ESOMAR Events

Rediscovering the Immigrant Journey

Mapping the potential of synthetic data in global immigrant stories

Arundati Dandapani
Kuno Tucker

ESOMAR
Office address:
Burgemeester Stramanweg 105
1101 AA, Amsterdam
Phone: +31 20 664 21 41

Email: info@esomar.org
Website: www.esomar.org

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Contact us

ESOMAR
ESOMAR Office:
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The Netherlands
Tel.: +31 20 664 21 41

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The ebb and flow, rise and fall of a global human civilization

The global population is on the decline, proven by the lowest population growth rate ever (below 1%) owing to low fertility rates, causing us to peak at a projected 10.4 billion humans in 2086 before it falls (Ritchie et al., 2022). Thus, we are moving into a post-people world (Generation1.ca, 2024). Finding people to research is cost and time intensive, especially those with rich attributes, such as global immigrants. It doesn't matter which type of immigrant, as immigration is a complex journey with similar yet nuanced differences for each story. In this post-globalised, post-pandemic, post-generative AI (GenAI) world, we know global migration continues to grow particularly from low-income countries to high-income countries, for the time being. Once people diminish, we will need to rely on museums and artificially generated or simulated models to preserve the historic truths that made and saved human-led empires and civilizations (Dandapani, 2024a). Global immigrants, the fastest growing group of consumers and citizens in North America, are often navigating many microcultures and selves in their quest to belong, survive and thrive in their new societies.

Their truths and stories must be heard and responded to. If not, the opportunity costs in missing this fast-growing consumer and citizen group will be damaging and potentially deal-breaking for various brands and institutions (Dandapani, 2024b). AI and synthetic data can help to preserve the digital immortality of global immigrant stories that are less understood, less celebrated or less known. This paper's case study, Generation1.ca, is a founder-led platform and community that grows the voice of overlooked immigrant consumers and citizens in business, at work and in society.

What makes immigrants special? Data gaps and data biases

One of the major challenges with researching immigrants is that they are hard to find. Moreover, even on reaching representative samples, the data quality gathered is not exactly the most trusted. It is also important to meet these underserved groups wherever they are, on their terms, to ensure the data collected is accurate, reliable and meaningful. We should not expect burdened or apprehensive respondents to answer questions about their levels of safety, comfort, acts of discrimination or other negative experiences with brands and institutions honestly, without their feeling fear or stigma attached. Respondent burden is also why the controversial demographic question about citizenship was dropped from the 2020 US decennial census in a US Supreme Court ruling, despite a push from the Trump Administration to include it. Experts predicted an immediate drop

in the census responses by 6.5 million, especially from immigrants and their families for including such a question about their citizenship status (Dandapani, 2019); this question last featured in the 1950 US census (Wang, 2018).

From data gaps to data biases

The process of making sense of new environments is closely connected with our identity and highly influenced by the people around us and the narratives to which we are exposed (Nardon, 2020). For this purpose, the data about immigrants is only as rich as our access to and understanding of their stories and experiences. However, for vulnerable and hard to reach groups like immigrants, data gaps are common. Data gaps result in data biases. Moreover, we want to make sure the research we are doing on immigrants and their stories are ethical, responsible and preserve their privacy and trust in the research practices around mapping their experiences and expectations as current and future citizens.

In a previous ESOMAR presentation, the lead author of this paper had challenged the industry with top recommendations to implement in order to lessen these data gaps by innovating with immigrant inclusion by: working with trusted partners and communities; understanding public attitudes, brand attachment and citizen satisfaction; conducting pre-arrival research; growing the voice of immigrants (i.e., future citizens); and humanising the data by blending objective measures (etic) with subjective (emic) (Dandapani, June 2024b). This paper thus also tackles the data gaps and data biases that prevent a good understanding of global immigrants today, particularly in North America but also elsewhere.

Common data gaps around immigrant populations include:

- What do immigrants want from their destination countries/new homes? Recommendation: Conduct pre-arrival research;
- How to improve the immigrant integration journey and immigrant levels of well-being? Recommendation: Measure immigrants' citizen satisfaction;
- How to preserve the digital immortality of human and cultural truths that are critical to immigrant success? These truths include instances of hate and discrimination or exclusion as experienced through interactions with various brands and public services. Recommendation: Let's understand best use cases of AI and synthetic data towards researching immigrants as a suitable alternative or complement to other types of research where needed.

Current uses of AI in immigrant research and data management

Finland has offered examples of using AI to develop immigrant integration solutions working in tandem with municipalities, governments and businesses to improve a holistic integration experience across all elements of adjusting to a new society, like learning about a new culture, society, economy, official languages, etc., as well as learning about its labour market (Ojwang, 2022). They used an app called AppIntegrate to facilitate such a journey that is also self-paced and tailored to the unique needs of its immigrants. Currently a lot of nations and regions use new technologies like facial recognition, biometric and DNA data, mobile data analysis, social media

monitoring and AI in their international migration management, including Canada, the US, Germany, Switzerland, the EU and other regions of high immigrant intake. This facilitates critical elements of the journey, such as to determine asylum processes or immigration application fit, and other key mechanisms that must be processed properly the first time for successful outcomes.

The data quality threats common to all these uses of AI, big data and new technologies include the threats to privacy of migrants, algorithmic accountability and fairness (Beduschi, 2020). In all these cases, the pursuit of protecting immigrants can backfire if the invasive technology is not used with the right safeguards in place, such as when using AI lie detection or automating asylum or visa decision-making processes, and instead turns into exclusive, discriminatory practices that betray the trust of its data subjects–immigrants or refugees in this case. The role of AI in Canada's immigration system is prevalent and much debated as well, especially in cases where the use of AI for automated decision-making is allowed. Chinook and Advanced Data Analytics (ADA) are two examples of tools that use automated decision-making to "improve administrative decision-making, assist or replace personnel, increase efficiency and reduce application processing times" (Karas and Goel, 2023). In 2018, Canada's Border Services Agencies (CBSA) used third party DNA services like Ancestry.com to determine nationality of immigrants, and even whom to deport (Bircan, 2021). Transparency of use and explainability are important for obvious human rights' sake. The right to refuse data gathering techniques by vulnerable groups are absent where consent appears to be an afterthought, as the example below will illustrate.

A startling example is that of iris scanning of refugees that unlocks digital aid account payments with the help of blockchain technology, reaching over a million refugees in camps in Jordan and Bangladesh. Iris scanning facilitates cashless transactions that allow refugees to claim their humanitarian aid in various forms like cash, food, water, medicine, etc., saving over USD 2.5 million in bank fees, according to the World Food Programme. This method is criticised by human rights activists and even refugees for the data collection risks, inefficient captures, sketchy consent mechanisms, invasive surveillance and commercial exploitation of refugees' personal data (Haikal, 2023). Such harms cannot be overlooked in a rush to offer efficient monitoring and humanitarian aid delivery services. For instance, did you know that Europe's largest arms sellers also market smart border management tools? The European Asylum Support Office (EASO) uses similar technologies to support the fundamental rights of and protocols for asylum that protects both legitimate asylum seekers as well as host countries (ibid.).

The European Commission proposed a regulation for the European Parliament and Council to introduce a screening process for third-country nationals at external borders. This process aims to swiftly identify individuals, assess their needs and refer them to appropriate procedures (asylum or return), while ensuring a fair and efficient management of mixed migration flows. The proposal aims to create a pre-entry screening tool to quickly identify individuals who may not receive protection and accommodation in the EU. This screening will be applicable to third-country nationals who do not meet entry conditions, or are disembarking after a search and rescue operation. The screening should consist in particular of:

- A preliminary health and vulnerability check;

- An identity check against information in European databases;
- Registration of biometric data (i.e., fingerprint data and facial image data) in the appropriate databases, to the extent it has not occurred yet;
- A security check through a query of relevant national and Union databases, in particular the Schengen Information System (SIS), to verify that the person does not constitute a threat to internal security (European Commission, 2020).

A Hellenic revival: About synthetic data

"An approach to confidentiality where instead of disseminating real data, synthetic data that have been generated from one or more population models are released" (Zerdick, 2021).

AI can be traced back to the 1930s and Alan Turing, and synthetic data has been used since the 1980s. No AI has passed the Turing test so far, which means there is a greater need for quality human oversight, and humans being in the loop of all data and AI operations. There has been much discussion around artificial general intelligence (AGI) and the ultimate event of singularity. However, this has not yet materialised, even as the rate at which business leaders are looking to AI as "thought partners" versus simply "chatbots" or "assistants" surges. By contrast, the concept of naturalisation in naturalised citizens indicates moving away from an original identity of state of birth to state of destiny–much like data is moving away from its source identity in its privacy preserving protected way. Can we use synthetic data without the privacy risks that come with using other marketing research primary datasets to grow our understanding of underserved consumers and citizens? An ESOMAR panel in Chicago bravely attempted to discuss the opportunities and risks with using synthetic data in marketing and social research, with more questions emerging than answers (Generation1.ca, 2024). This brings us to why we really need synthetic data in our research about immigrants.

While synthetic data started out as a de-identification technique in the 1980s, it has returned with a whole expanded scope powered by advancements in machine learning and AI to offer use cases that simulate whole populations or research eco-systems to deliver results that can be both meaningful and privacy-preserving. Furthermore, when Bill C-27 becomes law in Canada, creating the *Artificial Intelligence and Data Act*, there will be clear definitions of anonymised data and de-identified data with assigned status for each on where they fall in the privacy regime, where the law applies to both types of data and where they might be exempt from privacy laws (OPCC, 2022).

Sisyphean struggles in marketing research, and how synthetic data can help

The Sisyphean task of proving one's worth in a new country can be daunting, and equally difficult are finding and understanding the pain points. Synthetic data, when done properly, can provide the useful extrapolation to help conquer the data gaps from underrepresented and underserved populations. Here are some ways that synthetic data can help us research immigrant consumers and citizens better:

- Privacy preserving properties protect the sensitive information, including personal identities or migration journeys while still letting researchers analyse their behaviours.

- Qualitative research applications of large language models (LLMs) can offer a broad strategic approach and perspective that is "telescopic" and macro, and can blend well with the more specific and granular insights gleaned from completed human responses.
- Data quality is a problem that can be improved or worsened with AI. In an age of data abundance and data scarcity, there are some clear opportunities to differentiate by winning on clients' trust. This happens with differential privacy and federated learning, but also by proving to your clients that your work with AI and synthetic data is transparent, responsible, explainable and ethical, arriving at results and projections that are accurate, reliable and reproducible.
- Efficiency and scale can be improved with AI: The simulation of human processes by machines is effective at scale, by offering fast solutions to diverse challenges in the different taxonomies and topologies' combinations. AI can enable systems to learn from patterns in existing data to improve future experiences for immigrants in accessible, accelerated and accurate ways. Such intervention has the potential to improve outcomes for (racially) minoritised global immigrants' narratives.
- Cost effectiveness: Efficiency also improves cost savings on the data collection side, and the resources spent on training and using AI models is a lot cheaper than incentives for human respondents. The low costs of procurement could also build economies of scale within organisations.
- Time savings: Up to 40% of working hours could be transformed by LLMs through the automation and augmentation of worker tasks. The increasing digitisation of business is driving change for many workers, according to the *IT World of Work 2023 Outlook* that says 70% of organisations are already exploring the creation of a digital twin to simulate processes and speed up service (World Economic Forum, 2023).

Of knights and warriors: Establishing AI governance

The ability to imagine and dream of the Greeks is what led Alexander to take an army and conquer every territory to the banks of the Indus, before returning home. The Greek ability to write down history and document civilization is just as remarkable and noteworthy (paper's source plant papyrus has Greek origins, even if actual paper-making first started in China), which suggests the distinctly Greek hankering to preserve and archive civilization in its richness down the ages. The Greeks were able to create a civilization of worth as well as long-term memory of that worth. The world talks about Greece as the cradle of democracy. The history of modern Western thought begins in Greece. Logic, mathematics and astronomy all owe a lot to Greece, even with various cultural origins.

The logic and, albeit limited, fairness of Greek governance has led to many great governance models today. With the advent of massive data sets being processed by staggering machine processing power, ensuring AI data governance is critical to ensuring the output is not misinformed or misguided. The results could be phenomenal or disastrous. Despite and perhaps because of today's economic challenges facing Greece, it becomes important to draw from all the historic and cultural metaphors, and take the next leap of faith and imagination in researching diverse global immigrants of the future. If we are thinking about bypassing human lifespans with digital immortality and adding on to the civilizational legacy of human-led innovation, and doing so with artificially generated simulations or exact replicas of non-human citizens, we should definitely talk about

AI governance. Earning the trust of your customers and stakeholders is most important on an ongoing basis, and "not just at the outset", with focused committees for data and AI governance (Generation1.ca, 2024).

With all this abundance of data and AI accelerated data, we need stronger protections and safeguards in place. Having a well-skilled and knowledgeable (well-trained) data governance and AI governance committee at the staff and board levels, puts you at a competitive edge in securing your safety protocols with your CCO/CTO/CPO/CISO all present at the table. Once you understand your data sources, tag and store PII separately, provide a framework of what data is permitted for AI use and establish the permissible use cases, you should also create a reporting structure for when things go wrong. It is important to embed all your data products (and these will all be touched by AI if they are not already) with privacy by design and/or AI by design principles (ibid.). Privacy by design is the idea that privacy principles are the default setting in your data products and are conceived of when envisioning your products and systems rather than as an afterthought or once they are launched. Similarly, organisations need to embed privacy into their AI systems from the outset. This includes mapping and embedding privacy into system-development life cycles and enhancing control catalogs with AI and privacy controls, and mirrors the PbD concept of AI by design (IAPP, 2024).

Mapping Generation1.ca's use of synthetic data to advance global immigrant stories

To explore the power of AI-human data partnerships on issues like immigrant integration, we compared artificially generated simulated immigrant responses via platforms like Hey Pi, Bing, Meta's Llama and ChatGPT 4.0 versus actual human respondents of immigrants who moved to Canada and the US in the past year. First, both respondents were asked to identify the top three opportunities for Generation1.ca to help brands and researchers connect with immigrants and represent them better. Next, they were also asked about the top challenges they faced as an immigrant.

Differences and complements across synthetic respondents and human respondents in perceiving future market opportunities for Generation1.ca	
Growing immigrant voices	**AI/Synthetic personas:** Focus on the strategic benefit of sharing immigrant stories to help brands and researchers understand immigrant needs and preferences.
	Actual respondents: Emphasise the personal and emotional value of sharing their stores to foster connections and be heard.
EDIB education or cultural training	**AI/Synthetic personas:** Recommend educating brands on how to better engage with immigrant communities.
	Actual respondents: Highlight the necessity of cultural sensitivity training and brands demonstrating genuine respect and understanding of cultural differences.
Building community and networks	**AI/Synthetic personas:** Discuss creating structured community-building efforts.

	Actual respondents: Stress the importance of informal networks and community connections.
Practical solutions	**AI/Synthetic personas:** Suggest hypothetical possibilities and steps.
	Actual respondents: Focus on immediate, practical needs from existing offerings like career fairs, case competitors, etc.
Emotional versus analytical insights	**AI/Synthetic personas:** Provide more analytical and strategic insights into how Generation1.ca can assist brands in connecting with immigrants.
	Actual respondents: Offer insights grounded in their personal experiences and emotional journeys, emphasising the human aspect of their immigrant stories.
Engagement strategies	**AI/Synthetic personas:** Highlight the potential benefits for brands and researchers to engage with immigrants through structured activities and targeted support.
	Actual respondents: Reflect on the effectiveness of existing engagement strategies and suggest improvements based on their lived experiences.

Table 1

In global immigrant stories, if we compare responses to questions around what role Generation1.ca can play in the lives of immigrant newcomers, the similarities exist in terms of expectations of platform, voice, community and understanding. However, the human respondents sometimes are able to get slightly more specific and less broad or theoretical about their needs like events, policy information, language help, advocacy, publication opportunities, networking opportunities, etc. Should we rely on the consistently fairly performing and/or average (some would say graduate school trained-) AI, or the variable and varied quality of human response? These are instances where both granular detailed personalised and microscopic (human) and big picture broader telescopic (machine) perspectives will enrich the discussions. When we drill down to problem identification abilities, among the top skills needed for success in data according to Generation1.ca's *Annual Global Industry Skills Study* (Dandapani, 2024c), we need to make sure that we have enough understanding of nuance and richness of the human experience and context to deliver solutions that actually serve immigrants as brands and institutions.

We asked ChatGPT versus human respondents another question: *As a new immigrant to the USA or Canada, what are the top three challenges you would be facing?* The answers from the AI were more theoretical, broader and hypothetical–even if accurate, like: "underemployment, recognition of foreign credentials and past experiences, significant language barriers". The human responses were deeply personal and rich with specifics like:

> "Since I am not a fresher, I would like to maximise my past background rather than start completely from zero when considering Canadian immigration. However, this is not easy, as many Chinese immigrants in Canada at the moment, or most of the ones I have come across, have given up their original careers and are engaged in manual labour".

Moreover, AI was not able to pick up on nuances like economic challenges that a human respondent was able to discuss: “Very high housing rents. The apartments, if they are not an old building, are so tiny that it is painful to pay such an expensive monthly rent for so little space”.

Similarly, we also augmented some of Generation1.ca’s quantitative datasets with synthetic data from the Argentina-based LivePanel. These experiments with augmented synthetic data mimic positive curiosity and could put you in that league of business leaders who are not afraid to use AI as a thought partner to achieve more with less. You will also be forced to constantly examine and assess risk levels to prevent unwanted automated-decision-making, and ensure privacy protections and security safeguards are strong throughout the AI data lifecycle of planning, design, development and deployment.

Master AI literacy and governance at work

Boston Consulting Group surveyed AI users at work to reveal that the most regular users of AI are the most fearful of losing their jobs to AI, even as employee confidence in the utility of these tools only races ahead. We are truly in an age where there are more “management challenges” than “technology challenges”, owing to how much remains to be addressed in the human being–AI equation (Beauchene et al., 2024). There is equally a lot of valid criticism about being careless about putting the “wrong humans” in the loop to render human oversight ineffective, disempowered and worse; this is why we need more AI governance-trained professionals. The lead author of this paper is on the governing board of the International Association of Privacy Professionals’ (IAPP) ISO and ANSI affiliated credentialing programme, the world’s largest resource for privacy professionals, where she has helped create and launch the world’s first AI governance professionals certification in her role (IAPP, 2023).

Synthetic data is still in a stage of nascency, with researchers across industries exploring its abilities, utility and finessing the best talent stack across teams of analytics, engineering, machine learning, etc., in order to harness AI and synthetic data’s true potential to solve social and business problems. This is whether it includes enlarging sample to make it more representative of diverse demographics and viewpoints, overweighting or predictive modelling based on simulated or replicated data. In times of exploration like these, we need to unite as changemakers, and advocate for the good of our profession by upholding global immigrant stories with truth and rigour. We must also take bold leaps of imagination, which have propelled us to astronomical heights, to gain a stronger understanding of our earth and its immigrant-rich humanity.

Industry recommendations Z.0: Use synthetic data to understand and improve global immigrant stories

It is fitting to conclude with best practice recommendations for the industry regarding the use of synthetic data to research immigrants, with inclusive designs for more accurate and powerful data insights:

- Assess and classify the risk levels. Accordingly, restrict the instances of automated decision-making to low-risk tasks, depending on the subject and scale of the impact.

- Transparency and full disclosure: When done properly, synthetic data extrapolations may be necessary. However, they must be used carefully and fully disclosed, with complete transparency.
- Human in the loop and human-led: The quality of human-skilled oversight is very important, because the moral axis we are functioning around is human and our data subjects are still human. We should not use GenAI to outsource a skill or knowledge we don't have, or to form a view or recommendation we don't know much about.
- AI might be "consistent" or average, but human response is variable. This means we must allocate all our resources towards putting the best human talent on the jobs.
- Appreciate the potential use cases and the limitations of the technologies. For example, don't use GenAI as search engines, unless sources are provided that you can properly verify.
- Synthetic data doesn't and shouldn't replace real data exactly and it always needs to be validated against real data. Synthetic data is also unlikely to capture sub-group trends, edge cases or anomalies.
- Avoiding the "black box": Channel transparency focused on AI being explainable, and don't leave people wondering where all this data came from or how it was all generated.
- Evolve a new lexicon that documents human learning, ambition and learnability of synthetic data to create a new frame of reference that acknowledges the evolving principles of human-machine collaboration. Synthetic data and AI shouldn't be anthropomorphised by expecting it to be or act human; it can be better in some ways.
- Human biases are mirrored in AI biases. Use AI for its competitive advantage like high learnability, powerful speed and scalability to match it to its right use cases.
- Data and AI governance: Depending on the resources available to you, you should invest in a programme, team and a network of champions within your organisation and across clients and industries.
- Respondent duty of care must stay central to the investigation, curation and generation of insightful stories about some of the world's most vulnerable and underserved groups and/or individuals, to advance and empower their narratives for brands and institutions.
- Monitor the changing local and global legal and regulatory landscapes: Engage a cross-functional team and/or network of champions who monitor the latest trends in legislation, and communicate their implications for your use of various technologies.

Future research directions and dimensions

The paradox of civilization is that greatness becomes hard to exceed in future re-runs if everything stays the same. Greece may be faced with economic challenges, debt and a nostalgia of what once was a great and all-powerful civilization–the origins of Western society and scholarship. What we are seeing today is that societies that have mastered kinesis, movement and have a passion in their bellies to make history right, correct past injustices and inequalities, are rising into superpowers at a steady pace that is alarming to some in the West. This contributes to making the topic of immigrant stories an even more polarising and disruptive discourse. Those in pursuit of mind, myth and machine excellence brave long distances, far borders and dangerous terrains to be in control of their technologies, data protection and sustainable business and social impact.

Nobody can pat our backs nor point a finger to our carbon emissions today (and roughly 13 liters of carbon get emitted every time you prompt AI, according to Kay-Firth Butterfield, the World's first Chief AI Officer), except those who will inherit the earth from us—i.e., future generations of humans and also perhaps their AI agents. Thus, if you are looking for privacy-preserving and representative global immigrant models and narratives to uplift brands and public institutions, learn the technologies and their guardrails. Do not be afraid of experimentation and constant learning around the evolving applications of augmented synthetic datasets, and how they can power better business and society in rich and remarkably renewable ways.

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About the authors

Arundati Dandapani, MLitt, CAIP, CIPP/C, CIPM, Founder and Chief Executive Officer, Generation1.ca and Professor at Humber College Institute of Advanced Learning and Technology.

Kuno Tucker, MA, LLM, ICD, Chief Compliance Officer, Manulife Wealth and Professor at York University.