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AVOIDING CULTURALISM IN TECHNOLOGICAL DEVELOPMENT
REVISITING ARTIFICIAL INTELLIGENCE

Abstract

AI-developers face a challenge when seeking to use models that aim to be culturally sensitive. While we agree that culture is an emergent reality, there is always the risk of creating algorithms that treat culture as objective to account for various facets of the social realm. As a result, culture becomes prepackaged and autonomous. Nonetheless, culture is not only emergent but dialogically and socially invented. In this article, the point is to advance the discussion about culture by addressing a crucial philosophical issue and proposing some practical themes on how to avoid culturalism in AI development.

Keywords: non-dualism, participatory AI-development, phenomenology, algorithms

For quite some time it was thought that computer software development occurred within a sterile domain, divorced from the real interaction of individuals and groups and the environment (Crawford 2021). The operation of these systems was thought to be standardized, and that they operated according to the rules of logic. Accordingly, this technology was designed to improve human skills and capabilities, and with enough technical expertise, this technology could accomplish almost any task better than humans (Simon 1981).

But recently, culture has come into the picture. Perception, learning, and interaction are thought to be more intricate than in the past. Mastering rules or

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following scripts is no longer considered adequate to simulate learning or, for that matter, any cognitive activity that computer software is designed to mimic. Many of those who design these technologies nowadays are taking seriously the realization that all human activities, including cognitive operations, are fully mediated by culture and language (Xu 2019, Guszcza 2018, Winograd and Flores 1986).

For those who strive to be objective and completely rational every phenomenon "must have a meaning that exists independently of the act of interpretation" (Winograd and Flores 1986: 28). As will be discussed throughout this article, such a strategy generates many problems concerning AI design. As a result, computer technicians are training their focus on culture and common-sense knowledge (Feigenbaum 2003). The question then becomes: How does culture affect the construction and application of AI-based systems? In a recent article, Ornelas, Smith, and Mansouri (2022) address the need to rethink culture.

The context of their paper is human–robot interactions, although this work is relevant to other areas of computer development. Most important, they emphasize that culture is an "emergent phenomenon" and should not be treated as something abstract. Being emergent means that culture arises from daily interaction and should not be treated as universal or associated with objects or artifacts. A key point in this paper is that culture is constructed and should not be treated as prepackaged. When culture is treated as prefabricated, "culturalism" is practiced and can undermine the intention to be socially relevant (Dirlik 1987).

Although the point is to tie culture to local conditions, practices, and histories, the prospect still exists that this element of social life can gain a sense of autonomy. The aim of this discussion, accordingly, is to give culture a grounding that is designed to avoid this outcome. Particularly noteworthy, a prepackaged version may begin to obscure local knowledge and encourage the reductionism that the resurrection of culture is supposed to avert.

When culturalism is in effect, culture is reduced regularly to an array of empirical factors or objective properties. Individuals and environmental factors are thought to intersect, thereby providing a comprehensive picture of any phenomenon (Cwikel 2006). The most problematical aspect of this strategy is that how persons interpret their situations and respond in kind are not a part of this portrayal. In the end, persons and groups are ascribed particular traits that may have little to do with how they define themselves or their situations. Accordingly,

cultural factors are treated as calculable, systemic inputs that can be used to generate behavioral estimates.

This rendition of culture represents a minimal advance in making computer use socially relevant. Indeed, there is little awareness of how culture actually operates, so that local knowledge can provide feasible analyses and, if necessary, alternative perspectives on behavior. With a focus on this local knowledge, the turn to culture seems to be entirely compatible with the desire to humanize technology. But when false attributions are made, the aspiration to be culturally sensitive may be sidetracked and result in little more than old fashioned determinism and irrelevant propositions.

1. AVOIDING SYMBOLIC VIOLENCE

Introducing culture into discussions about AI seems to be an enlightened maneuver (Liu 2021). After all, the aim is to make any technological advancements socially responsible and beneficial to those who are associated with these processes. So, what is the problem? While the introduction of culture is not necessarily a problem, a lazy approach to this subject can be problematic. When attempting to address culture, a lot of discussion and reflection is necessary to avoid reifying any cultural outcomes.

When reified, the result is that cultural standards are treated as obvious. Accordingly, the problem remaining for programmers is to transform these readily observable characteristics into easily processed forms, sometimes into categories, rules, or scripts. This transformation is thought to enhance clarity and usability. Nonetheless, an unverified logic is imposed that may have little cultural relevance. In the end, due to the way that culture is handled – as a logic that is not believed to need local verification – behavior or cognition is associated with stereotypical practices. The situational values, norms, or other elements of culture are overshadowed, or symbolically violated (Bourdieu 1990).

Most important, a top-down approach to social relations and culture will not help to humanize AI-modeling. This mode of cultural ascription represents a mode of colonization. That is, the logic that is associated with algorithms, for example, becomes the new cultural imperative. As should be noted, this approach to culture blocks reflection and critical assessment. When culture is reified in this manner, most questions related to relevance are prematurely settled. The introduction of culture into AI design, for example, becomes mostly a technical

issue of establishing operational parameters and making sure that the key facets of the logic are coordinated.

Gradually, the culture that is enacted in everyday life is left behind. What might be called *cultural drift* occurs, that is, culture moves away from its creators andbecomes an autonomous agent. Rules and scripts that, in fact, are situational and contingent are transformed into universal schemes. Accordingly, the focus of technological design is on its application and ensuring that the proper adjustments are made in the environments where this technology is introduced. This sort of determinism does not lead to sound cultural insights (Kleinman 1978).

Becoming culturally attuned requires far more than recognizing the influence of culture. Entrée must be gained into the process of cultural creation. In this interpretive framework, entrée means that those who introduce culture into AI development must grasp how culture is created locally, that is, through an interpretive activity that generates meaning and norms.

The key issue at this juncture of this discussion is that culture is not an object or collection of entities, but a creation of meanings that must be explored to have any relevance. Ornelas, Smith, and Mansouri (2022) are correct when they state that there is no doubt that culture is emergent. However, identifying the emergent properties of culture is not the same as accounting for cultural reification and drift. The question that must be addressed to avoid these consequences is: why does culture gain a sense of autonomy that is essential to drift?

2. A PROBLEM WITH CULTURAL DRIFT

To avoid cultural drift, two points will be pursued. The first relates to the traditional understanding of culture and the role this outlook plays in the stabilization of societies. The second is a philosophical gambit that enables culture to be a source of stability. Taken together, these considerations are central to the rendition of culture associated with culturalism.

Traditionally, culture is credited to be the cement that holds a society together. In this sense, culture is the substrate of every society. To play this role successfully, culture has to be accorded a special status, often referred to as an ontological status. Culture becomes the *archē* or fundamental base of a society. In this way, culture is able to supply a society with a coherent, and sustainable, collective identity.

To perform this role, culture must have autonomy. That is, culture must not be treated as something that is subject to interpretation and shaped by the vagaries of everyday interaction. In more concrete terms, this rendition of culture provides a society with an objective center or core. Everyone, accordingly, is expected to coalesce around this normative referent. This *modus operandi* is not considered to be limiting or repressive. Adaptation to culture, instead, is rational and good for both an individual and society.

As can be imagined, there are many critics of this outlook on culture and order. Some time ago, Dennis Wrong (1961) captured the general sentiment of these critics with his notion of "over socialization." Similarly, critics such as Max Horkheimer and Theodor Adorno (1972) argue that this orientation to culture culminates in an "administered society." They argue that people are stripped of their agency and placed in a matrix of preestablished values, beliefs, and norms.

The issue now becomes the status of culture. Simply put, what allows the autonomy of culture to make sense to many people? Why is cultural drift acceptable and thought to lead to the rational organization of societies? At this point of this discussion is where the focus turns to philosophy. At the heart of the Western intellectual tradition is a maneuver that encourages cultural drift, and this becomes exceedingly clear around 1600 with the thoughts of Descartes (Bordo 1987).

The reason for this drift is that throughout most of Western philosophy, people are led to believe that their influence compromises the discovery of true knowledge (Grayling 2019). Therefore, the search for a foundation untrammeled by the cacophony of daily life – e.g., natural elements, ideas, God – was the centerpiece of most philosophy. To reveal this base, Descartes made a relatively simple maneuver. That is, he declared that subjectivity could be separated categorically from objectivity, thereby clearing a path to referents unaffected by interpretation.

The purpose of this dualism is to advance clear and distinct knowledge, severed from opinion and other sources of human error (Bordo 1987). With the human presence sequestered from objectivity, situational bias and error can be replaced by objective standards. The autonomy of culture is part of this scenario. When divorced from subjectivity, culture is associated easily with scripts or rules that ignore local interpretations and definitions (Robinson 2018).

To remedy this situation, culture must be conceptualized anew. Specifically, drift can be averted only if the separation of culture from daily life is impossible. For this condition to be met, the dualism that supports drift must be avoided

so that culture can be reconceptualized. Specifically, a new foundation must be provided that does not support the autonomy that has been traditionally attributed to culture.

3. A NEW BASE OF CULTURE

Vital to rethinking culture is replacing dualism as the foundation of culture. There are various positions available nowadays that reject dualism and supply an alternative to establishing culture, so as to avoid drift (Bakewell 2016). The position that will be adopted is offered by phenomenology, a philosophy that was created in this anti-dualistic spirit. Indeed, Edmund Husserl (1964) maintained that the key precept of this philosophy is "intentionality," which he defined as "consciousness is always conscious of something." If consciousness is understood in this way, the separation of the world into *res extensa* (objectivity) and *res cogito* (subjectivity) proposed by Descartes is avoided (Robinson 2018). Later writers such as Ludwig Wittgenstein (1992) and Martin Heidegger (1962), for example, no longer rely on intentionality to undermine dualism but language use. In earlier renditions, language is imagined to be a tool, particularly a pointer, that can be used to highlight factors and make crucial differentiations. In this version, language merely points to and highlights behaviors or events in the world. Thus dualism is maintained since these phenomena are presumed to be independent of speech; language, accordingly, merely serves to clarify worldly conditions.

Contrary to this outlook, Wittgenstein (1992) and Heidegger (1962) contend that language is not a tool but a creative medium. According to this rendition, nothing escapes from language, and thus become divorced from interpretation or escapes clarification. Everything that is known, instead, is mediated thoroughly and shaped by language. Anything that is known carries the effects of language use and the accompanying interpretations. In current parlance, social reality has a narrative or biographical texture that is always subject to additional interpretation.

By linking social reality to narratives, the aim is to convey that everyday existence is alive with meaning generated by language use (Ihde 1990). Everyday life is not only emergent but an interpersonal construction. Through the narratives that individuals and groups invent to describe themselves, their situations, and their relationships, a fully interpretive world is created (Gadamer 1989). Alfred Schutz (1962) extends this analysis when he makes the distinction between

primary and secondary concepts. Primary concepts are used by people in their everyday affairs to classify and interpret behavior, while secondary concepts are those associated with drift when culture assumes an autonomous status. As a part of drift, these secondary concepts take on a life of their own and are applied, for example, in the creation of algorithms that impose irrelevant logic and result in socially inappropriate outcomes.

In various ways, viewing culture as being built on local narratives is beneficial to the creation of relevant technology, such as culturally appropriate algorithms. Centrally important is that cultural rules or scripts are "accomplishments," rather than objective or automatically universal, since they are situational, tenuous, and in need of proper interpretation before they have any relevance (Pollner 1987). This conclusion is important for developing culturally relevant algorithms and AI that supports human aims.

4. AI AND NEW PHILOSOPHY

A reasonable question is: how does the work of Maurice Merleau-Ponty (1968) or other contemporary philosophers relate to AI design? There is clearly a philosophical or intellectual interest, but some practical considerations are also put on the agenda. In general, what this anti-dualist philosophy calls for is a thoroughly participatory design process. The thrust of this strategy is not simply to introduce culture into the development of AI, but to recognize the importance of a relevant culture. That is, the culture or cultures that are currently being built in a community, for example, should be the focus of attention in this process.

What does this new thinking about culture put into motion in AI design? There have been several developments in AI design in the past thirty years, or so, that recognize the role of culture. These movements relate to human–computer interaction (Winograd 2006), putting humans in the development loop (HITL) (Aggarwal 2021), human-centric AI (Shneidermann 2022), white-box AI (Power 2023), and natural language programming (Bender and Koller 2020). Each of these strategies has a unique emphasis, although their general purpose is to give computer technology a more culturally relevant grounding. In the case of AI, perhaps this new emphasis can enable this technology to behave more like humans.

Of course, culture is relevant to each of these research programs. Moreover, philosophical arguments that undermine the treatment of culture as autonomous

and prefabricated can provide a significant insight to guide AI design, but are there any practical steps that follow from the non-dualistic position? Does this philosophical vision assist planning in a concrete way?

There are several themes that may foster the introduction of a relevant culture into AI design. The first step is to stop thinking in a top-down manner and adopting corresponding practices. For example, do not look to culture to solve problems related to fixing design that has produced improper outcomes. Culture should not be simply appropriated because this body of information is built locally and does not come prepackaged. How culture is actually being built should be the focus of attention.

Therefore, second, designers should begin thinking in a bottom-up manner. They should take seriously that users and those affected by AI should play a significant role in the design, implementation, and evaluation processes. Often participation takes the form of consultations with so-called stakeholders. Bottom-up thinking goes far beyond merely seeking periodic input or confirmation. The guiding idea should be that because reality is not uniform, even in a single organization, multiple narratives may be in play about performance norms and how tasks should be completed. Simple consultations may only touch base with people without considering the unique, local knowledge that is operating.

Third, because of the interpretive nature of reality, participation in design should take the form of a dialogue. What should be noted immediately is that a dialogue is not the same as consultation or a conversation. A dialogue is not merely an encounter. Instead, a dialogue occurs when the narratives of interlocutors are interpreted as they intend to be understood. A stage must be established between designers and other participants, where the narratives expressed by these interlocutors are grasped in their own terms. As should be noted, this type of dialogue is not superficial, but instead involves serious reflection and a commitment to making sure that all of the participants are properly heard. A very different reality may be at stake in each interpretation of a narrative, and therefore a dialogue may be truly revealing.

And fourth, the issue of multiple realities and the primary concepts revealed by the participants in a dialogue should be taken seriously, and these narratives should be built into the algorithms. Basically, these algorithms should consist of storylines, although not in the traditional form of logical propositions. These local storylines should replace other narratives and guide AI development and should not be viewed as supplemental or background information. These new

narratives, instead, should serve as the primary, relevant logic that makes the algorithms culturally relevant and likely to generate appropriate outcomes.

Bringing culture into AI development is definitely a good idea. But there are some lessons that should be learned from the anti-dualist viewpoint that is associated with contemporary philosophy. Especially noteworthy is that philosophy matters when introducing culture into AI. Additionally, there are some practices that follow from this philosophical position. The big idea is that culture should be built into AI's algorithms, and these should be based on local narratives. Culture thus becomes relevant and can provide proper guidance to the production of this technology.

CONCLUSION

The general aim of this paper is to properly contextualize computer technology, including AI and its associated algorithms. Going beyond technical issues, attention is now directed to how culture is important to the development of socially responsible technology. Almost no tasks appear to be immune to the influence of culture, even those thought typically to be based on science and rationality such as algorithm creation.

While discussants are beginning to recognize that all technology, including AI, is impacted on by culture, not enough attention has been paid to cultural drift. Particularly absent is the importance of dualism in this process. Nonetheless, Cartesianism subtends the development of this technology and reinforces the optimism about its many applications. Furthermore, without addressing this philosophical issue culture tends to drift away from how it is used in everyday life. Culture, accordingly, becomes associated with culturalism and this outcome does not help to humanize technology.

What is mostly overlooked in discussions about introducing culture into technical development is that every facet of social life originates in the interaction of everyday life. Particularly noteworthy about this understanding of culture is that nothing is reducible to objective indicators. Instead, culture represents a pool of information that is created situationally and must be interpreted correctly to have relevance. With this non-dualistic conception, a key practical lesson is that local or situational interpretations are necessary for culture to humanize AI.

Without a non-dualistic philosophical base, both culture and technology tend to drift away from their creators. The result is alienation that the introduction

of culture is expected to eliminate. To improve the likelihood that culture will have the desired humanizing effects, starting from the bottom-up and engaging users and those affected by AI in dialogue may go a long way to humanize this technology. The culture that they build locally can become the logic of algorithms, thereby giving this technology human direction.

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