we assess the diagnosticity of different types of information formats (such as star-ratings, verbal comments or numerical information)? • What are the meaningful benefits of an AR-based customer experience and how to translate these into actionable value propositions? • How does a variety of offerings fit to functional, hedonic, social and/or epistemic value-creation? • Which type of customers benefits most from AR-based experiences across consumer decision-making styles (e.g., verbalizers vs. visualizers)? • How can companies experiment with different ways in which AR apps can be extended to enable the full conversion funnel? • How can companies explore shared decision capabilities and AR's suitability for customer co-creation?
There is no better PR than GDPR	<ul style="list-style-type: none"> • Extending AR's role as a shared decision support tool, can vertical channels be integrated to become more customer-facing? • How can re-engagement be conceptualized and operationalized? • What are the unique predictors of re-engagement? • How can companies develop digital strategies for dealing with potential privacy backlash in combination with risk registers? • How customers can be motivated to update or refresh their contact and communication preferences? • Can timing and touchpoint choice be integrated in forming different framing strategies? • How can we re-evaluate the hard and soft benefits and their associated incentive structures as terms of engagement and endearment in terms of the valuable relationships? • How should positioning incentives be used as tokens of appreciation about re-affirming the relationship or offering rewards for a fast response?
A persona is not a person	<ul style="list-style-type: none"> • Which endorsement strategies (e.g., celebrity vs. social influencers) be evaluated as another aspect of the GDPR puzzle? • How can we conceptualize and operationalize personalization-readiness as attitudinal construct? • How customer journey touchpoints can be tied in with access to micro moments for on-the-spot consumer decisions? • How gaps between firm-scripted journeys and the journey experienced by customers come about and how these can be dynamically flagged and addressed by managing so-called micro moments? • How do customers perceive AI? • How can AI be translated into the Attention and Interest that is just right, as we need to move on from the user to the personal experience? • What makes customers suspend their disbelief when engaging with an AI-based chatbot to create a personalized experience that offers a return on interactivity? • How can companies conduct experimentation or 'personalization growth-hacking' at the cross-section of predictive analytics, natural language processing and dialogue management through dynamic routing of content and virtual service employees?
Min(e)d your language	<ul style="list-style-type: none"> • Do companies continually revisit the personalization-privacy paradox within a GDPR context? • How can companies explore new communication targets and a wider set of figures of speech to gain a richer understanding of how brand-initiated messages can cut through the clutter of Big Data? • What are sequences of messages and the optimal timing thereof? • Should multiple messages or tweets be posted in one go or dispersed across time and with what frequency? • Does messaging effectiveness depend on the type of marketing event, such as a product launch vs. a seasonal promotion? • How can imagery and text be worked together in branded content? • How can meaning be conveyed in visual data? • How can companies utilize textual analytics and facial recognition technology to enrich online customer experience and gain better insights of millennial customers?
Raise your voice. Maybe.	<ul style="list-style-type: none"> • Will voice technology shape consumer preference? • Will voice affect the way content is developed and redefine the customer experience? • How will voice search engine optimization develop? • Will companies need to engage in voice branding? • Will brands need to team up with tech firms to be in the evoked set of voice-recommended brands? • How do we best handle voice-based data input and analysis? • Will there be blind auditions for recruiting marketing voice talent?

easily accessible and easy to replicate, like Magritte's painting are particularly impactful.

One issue is that in order to stand out in the online crowd and develop content management strategies to effectively join the social conversation firms need to reframe their communication strategies. A recent study shows that directive messages, or explicit calls to action, induce less consumer engagement that emotional brand messages (Villarroel Ordenes et al., 2018). The same study also shows that alliteration ('the beat of the tweet') also contributes to a higher degree of online message sharing. Further research could explore other communication targets and a wider set of figures of speech to gain a richer understanding of how brand-initiated messages can cut through the clutter of Big Data.

Secondly, in order for brands to seamlessly join in the conversation (and not be perceived as party crashers), we need to develop a better understanding of sequences of messages and the optimal timing thereof. For instance, there is no conclusive guidance on whether multiple messages or tweets should be posted in one go or whether they should be dispersed across time and with

what frequency. Moreover, we need to explore whether messaging effectiveness depends on the type of marketing event, such as a product launch vs. a seasonal promotion.

Thirdly, research is needed to assist companies in learning the hidden language of the visual Web and explore how imagery and text work together in branded content. Marketing researchers need to explore concepts of visual semiotics and art history to develop a better understanding of how meaning is conveyed in visual data. For instance, the literal depiction or what is objectively in the image may alter depending on other associations offered. Moreover, and in line with digital surrealism, the connection between image and text may signal different meaning.

Finally, textual and visual mining is increasingly used for checks and balances as well. Textual analytics are being deployed for automated lie detection purposes in consumer loyalty program claims (Ludwig and de Ruyter, 2016) and facial recognition technology is being deployed by data-driven companies, such as peer-to-peer insurance company Lemonade and by Google on their most recent phones, which in turned has stimulated retailers to start piloting

face-based check-outs. Research is needed to evaluate the use of such methods in relation to the online customer experience and perhaps increase our understanding of millennial customers.

Trend 4 ¾: Raise your voice. Maybe

This is not a trend. At least not yet. There are signs that finally another sense is added to the digital mix as voice keeps surfacing in digital strategy discussions. We are not sure, and we do not want to overpromise and get it wrong, so we are labeling this our 4 ¾ trend before declaring that typing is out and talking is in. Assistive technology is all around us and in fact has been for a while on mobile phones and since then we have adopted Alexa (or Cortana or Siri) as part of our extended families. Voice has the potential to smooth out our journeys as customers. We know that typing our Netflix password on a remote control is a very annoying customer experience and Samsung's 2018 TV line addresses this inconvenience with enhanced voice control. But no brand has quite smashed voice controlled access yet. While she is getting smarter, making Alexa understand the correct pronunciation of our names (without raising our voice and uttering incivilities) is a real challenge.

It has been predicted that 50% of searches will be done by voice by 2020 (Comscore 2018), but will voice technology fundamentally shape consumer preferences? And other pertinent questions present themselves. Will voice affect the way content is developed and redefine the customer experience? How will voice search engine optimization develop? Will companies need to engage in voice branding? Will brands need to team up with tech firms to be in the evoked set of voice-recommended brands? How do we best handle voice-based data input and analysis? Will there be blind auditions for recruiting marketing voice talent? And more questions will undoubtedly surface and they will be transformed into future research opportunities as voice is likely to blossom as a full-blown trend.

We summarise the trends and interesting research questions in Table 1.

Epilogue

This is not a research paper. It is an attempt at offering an inventory of research questions, based on a subjective analysis of marketing's current reality. Our approach is based on the work of Rene Magritte, a timeless genius, who died in 1967, long before the advent of digital marketing. Looking through the lens of digital surrealism at a number of emerging trends in digital marketing

can help us to make sense of the reality of digital marketing strategy and perhaps question our perception or even experience of it. There are no easy answers. Like Magritte's paintings some issues are conundrums that will be hard to solve. However, composing a research agenda may help in deepening our understanding of a field that is fuelled but certainly not dictated by technological innovation or corporate strategizing. Through his art, Magritte smiles at today's digital marketing scholars, conveying that we know little, that nothing may be what it seems. And as he questions our basic assumptions and sends us off to investigate the digital space, we suddenly realize that the Magritte painting depicting an apple (*'ceca nest pas one pommel'*), which was acquired by Paul McCartney, inspired the Beatles to found Apple records. In turn, it instigated Steve Jobs to launch the most iconic digital brand in the world.

References

- Caplan, 2018. Digital Marketing Trends for 2018 Retrieved May 08, 2018 from: <https://www.slideshare.net/bjcbbranding/5-digital-marketing-trends-for-2018>.
- CNBC, 2016. Apple CEO Tim Cook on virtual reality: 'There's no substitute for human contact' Retrieved November 16, 2016 from: <http://www.cnbc.com/2016/10/14/apple-ceo-tim-cook-on-virtual-reality-theres-no-substitute-for-human-contact.html>.
- Fortune, 2018. Tech's next big wave: big data meets biology Retrieved May 08, 2018 from <http://fortune.com/2018/03/19/big-data-digital-health-tech/>.
- Hilken, T., de Ruyter, J.C., Cywinski, M., Maher, D., Keeling, D.J., 2017. Augmenting the eye of the beholder: exploring the strategic potential of augmented reality to enhance online service experiences. *J. Acad. Market. Sci.* 45, 1–22.
- Hootsuite, 2018. 23+ useful Instagram statistics for social media marketers Retrieved May 08, 2018 from: <https://blog.hootsuite.com/instagram-statistics/>.
- Janaki Raman, N., Myrdal, H.A., Freeling, R., 2016. The Effect of Return Policy Leniency on Consumer Purchase and Return Decisions: A Meta-Analytic Review. *J. Retail.* 92 (2), 226–235.
- Kleijnen, M., Lievens, A., de Ruyter, J.C., Wetzels, M.G.M., 2009. Knowledge creation through mobile social networks and its impact on intentions to use innovative mobile services. *J. Serv. Res.* 12, 15–35.
- Kohler, C.F., Rohm, A.J., Ruyter, J.C.de, Wetzels, M., 2011. Return on interactivity: the impact of online agents on newcomer adjustment. *J. Market.* 75, 93–108 93 March 2011.
- Ludwig, S., de Ruyter, J.C., 2016. Decoding social media speak: developing a speech act theory research agenda. *J. Consum. Market.* 33, 124–134.
- Motyka, S., Grewal, D., Puccinelli, N.M., Roggeveen, A.L., Avnet, T., Daryanto, A., de Ruyter, J.C., Wetzels, M.G.M., 2014. Do all roads lead to regulatory fit? A meta-analytic synthesis. *J. Consum. Psychol.* 24 (3), 394–410.
- Researchscape International, 2017. 2017 Trends in Personalization Retrieved May 18, 2018 from: <https://www.evergage.com/wp-content/uploads/2016/06/2016-Trends-in-Personalization-Survey-Report-Evergage-final.pdf>.
- Villarroel Ordenes, F., Ludwig, S., de Ruyter, J.C., Grewal, D., Wetzels, M.G.M., 2017. Unveiling what is written in the stars: analyzing explicit, implicit and discourse patterns of sentiment in social media. *J. Consum. Res.* 43 (6), 875–894.
- Villarroel Ordenes, F., Ludwig, S., de Ruyter, J.C., Mahr, D., Grewal, D., Wetzels, M.G.M., 2018. Cutting through content clutter: how speech and image acts drive consumer sharing of social media brand messages. *J. Consum. Res.* doi:10.1093/jcr/ucy032, in press.