Navigating the Nexus: Macromarketing, Public Policy, and Technology in an Evolving World

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ABSTRACT

This interview with Dr. Stefanie Beninger, President of the Macromarketing Society and a scholar in marketing and society, explores the critical intersections of macromarketing, policy, and the rapidly evolving field of technology. Dr. Beninger shares her insights on the societal implications of marketing, drawing on her extensive research in sustainability, resilience, and the ethical considerations surrounding emerging technologies, such as commercial drones and generative artificial intelligence. The discussion examines how her international and interdisciplinary collaborations enhance research, contribute to the development of effective policies, and address complex social challenges. This conversation provides valuable insights into the evolving landscape of marketing education and its role in promoting a more sustainable and equitable future.

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1

Professor, your work on generative AI in educational settings is highly relevant today. To start, what inspired you to dedicate your research to such a dynamic topic, and how do you see the most significant opportunities for GenAI in education today? (Renata Andreoni Barboza)

Stefanie Beninger: This research project, which focuses on generative AI, originated from a research group within the Macromarketing Society. In 2019, various professors presented at a track at the Macromarketing Conference on the topic of macromarketing pedagogy. We aimed to understand how we, as marketing educators, could increase the presence of macromarketing in our classrooms. Dr. Stan Shapiro, a prominent macromarketer for many decades, suggested that six of us — Julie Stanton, Alex Reppel, Forrest Watson, Christine Domegan, Stan Shapiro, and myself — collaborate on this goal.

We began researching how to integrate macromarketing into the classroom, leading to several publications. In November 2022, a couple of years later, we were still conducting research together when generative AI burst onto the public scene. We immediately recognized its massive impact on marketing education, with significant implications at the macro level. This led us to consider what it would mean for education, society, and the environment. A few of us from this research team shifted our focus to generative AI, making it an offshoot of our larger marketing pedagogy research. It grew organically from there, rather unexpectedly. While I had a small research line on technology, witnessing how this technology would impact our classrooms was truly impactful.

At the same time, I was switching institutions and moving back to the Netherlands, which involved setting up entirely new courses. This allowed us to quickly integrate new interventions into my classroom and collect data on these interventions, as much of our work had focused on small-scale classroom interventions. It was a small amount of serendipity, combined with the energy and efforts of our ongoing research team.

As a result, we have published several papers on generative AI, including on generative AI literacy and a human-first approach to integrating a synthetic teammate into activities. Looking ahead, we have several papers in progress on the implications of generative AI for education. Its impact on education cannot be underestimated. There is a tension: as academics, we potentially have a responsibility to teach generative AI literacy in our classrooms. On the other hand, there are also broader implications of teaching generative AI in our classes and institutions that should be considered. At my institution, I have been involved in shaping AI policies for both our students and researchers, and have had the chance to talk to many educators, students, and managers about their perspectives on this topic. The tension between embracing or limiting generative AI is quite interesting and raises questions about what this means for education, institutions, and society. There is certainly much more research to be done in this fascinating area.

Considering the rapid evolution of GenAI, how do you foresee the need for GenAI proficiency and interpretive flexibility developing in the coming years? Are there specific areas that will require greater attention? (Renata Andreoni Barboza)

Stefanie Beninger: In the *Journal of Marketing Education* piece (Beninger, Reppel et al., 2025), we proposed different elements of generative AI literacy, focusing on three main areas: first, a foundational understanding. We strongly believe that students and managers require a basic understanding of what these models entail and how they work. While we do not need to be computer scientists, it is crucial to understand that these models are probabilistic, trained on vast amounts of often unknown data, and predominantly English data for many of the larger models, which, of course, has distinct implications.

Second, students need to understand diverse use cases. In 2023, we conducted an extensive survey (Beninger et al., 2024) with our research team, asking business students about their use of AI in education and the issues they encounter. The uses are extensive. Students are using them to improve grammar, for translation, and, with the new deep research models, for writing entire literature reviews. While there were once significant issues with non-existent citations, that is less of a problem now. So, understanding these different use cases is the second part of GenAI literacy. We are reissuing this survey in Fall 2025 to see how things have shifted in the last two years.

Of course, in the marketing classroom, we also need students to understand how AI is being used to generate videos and content, how it is integrated into chatbots, and the emergence of new 'agentic' AI — that is, AI that performs tasks without our direct involvement, acting as an agent. The specific use cases are crucial, as their implications vary depending on the application.

Finally, evaluating the output is critical. Emerging research clearly shows inherent biases. OpenAI (2024), for example, is transparent about the fact that its models have biases baked in. When we ask it to design a picture of a particular group of people, we need to evaluate the resulting picture. Bloomberg, for instance, conducted an exten-

sive study of AI-generated images and found that higher-paying jobs were more correlated with images of people with lighter skin tones. In contrast, lower-paying jobs were more correlated with images of people with darker skin tones, based on over 5,000 images (Nicolett & Bass, 2023). Thus, students and managers must be able to evaluate the AI's output.

All of this is nested within the broader discussion of socio-ethical implications, not just for humans, but also for the environment — what does this mean for water usage, energy consumption, and other related factors? From our perspective in this article, when we consider interpretive flexibility — a specific framework used in the paper and applied in the current one — it is about ensuring students are aware of the various uses, outputs, and implications for different stakeholders. However, they can keep their minds open about what this could mean. Over time, we tend to reach an agreement on how specific technologies should be used and their implications, and this process is often disproportionately influenced by those with more power, including, for example, technology companies. In this way, we tend to narrow our understanding of how we should utilize technologies. For example, social media companies, through providing the structure and features, often dictate usage, and models themselves predispose specific applications. By encouraging our students and managers to consider the various implications and their broader implications — to keep their minds open about how we can use technology and what it means — we may have the opportunity to minimize the adverse effects of this technology and maximize its positive effects. At least, that is the idea behind why it is important to teach GenAI literacy, always within a socio-ethical framework.

Your involvement in international research projects, like those with the European Union and the Spanish Ministry of Science and Innovation, underscores the importance of international and interdisciplinary collaboration. How do these collaborations enrich research in marketing and management, and what is their potential for addressing complex social challenges? (Renata Andreoni Barboza)

Stefanie Beninger: When I began my PhD in 2012, my primary aim was to understand the diverse ways marketing is executed and its implications. My two previous business degrees, a BBA and an MBA, revealed that the dominant textbooks used in North America and Europe typically originate from North America, with localized versions for other regions, such as a Canadian version of an American textbook. I was interested in exploring how business is conducted elsewhere and what aspects are not part of the mainstream discussion. My particular focus was on small-scale shops and business owners — tiny establishments, often run by a single, full-time owner. I wanted to discover what they do differently and what unique knowledge they possess, as this often diverges from what we find in conventional textbooks about how business should be and is run.

My great-grandfather owned a small shop in rural Ontario, Canada, decades ago, which was an important part of his community. We often underestimate small retailers and shops. While excellent research on them exists, this research focus is often disproportionate to the fact that these are the dominant business types globally. They are not always adequately reflected in mainstream business education either. To gain a deeper understanding, it is essential to explore different parts of the world. Small shops are ubiquitous, and in many economies, they play a significant role in driving economic growth. I had fantastic opportunities to collaborate with researchers in various regions, such as during my PhD. A side project not part of my dissertation involved working with colleagues from the United States and Egypt. We conducted numerous interviews with Egyptian women who owned small shops (Beninger et al., 2016). It was fascinating to understand their practices, how they managed challenges, and their self-efficacy.

That experience truly marked the beginning of my journey. I focus extensively on resilience, seeking to understand how these small shops cope with challenges and what marketing activities they employ to do so — an intersection of organizational theory and marketing. This work also led me to Myanmar during my doctoral studies, where I conducted a study (Beninger & Francis, 2021), funded by Canada's Social Sciences and Humanities Research Council, on small shops in this country, and further, as part of a Marie Curie grant from the European Commission in Madrid, Spain. This study (Beninger, Bullinger et al., 2025), which is still being finalized, focused on migrant-owned businesses, specifically those run by individuals who had come from all over the world to Madrid, many of whom were undocumented.

What I have always appreciated about these projects, which I continue to work on, is the inclusion of lived experiences and voices that are often overlooked in mainstream research and textbooks. This has always been incredibly important and interesting to me. Many colleagues worldwide are doing this fascinating work, so I am certainly not alone; I am in excellent company. I hope to see more of this in the future. We need more diverse voices present in research, in our societies, and, of course, in our teaching.

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3

Your research on commercial drones is particularly fascinating, especially given its contemporary relevance. How do you view the regulatory and public policy implications of the increasing use of drones in commercial and social environments? What safeguards do you believe are necessary to ensure the sustainable and responsible implementation of this technology? (Renata Andreoni Barboza)

Stefanie Beninger: This research focused on commercial aerial drones (Beninger & Robson, 2025) and originated from my broader interest in how businesses globally address their challenges. A significant hurdle for many businesses, especially small ones, is what we refer to as the 'last mile challenge.' It is often straightforward to transport products between major points, but that final mile or kilometer, such as delivering the product to the end shop, can be a significant challenge.

During my early research on small shops, a recurring solution involved the use of commercial aerial drones, especially for hard-to-reach rural areas. We considered how these drones could be utilized in areas lacking airports and other infrastructure, such as reliable roads, especially where ground infrastructure might be impassable due to snow, floods, or other issues, as is sometimes the case in Canada and many other countries. I collaborated with Dr. Karen Robson in Canada, focusing on contexts where land-based infrastructure was unreliable. We first published a paper in *Marketing Letters* (Beninger & Robson, 2020), establishing this as a research area in marketing. Then our focus broadened to encompass a comprehensive examination of commercial aerial drones and their broader social and environmental implications.

We surveyed marketers, drone experts from specialized companies, and members of the general public. While many people are keen, most of us have not yet seen these devices zipping around delivering pizzas. There are some trials, but widespread adoption has not occurred.

A primary reason identified from our research is indeed regulation. We are struggling with how to manage commercial aerial drones. Airspace is heavily controlled for commercial and military aircraft. What happens when suddenly all these commercial organizations want to fly these devices around to deliver products, carry advertisements, or provide services such as internet access? Regulation has a significant impact on either permitting or prohibiting their use.

A big issue is that it often requires cross-country, regional-level responses, as it is rarely confined to a single country, which creates significant problems. For example, in the African context, where we also have a working paper focused on this context, each country has widely different regulations regarding what is allowed, with some being highly restrictive and others very permissive. This is a significant challenge. Without progress in regulation — though there is movement, particularly in the European Union and Africa, towards broader regional frameworks — it is not easy to move forward.

The technology and use cases are already in place, however. Commercial aerial drones have achieved remarkable things in certain places, such as rapidly transporting medical products, which is truly transforming medical access. They have also been used to provide internet access; you can deploy a drone to provide Wi-Fi to people below. They can even be tethered to the ground to produce localized energy. Therefore, there are many compelling and engaging use cases, but without proper regulation, progress will be a struggle. As we know, regulation often lags behind technological advancements, a phenomenon also evident in the case of generative AI.

In our paper, we aimed to discuss the broader public implications, including concerns related to this technology, as well as the opportunities perceived, and propose a framework of safeguards in marketing, including those related to companies, governments, and the general public. However, without governments moving forward, we will not see widespread adoption. Only time will tell if it will come.

Based on your experience and current macromarketing trends, how do you envision the field contributing to the formulation and implementation of effective public policies, particularly in crucial areas such as sustainability and resilience? (Renata Andreoni Barboza)

Stefanie Beninger: Macromarketing explores the deep connections between markets, marketing, and society, differing from micro-focused research by examining implications at an aggregate level. This leads us to crucial research areas, including the nexus of marketing and the environment, policy, and significant societal and technological shifts. Within macromarketing, two key schools of thought exist: the developmental school, which aims to improve existing marketing systems, and the critical school, which challenges these systems and calls for fundamental change. Both are vital for identifying problems and advancing solutions.

Connecting macromarketing to public policy means identifying and understanding issues and proposing solutions that enhance institutions and well-being. Our research must include, but also transcend, consumer or compa-

ny actions to effect real, strategic change at a macro level. A key challenge for researchers is ensuring our findings reach the right decision-makers beyond academia. We need to think at a higher level, which macromarketing is uniquely positioned to do, offering an opportunity for greater impact.

Could you share some concrete examples of how your research, or the field of macromarketing more broadly, has been applied to inform public policy decisions or interventions? (Renata Andreoni Barboza)

Stefanie Beninger: Some of my research is relatively new, so its direct application to policy is still emerging. For instance, the recent drone research has the potential to offer insights that could inform public policy. In another area, my research on generative AI with my co-authors has significantly influenced my institution's policy. As this research unfolded, with papers being published and new studies underway, I was concurrently involved in my university's AI working group for education policy. The research, supported by surveys and small-scale class-room interventions, greatly enriched the policy we quickly developed. Contributions from my research allowed me, as the only faculty member, together with other working group members from program management and university staff, to translate findings into tangible policy. Consequently, our AI policy emphasizes transparency, informed consent, and accountability; these principles are directly derived from the research. This research has also informed our recently formalized AI research policy.

Furthermore, I have had numerous opportunities over the past two years to speak about generative AI to various groups, including students, managers, alumni, public-facing organizations such as Rotary International, and different universities. This research can therefore influence company-level policy, guiding how organizations address challenges and opportunities, and hopefully informing approaches at other universities. It is gratifying to hear that the research you are involved in is influencing how organizations operate. While publications are valuable for our CVs, what truly matters to many researchers is whether their work has made a difference to someone. Hearing feedback like, "Hey, I actually implemented something from your research in my organization or university," is incredibly gratifying.

As President of the Macromarketing Society, what do you see as the most significant challenges and opportunities facing the organization in its mission to connect marketing with social impact? (Renata Andreoni Barboza)

Stefanie Beninger: The Macromarketing Society's core mission has always been to understand the intersection of marketing and society. We are facing an array of global challenges, which makes macromarketing research even more important and impactful. A mix of both an opportunity and a challenge arises from the recent, welcome shift we are seeing in academia, where more marketing researchers across various research areas are now focusing on socially relevant topics — something macromarketing has been doing for decades. Our task is to maintain relevance when others are also excelling in this area. We achieve this by emphasizing our unique macro view and marketing systems perspective, bridging the micro, meso, and macro levels — a distinction we have long mastered.

Towards enriching this, as president, my goal is to foster inclusivity by involving more diverse perspectives, including those from different countries and lived experiences, as seen at our first Macromarketing Conference in the Global South in the summer of 2025. Engaging early career scholars with their unique ideas is also crucial to further enrich our macromarketing research. Ultimately, while macromarketing already conducts vital socially relevant work, we must continue to do this by being truly inclusive and bringing diverse voices together across all our activities, particularly in our research.

REFERENCES

Beninger, S., Aijan, H., Mostafa, R. B., & Crittenden, V. L. (2016). A road to empowerment: Social media use by women entrepreneurs in Egypt. *International Journal of Entrepreneurship and Small Business, 27*(2-3), 308-332. https://doi.org/10.1504/IJESB.2016.073987

Beninger, S., Bullinger, B., & Rakib Ortega, L. (2025). How organizations acting resiliently draw on and make place. In *Academy of Management Proceedings* (Vol. 2025, No. 1, p. 16617). Valhalla, NY, United States: Academy of Management.

Beninger, S., & Francis, J. N. (2021). Collective market shaping by competitors and its contribution to market resilience. *Journal of Business Research, 122*, 293-303. https://doi.org/10.1016/j.jbusres.2020.09.005

Beninger, S., Reppel, A., Stanton, J., & Watson, F. (2025). Facilitating generative AI literacy in the face of evolving technology: Interventions in marketing classrooms. *Journal of Marketing Education, 47*(2), 112-125. https://doi.org/10.1177/02734753251316569 Beninger, S., & Robson, K. (2020). The disruptive potential of drones. *Marketing Letters, 31*(4), 315-319. https://doi.org/10.1007/s11002-020-09542-8

Beninger, S., & Robson, K. (2025). Social, economic, and environmental implications of drones in marketing: A framework of safeguards for sustainable technology implementation. *Journal of Business Research, 191*, 115251. https://doi.org/10.1016/j.jbusres.2025.115251

5

Beninger, S., Stanton, J., Watson, F., & Reppel, A. (2024). Generative AI in the business school: From the perspective of students. 2024 Macromarketing Society Conference. https://www.macromarketing.org/assets/proceedings/2024-macromarketing-proceedings.pdf

Nicoletti, L., & Bass, D. (2023, June 9). Humans are biased. Generative AI is even worse. Bloomberg. https://www.bloomberg.com/graphics/2023-generative-ai-bias/

OpenAI. (2024). Is ChatGPT biased? OpenAI. https://help.openai.com/en/articles/8313359-is-chatgpt-biased

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