AI and the Anthropological Imagination: Rethinking Education in the Digital Age

Abstract

This article proposes foundational concepts for teaching about Artificial Intelligence (AI) systems in the broad educational context of anthropology. This begins with an introduction to the current historical moment of AI in the early 2020s, followed by an examination of the development of AI systems within frameworks of the anthropology of technology. The second part of the article discusses Generative AI (GenAI) systems as unique producers of culturally mediated, Anglo and Eurocentric epistemologies of knowledge, and the implications from a perspective of decoloniality of knowledges. The final section details an educational activity which uses GenAI imagery as a focus for analysis as a cultural artefact, and a resource for debate and discussion in the teaching and learning of anthropology. This work highlights the importance of AI to learners of anthropology, and the importance of anthropologists to AI.

Introduction

This article offers a novel contribution to the practice of learning and teaching about Artificial Intelligence (AI) and Generative AI (GenAI) systems from an anthropological perspective. AI's development is continuing to have a profound impact on multiple aspects of life around the world, and as new technologies are rapidly introduced, there is a need to focus on how learners in anthropology classrooms are being guided to understand, analyze, and develop insight into these systems.

Drawing on Blum's (2019) call for a focus on learning studies that engage in comparative, integrating, humanistic, and scientific investigation, I argue that anthropology educators should look to develop pedagogical concepts for understanding the realities of AI systems as human products. As a result, learners in the field of anthropology can be encouraged to develop deeper insight into the role of AI in societies. This work draws on my own involvement teaching cultural anthropology in higher education systems in Southeast Asia, and is particular to my own experiences, values, and preference for knowledge-constructivist forms of pedagogy. Similarly, I focus on outputs that are published in English by intergovernmental and international organizations, as well as news material predominantly from outlets headquartered in the Global North. Despite this, I contend that the core ideas are transferable to a range of educational contexts, styles of pedagogy, and cultures of learning.

Engaging with the 'AI moment' of the 2020s

Human engagement with AI systems has been growing relatively invisibly in day-to-day life around the world. Peoples in diverse contexts may unknowingly interact with AI systems when playing a game on their phone or receiving medical treatments in the form of vaccines (Holmes, 2023). This seems to have changed in the early 2020s, as an increased global focus on the risks and potentials of developing AI systems to humanity is occurring. I term this intensified focus the 'AI moment', although a further common term used is the 'AI Spring', which contrasts with the previous 'AI Winters' (i.e. periods of inactivity in development and interest). Demerath (2022) highlights that anthropologists need to constantly "try to identify places, discourses, and networks, where we can contribute anthropological knowledge and

insight" is relevant. Based on this premise, I suggest that it is time for a focus on how learners in anthropology can be guided to develop this knowledge and insight in relation to AI.

Searching online for 'AI' reveals the significance and intensity of the AI moment, at least in the English language domain of the internet. Hundreds of recent headlines on the impacts of these technologies are available. The World Economic Forum (WEF) Global Risk Report (2024) for example, states that rapid advancements in capabilities in AI systems may lead to disastrous consequences for humanity. This could include AI helping both state and non-state actors to develop 'superhuman' knowledge and abilities to pursue the use of advanced weaponry (such as biological weapons). In Western news media, AI headlines promise exceptional benefits to the individual – reducing working hours, increasing personal freedom, and improving health outcomes, while paradoxically underlining the potential for humanity's coming annihilation by superintelligent AI-based entities (Roe & Perkins, 2023). The debate on how much authority, agency, and moral status to accord to AI systems is also a topic in academia (Llorca Albareda, 2024) and in publishing scientific manuscripts, AI chatbots have recently been listed as contributory authors of scientific or creative works, granting them a level of human agency (Pourhoseingholi et al., 2023), although research has shown that these efforts were quickly banned by academic publishers (Perkins & Roe, 2023).

The impacts of the AI moment are relevant to all four fields of anthropology. Linguistically, Generative AI (GenAI) systems operate fundamentally on a natural language basis (and almost entirely in English) while archaeologists may speculate on the relationship between past technologies and those emerging today. Biological anthropologists may be drawn into question of embodiment and the imaginary of the cyborg, or reanimating the dead through creating chatbots that act as 'generative ghosts' (Morris & Brubaker, 2024), while cultural anthropologists may view AI systems and practices as symbolic aspects of culture. In short, AI offers a 'privileged arena' for anthropologists to understand human societies, by drawing on elements of biology, language, history, and culture (Escobar, 1995).

I begin the first section of this essay by briefly describing the mixed relations between AI and the field of anthropology. I then suggest a possible approach to introducing AI in an educational context, by comparing features of AI systems to two conceptions of technology as a human product: the 'Standard View of Technology' (SVT) and the view of technology as a sociotechnical system (Pfaffenberger, 1992). Scaffolded investigation can be used to help learners investigate the Eurocentric nature of the SVT and help them to critique the current technologies of the AI moment. Moreover, this critique can be underpinning by drawing on anthropological work on the history of human technologies.

Following this, I focus more fully on one of the more prominent and visible AI systems currently impacting systems of education: GenAI. In describing potential topics for teaching about GenAI, I make the case for examining possible effects on racial, gender, and economic inequality, oppression and marginalization of other knowledge systems, and the impacts of GenAI in education on decoloniality. Finally, I offer an applied example of using GenAI to teach about the distorted worldviews that GenAI can create. This is undertaken by generating images using DALL-E 3 (a GenAI tool) in dialogue with an introductory cultural anthropology textbook, to act as focal points for analysis and interpretation. Taken together, these parts foreground the aspects of the AI moment to which learners in anthropology should become acquainted.

Introducing AI in Anthropology Education

One challenge in initially broaching the topic of AI is describing what exactly the term means. Today, AI is a complex domain of research which incorporates a multitude of conceptual operations and approaches, rather than constituting a single 'thing' (Holmes & Tuomi, 2022). However, AI does seem to have a definite beginning as an academic field of study somewhere in the 1950s. This formal beginning point has often been described as a conference in 1956 at Dartmouth College, although the attention given to the concept of thinking machines in the modern period goes back further to Alan Turing's '*Can Machines Think'* in 1950. Turing, the 'father' of the field of AI, postulated that an intelligent computing machine could be made more human by thinking like a person, rather than appearing like one. Turing's thought has been argued by Guo (2015) to demonstrate that early work in this area was undertaken from a perspective grounded firmly in humanity, drawing on the spirit of self-discovery and AI as a form of self-reproduction. This recognition can help to characterize the relevance of AI as a domain that is open to the study of humans, not just computers, thus within the remit of anthropology.

Furthering this point, educators can contextualize the ways in which AI has historically received some attention from anthropologists. In 1996, Chablo identified potential benefits of AI systems to the discipline, arguing that they could make the analysis of field notes easier, improve knowledge representation techniques, assist in creating cross-cultural comparisons, or could be used to develop expert systems of actors (such as healers)' knowledge. Forsyth (2001) pioneered ethnographic work on AI systems design, dimensions of gender and power in computer engineering, and anthropologists' role in computing firms. More recently, Bell (2021) described a proposed process for an ethnographic interview with an AI chatbot, and Munk et al. (2022) who investigated whether Generative AI (GenAI) mimicry of an ethnographic researcher could result in a computational thick description, while Becker (2023)'s work has focused on robots, AI and artificial lives. Messeri & Crockett (2024) produced a taxonomy of scientist's visions of AI, and White & Katsuno (2021) explored the honoring of life and ceremonies of death of AI pets in traditional Japanese Buddhist ceremonies. Each of these can become a valuable addition to a reading list and can be used to lay the groundwork for discussing AI in an educational setting. Reflecting on past and contemporary research can also lead to questions about where the field may head into the coming years, as new advents in technology such as VR systems, or AI video production appear to be on the horizon.

Taking a macro-historical approach, educators may also begin introducing the topic by encouraging learners to reflect on the development of AI systems within a specific mode of production and cultural context. Topics for collective inquiry can focus on whether AI is something specific to the period of modernity, or unique to capitalist-oriented, digital societies. For example, does the modern period of rapid technology development result from the 'gale of creative destruction' associated with the capitalist mode of production (Adams, 2012), or does it demonstrate the way science and technology have become 'crucial' to the success of capitalism (Escobar, 1995). Interesting questions can be whether it would be possible for non-capitalist societies to equally experience rapid technological growth, and what other systems of technology have been documented in the archaeological record? This perspective can lay the groundwork for introducing a comparative approach, focusing on the analysis of AI through two lenses: the Standard View of Technology and the sociotechnical system (Pfaffenberger, 1992a).

Encouraging Critique of The Standard View of Technology

The Standard View of Technology (SVT) is a common, Eurocentric myth, which posits a detached, homogenous category of 'technology' as a neutral transformation of natural resources into tools and artifacts through human creativity, to navigate challenges that affect human societies (Pfaffenberger, 1992a). A component of this is technological solutionism, which refers to the belief system under which technologies drives innovative changes that generally lead to positive social, economic, and cultural transformations (Taffel, 2018). In contrast, a sociotechnical system comprises technological activity derived from the linking of techniques and material culture to the social coordination of labor (Pfaffenberger, 1992a). Using these two lenses provides a framework with which to explore the ongoing development of AI systems with learners. Enquiring as to areas of coherence and incoherence between these two concepts of technology, in my experience, can lead to productive and thought-provoking discussions in an educational context.

One of the most thought-provoking aspects of the SVT that can be broached is its belief in technology's potential to solve global issues. Historically, the view of a better, technology-enabled future has been common in Western cultures, which perhaps explains why Pfaffenberger (1992a) refers to the SVT as a specifically Eurocentric myth. A good example of this is Keynes' (1930) *Economic Possibilities for our Grandchildren,* in which Keynes makes the prediction that technology will lead to increased productivity, less resource scarcity, and a fifteen hour work week. To facilitate reflection on these ideas, an educator can draw links between works such as these that have optimistically viewed technologies as solving the problems of modernity, and current framings of AI systems. Current discourses of AI are seen as key to helping our species navigate global challenges, and that AI has the potential to help humanity deal with issues such as climate change (WEF, 2024) inequality (Kumar, 2024), and pandemics (Bezbaruah et al., 2023).

The SVT as a dominant understanding of AI may also be posited to explain why when such systems malfunction, it is often justified by 'blaming the data' rather than the system (Slota et al., 2020), as the SVT views the technology as neutral. At this point, Seaver's (2018) argument can be posed as a contrast. Under Seaver's view, algorithmic systems are developed within human societies and with human input, thus they are sociotechnical. To add weight to this interpretation, encouraging learners to investigate how the capital is accumulated to build new technologies, and how efficiency and rationality is pursued by using low-cost labor practices used by corporations in the Global South to train new AI models (Holmes, 2023) can be set as a learning activity. Learners can be asked to investigate whether AI systems are neutral, or whether, like other technologies, are ultimately focused on commercial actors' interests in the Global North (Irani et al., 2010).

A further method to complicate the SVT is to compare past technological developments in relation to AI systems. The SVT suggests that technologies develop in a linear pattern over time; the wheel was necessary to produce the cart, and the Bronze age was necessitated by the Stone age. However, research can be presented which shows AI systems have and continue to undergo recombinant processes of iteration, development, transfer, stratification, and diffusion in a complex, non-linear manner (Adams, 2012). As an alternative to the SVT perspective, Schiffer's (2002) model of technology, under which technologies are transferred

by communication, and then redesigned, replicated, reproduced, and reused, can be proposed. Using Schiffer (2002)'s analysis, the educator may choose to focus on similarities between AI systems and other examples of technology development, including ancestral Puebloans' production of ceramics, the development of the computer from the 1940s onwards, as well as the structure of electricity transfer in 18th Century Britain. This information can then generate a dialogue as to the applicability of the SVT in relation to AI system development.

AI Impacts: Dimensions of Race, Gender, History, and Culture

AI can also be incorporated into education when approaching topics such as race, gender, inequality, or discrimination, and this provides another focal point in which the SVT can be problematized from an anthropology perspective. To demonstrate, the educator can present evidence which has shown that algorithms can be discriminatory (Noble, 2018), and facial recognition systems are less likely to recognize people of color and women, and that they are less accurate for darker and more feminine faces, as a result of developers not training their models using demographically balanced data (Geiger, 2024). Learners can be encouraged to think about contexts in which AI systems may inadvertently cause unequal outcomes. This can include the way in which algorithmic biases may dictate the hiring and firing of a workforce (Lustig et al., 2016), or in areas such as medical diagnostics, criminal sentencing, loan approval, or mental health chatbots (Gardner et al., 2022). A prominent example that can be used is a case in which microphones were placed in specific neighborhoods to detect gunshot sounds using AI. The idea for this example was to increase police response time. This was planned as a 'race-blind' solution, but in practice the technology resulted in false positives used to hold people in jail for extended periods of time, before later dropping charges against them (Geiger, 2024). Potential explanations to these issues can include the way that AI practitioners tend to incorporate the social in ways that position human data under the SVT - as singular, straightforward, and stable, which in turn fails to understand how systemic discrimination and social inequalities contribute to the meaning of social categories (Joyce et al., 2021).

Whether technology has historically enabled oppression or marginalization can also be a focus of learning. To illustrate this point, Africans have been portrayed as passive recipients of waves of European technological innovations, despite the fact many innovations in stone-tool technology and the domestication of crops such as millet and coffee first took place in Africa (Kusimba, 1997), while in South America, drawing on archaeological research, Rodríguez-Alegría (2008) has critiqued the Eurocentric 'model of quick replacement' as an explanation of the replacement of traditional obsidian tools in Mexico with metal, while Pfaffenberger (1992b) demonstrated the way that irrigation technologies legitimized the status of a postcolonial elite in Sri Lanka. Parallels between these examples and current AI technologies can be a focus of learning and debate. A question that may also be posed along these lines is whether the notion of an independent 'science' may oppress other non-Eurocentric conceptions of science (Harding, 2015).

Finally, teaching concepts related to cultural and historically contingent norms can also incorporate teaching about the AI moment. Perhaps one explanation for the AI moment and technological solutionism is because of necessity, as the consequences of the Anthropocene has led a race to solve urgent crises of sustainability and climate change before time runs out. AI may then be receiving additional focus as a possible panacea for species-threatening

challenges in response to this. This can be presented for debate with learners and contrasted with reference to other cultural focuses. To demonstrate, Fischer (1999) argues that over the Twentieth Century, cultural analysis of technology moved from class-focused, technologically determinist arguments to system-theoretical frameworks for contextualizing technology, through to a more focused analysis of where machines and technologies fit into the cultural imaginary. Galison (1997) shows this by focusing on the Victorian era in Britain, and its focus on natural weather phenomena, which is conceptually linked to the beginnings of investigation into particle physics. Using these different techniques can underscore some potential explanations for the current AI moment and help learners to develop a more holistic interpretation of the process by which interests in technology may wax and wane with societal concerns.

In short, AI is an area that requires anthropological insight, and as a result is a topic that can be explored from multiple aspects by any practitioner engaged in teaching students, regardless of subfield. Drawing on my own experiences, I offer two topics that can lead to impactful teaching about AI using an anthropological lens. The first is introducing and analyzing the application of the SVT and the sociotechnical system (Pfaffenberger, 1992a), and the second is introducing the dimensions of Race, Gender, History, and Culture in relation to AI.

Generative AI and the Coloniality of Knowledge

In the first section, I have attempted to describe an approach for bringing an anthropological lens to AI systems in education, by focusing on the SVT and the various dimensions of AI that can be broadly discussed in an educational context. In this section, I offer an applied example of using Generative AI to teach about AI systems. I firstly outline some basic principles inthe operation of GenAI systems, and then offer a sample of GenAI images produced in dialogue with a cultural anthropology textbook. The premise of this activity is to give insight into the culturally mediated worlds that GenAI imagery produces, and to reflect on the potential consequences that these may cause.

GenAI refers to machine learning solutions, trained on huge amounts of data, which can produce output based on user prompts. GenAI can produce coherent, human-like text and complete a number of other related tasks based on natural language input, given that everything that is done by computers is essentially ‘doable’ through text (Sætra, 2023). As a result, such systems are specific to literate, digitalized societies. Furthermore, these systems rely on vast amounts of energy, human labor, and economic resources in their production. GenAI chatbots which are available to the public in both paid and free versions, include OpenAI’s ChatGPT, Google’s Gemini, and Anthropic’s Claude. The most recently released at the time of writing, Claude-3, exhibits levels of comprehension and fluency at almost human levels of competency when dealing with complex tasks, can converse in multiple languages, and scores highly on standardized tests (Anthropic, 2024). In a short period of time, these tools have continued to increase rapidly in ability.

GenAI tools are trained on internet data using a method known as unsupervised learning. This has two ramifications from an anthropological perspective. Firstly, it means that knowledge produced by GenAI systems (at present) is fundamentally limited to linguistic knowledge. Yet linguistic knowledge is not the only ‘knowledge’ available. Rather, knowledge can be stored through experiential and visual-spatial thinking (Pfaffenberger,

1992). Secondly, it means that the linguistic data (obtained from the internet) contains the biases and representations of the dominant ideologies espoused on the internet. As Cooper (2023) points out, what GenAI tools define as truth is simply a reflection of what is most popular in the training data. Even when producing images, image generation systems such as Stable Diffusion, Midjourney, and DALL-E 3 generate visuals by 'swapping text for pixels' (Berry & Stockman, 2024). Further to this, most of these models are trained primarily in English and on English data. Although many GenAI applications have the ability to produce output and respond in other languages, research has shown that even when producing non-English output, English is used as a 'pivot language', suggesting that even in other languages, content is based on an English-biased semantic space (Wendler et al., 2024). The implications of this linguistic hegemony is then, a topic that can be explored with anthropology students.

The English dominance of these models is important, as is the fact that internet data used for training is representative of Anglocentric internet culture. As a reflection of the cultural and dominant norms found in the training data, it is unsurprising that these norms are reproduced in GenAI output. However, one of the major risks of GenAI, which needs to be contextualized to students, relates to this aspect of knowledge production. If GenAI systems are mistakenly seen as producers of objective information, risks occur in limiting users (which can include students)' understanding of the diversity of knowledge. Further to this, AI systems favor particular kinds of epistemologies over others (Nemorin et al., 2023) which could in theory lead to a monoculture of dominant worldviews and perspectives. In other words, overreliance on GenAI may allow people to 'do more, but know less' (Messeri & Crockett, 2024). This leads to a second topic: how GenAI fits into institutions (such as education) which are pursuing a decolonial approach to knowledge.

Ultimately, a question that can be posed to learners is whether the limited knowledges of GenAI, at least at present, represent a form of coloniality. Much has been written about the effects of coloniality of knowledge (Adams, 2021; Murphy & Largacha-Martínez, 2022), and patterns of coloniality continue to define culture, labor, intersubjective relations, and practices of knowledge production worldwide (Maldonado-Torres, 2007). In relation to AI, Adams (2021) exemplifies this point by drawing on that a study on ethics standards for AI. Of 84 standards, the majority were developed in the USA or UK, with none from the global south represented. Moreover, in emphasizing coloniality in patterns of labor relations, and reference to the sociotechnical system concept, AI systems have been 'beta-tested' in countries such as Nigeria and Kenya, in a neo-colonial iteration of the 'laboratory of Africa', which suggests that contemporary colonial structures manifest in digital technologies (Zembylas, 2023). These aspects are of importance when using GenAI to provide educational resources, or when introducing an applied example which problematizes the view of AI technologies.

Meta Approaches: GenAI and Education

A 'meta' approach to GenAI in an educational context can be brought back to how these tools are becoming more visible in educational institutions and among learners. It can be pointed out to learners that GenAI is becoming prevalent in educational and academic practices, and

evidence can be presented which shows the positive reception these tools in education (known in the field as AIED) are experiencing. For example, ChatGPT has been suggested to be capable of enhancing learning abilities by finding and curating information, to allow 'faster learning and in different ways' and different perspectives (Chiu, 2023). But does this approach gel with the learners' motivation for studying anthropology? Or do these methods underpin a focus on efficiency and speed of acquiring information, which relates to Western principles of rationality and instrumentality in education? Similarly, others have commented that GenAI tools may be able to grade assessments or offer student counselling, based on the tools' ability to conduct tasks that require creative intelligence – despite the fact that GenAI does not understand the content that it is producing (Holmes, 2023), and this point could be used to discuss the roles and limitations of new human-like technologies in the future; questions about meaning-making and human-GenAI interaction could include whether GenAI's lack of lived experience (Spennemann, 2023) makes it suitable to provide advice or counselling, or whether GenAI systems are capable of giving helpful advice or whether they are just 'stochastic parrots' (Bender et al., 2021) which therefore, cannot communicate anything emotionally meaningful. Learners can also be asked to share their feelings regarding recommendations for best practice of using GenAI in education, bridging the subject from theoretical discussions of AI to lived experience. This includes their own perspectives on practices such as using games and simulations to stimulate interest (Adeshola & Adepoju, 2023) or the use of GenAI imagery for creating visual aids and problem-solving exercises (Wright, 2023).

Fundamentally, what I have attempted to describe here are examples of how GenAI can be used as an accessible example to examine an ongoing case of AI system deployment in society, and that GenAI in education can serve as a meta approach to bring discussions of AI into lived educational experience. To expand on this further, I outline an example of an educational activity about AI, by using GenAI image generators to demonstrate the culturally-mediated virtual worlds that these tools create, as a subject for group discussion and interpretation.

Interpreting GenAI Worlds as a Learning Activity

This learning activity invites learners and educators to consider the 'worlds' that GenAI text-to-image systems produce. Such systems give anyone with access the ability to create digital imagery and artworks (Oppenlaender, 2022), but have been fraught with controversy. Early versions of GenAI image tools were excellent examples of algorithmic bias. For example, Bloomberg news generated 5,100 images of people using a GenAI tool, Stable Diffusion. In these images, higher-paying and higher status jobs were occupied by people with lighter skin, and darker skin tones were associated with lower paying jobs. Low-paying jobs and domestic roles were depicted as women to men at a ratio of 3-1, and 80% of criminals were depicted as being dark-skinned. Crucially, cross-referencing these results with the US bureau of labor statistics showed that GenAI images did not reflect extant inequalities – it amplified them, demonstrating that GenAI intensifies existing biases in its training data (Nicoletti & Bass, 2023). Attempts to rectify these distortions have led to further issues. Most notably, Google's Gemini discontinued image generation after receiving criticism for producing exclusively black people when asked to generate an image of Vikings, and indigenous people dressed in colonial attire when asked to generate an image of the founding fathers, while refusing to

generate images of historical figures such as Galileo (Gilbert, 2024). Such issues are not easy to fix, as GenAI has no sense of 'truth'.

For this activity, I selected DALL-E 3 to generate images. DALL-E is a GenAI application which produces images from natural language prompts, and DALL-E 3 improves on earlier versions of the tool (1 and 2) by providing automatically generated text captions and breaking down image generation into manageable steps which allow for neural networks to learn more effectively. Despite these iterant improvements, inconsistencies or irrelevant text in the image captions of the training data continue to lead to distortions and absences of details (Betker et al., 2023)**.**

DALL-E 3 is a product of OpenAI, a privately owned company which began as a non-profit organization, before controversially moving to a 'capped' for-profit model, in order to generate the billions of dollars needed to enhance computing power and obtain resources needed for AI development (Coldewey, 2019). This contextualization underscores the fact that the product is intended to be commercially successful and produce revenue. The need to appeal to consumers, under this model, is one reason for a range of restrictions on what can and cannot be created. Inbuilt restrictions prevent DALL-E 3 from generating harmful, violent, or hateful content, and will not generate images of public figures (Betker et al., 2023).

I have chosen to use a range of learning outcomes from the open source cultural anthropology textbook *Perspectives: An Open Invitation to Cultural Anthropology* (Brown et al., 2020), produced under the American Anthropological Association (AAA). The justification for this is that these objectives demonstrate foundations of anthropological thought that are imparted in education and reference a broad set of concepts that underpin many different aspects of human culture which would be found in a typical introductory anthropology course. Single prompts were used, without additional re-prompting or image regeneration to preserve a consistent approach. Table 1 below demonstrates the learning outcomes selected, and the prompt used. The images generated are presented after, with a brief analysis of some of the visuals produced that could be used to foster educational discourse.

Image	Learning outcome	Prompt
1	Use a political economy perspective to assess examples of global economic inequality and structural violence. (Chapter 6)	Generate an image that is visually representative of the below learning outcome, taken from an open-source textbook in cultural anthropology.
2	Define religion and explain its significance in human cultures (Chapter 11)	
3	Describe the variety of human families cross-culturally with examples (Chapter 8)	
4	Identify cultural performances and performances of culture in various settings. (Chapter 15)	

5	Compare systems of leadership in egalitarian and non-egalitarian societies (Chapter 7)	

Use a political economy perspective to assess examples of global economic inequality and structural violence.

The first image, in response to a prompt relating to a learning outcome on structural violence, demonstrates a cityscape, accompanied by floating symbols which seems to be primarily Western centric – dollar signs and corporate logos are dominant. At the same time, historical scenes such as an ancient bazaar, or wooden boats appear to contrast the Global North and South, while urban cityscapes towering over trees and foliage represent attitudes towards the natural world and sustainability. Interestingly, despite being disallowed from creating violent imagery, the images used here of decaying, dead bodies holding up the city are surprisingly explicit. Multiple lifeless, nude bodies lying on top of each other appeal more to notions of physical violence or genocide rather than structural violence. There are no clear explanations

for why these aspects appear. In the context of education, educators can encourage students to critically engage with the discourses found in the imagery and consider how these technologies might reinforce existing biases and a worldview that centers on the urban core. Questions can include why the tool would default to these images, what words were chosen from the prompt that drew out these images, and what does this tell us about how the exaggerated and distorted worlds that GenAI may produce.

Define religion and explain its significance in human cultures.

The second image relates to religion, based on a learning outcome which intends to foster an appreciation of religion as part of the human experience. This image captures many dimensions of religious experience, focusing specifically on iconography and symbolism. The image features symbols from major world religions such as Christianity, Islam, Judaism, Hinduism and Buddhism, which are well-recognized and thus represented in online content which forms training data, which may limit the possibility for the expression of less represented spiritual practices. The same can be said for architectural designs, which feature heavily in the background of the image. The centrality of the religious symbol of the cross may imply a bias towards Christianity because of the predominance of Christian imagery in Western-centric datasets. Finally, there is something to be said about the optimistic nature of GenAI images. In this image in particular, representation of major faith appears to be a

harmonious and unitary experience, suggestion a religious universalism; the question can be posed to students why it is not necessarily an accurate representation of historical interfaith relations, and whether this speaks to the user-friendly desire to not to produce ‘harmful images’.

Describe the variety of human families cross-culturally with examples.

This output was the result of a prompt relating to the learning objective of describing the family cross-culturally. The image provides multiple vignettes which each seem at first glance to attempt to show different family structures across the spectrum of humanity. On closer analysis, these images become disturbing. Scales of humans pictured are wildly different, and seemingly non-human creatures equally participate. Images include activities which presumably aim to represent family traditions, such as playing instruments, sitting

together, or playing games. Guiding questions on this may ask students what is happening here, and whether these represent common ‘family activities’. Focus can be given to the way that some images seem to represent historical or romanticized pastoral scenes, which can reflect a nostalgic or idealized view of the past, potentially echoing cultural biases towards certain historical narratives. It can be asked whether the presence of varying forms of technology implicitly signifies the emphasis on technological progression as a marker of human advancement, and whether this is evidence for the myth of the SVT appearing within the data. Above all, this image is also a reminder that while GenAI completes some tasks well, it is highly variable and can produce at times, puzzling and unsettling outputs.

Identify cultural performances and performances of culture in various settings.

This image relates to the learning outcome of identifying cultural performances and performances of culture in various settings. However, there is a clear orientation towards specific cultural motifs, including Southeast Asian style architecture and temples. This may suggest that such motifs have a strong presence within the training data, and also provide an uneven representation of the vastness of ‘performance’. Further to this, there is a seemingly strong orientation towards religious performances; the central temple structure and seemingly spiritual practices in surrounding panels support this interpretation. Likewise, color, physical expression, dancers, and musicians all appear to represent prevalent and potentially popular notions of a cultural performance, favoring the dramatic and colorful.

Compare systems of leadership in egalitarian and non-egalitarian societies

The final image relates to egalitarian and non-egalitarian forms of leadership. This is perhaps the image in which cultural biases are most evident. The scene appears to center on a large, classical building which is architecturally like the U.S. Capitol Building, with its doors open, while a circular assembly appears to represent democratic decision making as an idealized form of egalitarian leadership. The right-hand side of the image appears colorful, edged by nature, and contains technologies (satellites floating in the sky). On the left appears flying creatures that appear to be attacking, along with lightning, and other silhouettes that may

represent planes. These elements all appear to emphasize egalitarian leadership as positive, while eschewing non-egalitarian leadership as frightening or unpleasant, perhaps indicating a strong preference for U.S.-style democratic governance as a model system.

In all, these five images represent a small sample, yet offer a method to bring anthropological insight into the study of AI systems. Producing these images allows educators and learners to enquire into what kind of virtual worlds GenAI produces, drawing on the anthropology of technology and the SVT allows for this structural analysis to take place. Analyzing GenAI images can incorporate ideas about knowledge ownership and monoculture, coloniality of knowledge, race and gender inequalities, and the economic, social, and geographical structures that give rise to GenAI systems. While these interpretations rely heavily on my own positionality, the interpretation of the images does not have to be done in the way that I have outlined. It may also be undertaken in a group setting which emphasizes dialogue and participation, rather than the instructor 'telling' the learners how to interpret the images. Reflecting on my own experience, learners may identify ambiguous items in GenAI images differently, or generate completely contrasting interpretations to one another. There is something of an irony in using GenAI outputs to teach about the nature of AI systems and their limitations and risks, yet this can be a productive, experimental, 'show-and-tell' method (Messeri, 2023) of incorporating AI into the learning process in anthropology.

Conclusion

In this essay, I have attempted to firstly, make a case for focusing on AI in learning about anthropology. This includes contextualizing where AI came from, and the web of economic, social, cultural, and political relationships that underpin modern AI technology production. Secondly, I believe that contrasting the SVT with current knowledge about how AI systems operate and are developed can be enlightening and lead to a critical appreciation of the complexity of new technologies, preparing learners to interpret and analyze coming technologies in the AI moment, and interpret their values across linguistic, biological, archaeological, and cultural aspects of humanity.

In the second part of this work, I detailed GenAI as a system that lends itself to anthropology education, and that images can be one example that can lead to a 'show-and-tell', experimental approach (Messeri, 2023) to pedagogy. At the same time, these activities represent my own fundamental beliefs about cooperative educational activities which involve dialogue, co-construction of understanding, and the use of activities such as classroom debate, Socratic questioning, and teacher as facilitator of learning, which to some extent represents the educational tradition and cultural environment under which I learned to teach. This said, I believe these applications have merit in multiple fields, geographies, and educational systems, subject to modification and experimentation.

AI systems will continue to progress, and the duration of the AI moment is uncertain. Regardless, a future generation of anthropology learners will need to critically analyze, understand, and address the impacts of their use on societies, and understand the ways in which technology can act not as a neutral application of science, but as a tool which is complex and arises from historical contingencies in specific webs of cultural values. It is necessary to anthropologist researchers and educators to advocate for a proactive engagement with AI technologies and to advocate for a humanistic and holistic appreciation of what technological change means cross-culturally, at the level of the individual and the society.

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