

Increasing Transparency When Assessing the Impact of Technology on Human Well-Being: A Capability Approach Perspective

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ABSTRACT

The authors argue that the impact of technological artifacts on well-being is inconsistently assessed since evaluation criteria are conditioned by the definition of technology, the moral perspective taken, and the heterogeneity of interests at stake. An analytical framework is proposed to structure this evaluation process. It is based on the capability approach and uses Nussbaum's list of central capabilities and the five moral principles put forward by Peterson for the ethical evaluation of technology. An illustration of the framework applied to automobility is provided.

KEYWORDS

Automobility, Capability Approach, Ethics, Nussbaum, Peterson, Technology

1. INTRODUCTION

The Capability Approach (CA) defines multidimensional well-being making use of the concepts of functionings and capabilities (Sen 2008). Functionings are the set of beings and doings that a person achieves, e.g. being educated, well-nourished, or participating in political affairs. Capabilities refer to the freedom of the person for choosing to be or to do. The CA also insists on the notion of agency that emphasizes how individuals should be able to define themselves the goals and values, which might not be self-interested, they wish to pursue. Well-being is then defined as the freedom of individuals to achieve valued things. The CA establishes a framework to identify elements contributing to well-being and advocates for the expansion of freedoms (capabilities). However, technological artifacts can have heterogeneous effects on human well-being. The CA does not provide conceptual tools to evaluate these potential capability trade-offs since it is primarily concerned with enlarging people's freedoms, each of them being intrinsically valuable and equally important. This lack of tools is reflected in the paradoxical situation that sees the CA widely acclaimed as a conceptual approach to technological issues (see for instance Johnstone 2007 and Tshivhase et al. 2016) and, at the same time, rarely used by scholars in the assessment of specific case studies (for example, Grunfeld 2011 or Kivunike et al. 2014). This is mainly due to the considerable difficulty of empirically measuring

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capabilities, which usually tend to be elicited through proxy measures (Cookson 2005). To assess trade-offs between capability sets, Sugden has for instance shown that “whenever potential preferences generate conflicting rankings of opportunity sets, those sets are treated as non-comparable in terms of the range of opportunity (or effective freedom) that they offer” (1998: 330). Sen himself agrees on this when he states that “undecidability” cannot be completely eliminated when “dissonant valuations” exist (2001: 48).

This paper is set out to complement the CA by integrating moral principles in the evaluation of the impact of technology on well-being. In what follows, this framework is referred to as the Capability Approach to Technology (CAT). In choosing to do so, the authors align with the capabilityarianism view of the CA outlined by Robeyns (2016). The CAT accentuates the necessity of deliberative processes by taking the deliberation to the ethical domain, thus providing an explicit ground for stakeholders to confront the plurality of their objectives. The design of technological artifacts ought to be the result of social deliberation as it affects individual freedom if one recognizes individual freedom as a social product that is desirable (Sen 1999: 31). The deliberation increases transparency as technological design choices and the moral valuation of their outcomes are subject to public scrutiny. Transparency is meant here as the achievement of public and democratic discussion on issues largely confiscated by scientific, political, and economic elites (Habermas 1970). This confiscation of discussion, a form of “indirect agency”, is challenged by the CA. Although the relation between the CA and collective decision-making processes is not straightforward given the claimed individualistic focus of capabilities (Robeyns 2003), what really matters is the “direct agency” of individuals, notably the fact that they decide for themselves, base their decisions on reasons and perform actions accordingly (Crocker 2008: 157), a process more adequately attained by a public deliberation. The application of the CAT is meant to structure the collective deliberation process, but certainly does not assure a final agreement.

The CAT prioritizes pragmatism by departing from purely universalist seeking designs: it uses Nussbaum’s list of 10 capabilities (Nussbaum 2000) and Peterson’s 5 moral principles (Peterson 2017). The list is presented in the Appendix and the moral principles are discussed in the next section. Nussbaum’s list seeks universality by following the “principle of each person’s capability: the capabilities sought are sought for each and every person, not, in the first instance, for groups or families or states or other corporate bodies” (Nussbaum 2000: 74). The list is meant to facilitate discussion since it is constructed on an “overlapping consensus”, not requiring to share a common worldview, but the integration of different actors’ perspectives on what constitutes a dignified human life¹ (ibid: 76). Furthermore, a defined set of capabilities can be instrumental for bringing awareness, focus, and intention in deliberative processes starting at the conception of technological artifacts (Oosterlaken 2015). The choice of using the five moral principles studied in Peterson (2017) is founded on his effort to bring a bigger picture to the ethics of technology. He follows the view that ethics of technology should provide the “morally right courses of action when we develop, use, or modify technological artifacts” (Peterson 2017: 3). Recognizing that the ethical issues vary depending on the technology assessed, he proposes a method for the use of moral principles. This framework does not use his method but retains its applied ethics view: moral principles are domain-specific (ibid: 6). Thus, it shares his “principlism” approach, where the number of principles to apply is not predefined.

Technology development is often presented as enabling human societies to better and faster fulfill their needs. It has had multiple positive effects on human development, for instance in challenges related to mortality and undernutrition (UNDP 2001). However, this paper argues that the use of technological artifacts tacitly imposes freedom trade-offs leading to undetermined cumulated effects for well-being. Indeed, technology artifacts such as care and industrial robots or smartphones may have negative effects on capabilities and functionings by disrupting interactions between individuals and their environment. The relative impact of new technologies on people’s lives notably depends on two distinct elements. First, it builds upon the definition of technology and moral perspective applicable to it. For the CAT, technological artifacts “are far from neutral instruments”, since different social groups may attach different meanings and objectives to their use (Oosterlaken 2009: 95). Second, the

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