



REFRAMING AI GOVERNANCE: CAPABILITARIAN INSIGHTS FOR THE FUTURE OF WORK *

Reconfigurando a governança da IA: Perspectivas da Abordagem de Capacidades para o futuro do trabalho

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Abstract: Recent advances in artificial intelligence (AI) have sparked a lively debate on the future of work—a debate replete with quantitative predictions about the jobs threatened by AI alongside consequentialist comparisons between the anticipated costs and benefits of automation. Instead, in this paper, I explore whether the Capability Approach (CA), as originally developed by Amartya Sen and Martha Nussbaum, can contribute to this future of work debate and, if so, I consider the form that this contribution could take. I advance a flourishing-centred, capabilitarian paradigm for the future of work, aimed at shaping AI-driven automation so as to enable citizens' capability for work and leisure as well as a broader expansion of their freedom. I defend this novel paradigm against potential objections and conclude by evaluating its differences from the predictive and consequentialist paradigms prevalent in the literature. Finally, I provide recommendations for research, policy and practice.

Keywords: Capability Approach. Future of work. Automation. Artificial Intelligence. Human flourishing.

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Resumo: Os recentes avanços em inteligência artificial (IA) alimentaram um debate vigoroso sobre o futuro do trabalho — um debate repleto de previsões quantitativas acerca dos empregos ameaçados pela IA, assim como de comparações consequencialistas entre os custos e benefícios antecipados da automação. Neste artigo, porém, examino se a Abordagem de Capacidades (AC), tal como originalmente desenvolvida por Amartya Sen e Martha Nussbaum, pode contribuir para esse debate sobre o futuro do trabalho e, em caso afirmativo, considero a forma que tal contribuição poderia assumir. Proponho um paradigma da Abordagem de Capacidades, centrado no florescimento humano, para o futuro do trabalho, orientado a moldar a automação impulsionada por IA de modo a ampliar a capacidade dos cidadãos para o trabalho e o lazer, bem como expandir de forma mais ampla a sua liberdade. Defendo esse novo paradigma contra possíveis objeções e concluo avaliando suas diferenças em relação aos paradigmas preditivos e consequencialistas predominantes na literatura. Por fim, apresento recomendações para a pesquisa, políticas públicas e aplicações práticas.

Palavras-chave: Abordagem de Capacidade. Futuro do trabalho. Automação. Inteligência Artificial. Florescimento humano.

Introduction

What *will* the future of work look like? And what *should* the future of work look like? These questions have preoccupied society, policy-makers, and scholars alike at least since the (First) Industrial Revolution.¹ Nonetheless, concerns about the automation of human work, meaning the process by which the latter is fully or partially replaced by machines, have recently intensified. This is mainly attributed to advances in artificial intelligence (AI) systems, meaning sets of algorithms performing goal-oriented tasks that would otherwise require human intelligence.² When matched with financial incentives to reduce labour costs, the increasing sophistication, availability, and efficiency of AI systems make the perceived threat of automation more potent—particularly after the outbreak of COVID-19 and the emergence of Generative AI.³ Within policy and academia, this threat has prompted a lively debate on AI-driven automation and the future of work.

¹ VICKERS, Chris; ZIEBARTH, Nicolas L. *Lessons for Today from Past Periods of Rapid Technological Change*. New York: United Nations, 2019.

² SIAPKA, Anastasia. The Ethical and Legal Challenges of Artificial Intelligence: The EU Response to Biased and Discriminatory AI, in *Social Science Research Network*, 2018, p. 13.

³ “Generative AI refers to AI techniques that learn a representation of artifacts from data, and use it to generate brand-new, unique artifacts that resemble but don’t repeat the original data.” GARTNER. Definition of Generative AI, in: *Gartner Glossary: Information Technology*, available at <https://www.gartner.com/en/information-technology/glossary/generative-ai>. Examples include OpenAI’s ChatGPT and DALL-E 2 or Runway’s Stable Diffusion and Gen-1.

Most contributions to this debate adopt predictive or consequentialist paradigms. Caught in a repetitive cycle, experts of often competing views seek to predict the likelihood and volume of AI-induced unemployment, its timescale, and the susceptibility of various occupations.⁴ The quintessential example comes from Carl Benedikt Frey and Michael A. Osborne, who predicted that half of US jobs would be automated within two decades.⁵ Other indicative studies by the UK's Office for National Statistics and the Institute of Development Studies respectively identify the sectors at risk of automation and the demographics most likely to experience the adverse effects of technological transitions.⁶

This predictive paradigm, however, is technologically deterministic. It assumes not only that AI-driven automation is an inevitable force unilaterally capable of disrupting society but also that current societal, economic, and political arrangements should accommodate and manage this force to avoid the prospect of mass unemployment.⁷ However, restricting the future of work debate to a game of technocratic predictions overlooks its normatively loaded character. Hence, mainstream perceptions of automation as a *fait accompli* should be counteracted by paradigms that shift from what *can* or *might* happen to what *ought* to happen.

Other approaches follow a consequentialist, particularly utilitarian, argumentation, evaluating the utility of AI-driven automation by comparing its negative and positive consequences, or costs and benefits, respectively. By way of illustration, Richard E. Susskind and Daniel Susskind argue that the wider access to practical expertise, which they anticipate from the automation of professions, outweighs the side-effects of such automation, including the loss of meaningful work and face-to-face interaction.⁸ In a likewise comparative attitude, Martin Ford accepts the inevitability of AI-driven automation, arguing for the greatest possible maximisation of its benefits and the minimisation of its harms, one such harm being tech-

⁴ AUTOR, David H. Why Are There Still So Many Jobs? The History and Future of Workplace Automation, in *Journal of Economic Perspectives*, v. 29, n. 3, 2015, p. 3-30; BRYNJOLFSSON, Erik; MCAFEE, Andrew. *The Second Machine Age: Work, Progress, and Prosperity in a Time of Brilliant Technologies*. New York: W. W. Norton & Company, 2014; CAVE, Stephen; DIHAL, Kanta. Hopes and Fears for Intelligent Machines in Fiction and Reality, in *Nature Machine Intelligence*, v. 1, n. 2, 2019, p. 74-78.

⁵ FREY, Carl Benedikt; OSBORNE, Michael A. *The Future of Employment: How Susceptible Are Jobs to Computerisation?* Oxford: Oxford Martin School, Programme on the Impacts of Future Technology, 2013.

⁶ HERNANDEZ, Kevin; ROBERTS, Tony. *Leaving No One Behind in a Digital World*. Brighton, UK: Institute of Development Studies, 2018; WHITE, Sean; LACEY, Andrea; ARDANAZ-BADIA, Anna. *The Probability of Automation in England: 2011 and 2017*. Office for National Statistics (UK), 2019.

⁷ BENANAV, Aaron. *Automation and the Future of Work*. London: Verso, 2020.

⁸ SUSSKIND, Richard E.; SUSSKIND, Daniel. *The Future of the Professions: How Technology Will Transform the Work of Human Experts*. Oxford: Oxford University Press, 2015.

nological unemployment.⁹ Echoing this, the UK's Institute for the Future of Work suggests that we should "better understand and shape changes to the world of work so that we can maximise its benefits, while protecting against negative impacts."¹⁰

This consequentialist or utilitarian paradigm is equally misguided. Cost-benefit comparisons presuppose that we can discern with some certainty the consequences of an action and which of these consequences are positive or negative; such certainty is not yet available about emerging technologies in general and AI in particular. Most importantly, this paradigm omits three essential aspects. First, focusing solely on consequences, it omits the processes by which these consequences are brought about. It is, however, questionable whether the ends of AI-driven automation justify the use of any means (e.g., the exploitation of crowd-workers). Second, examining consequences in the aggregate, this paradigm omits distributional differences associated with these consequences. The mere ability of automation to generate positive or negative consequences in total or average terms does not capture how these are distributed among citizens, groups, or countries. Nonetheless, the wide availability and distribution of opportunities for good working and living conditions, as opposed to their concentration in a few sectors or groups, is morally significant. Finally, this paradigm omits individuals' conversion abilities or factors, meaning abilities to convert what in the abstract might be positive consequences into actual well-being and freedoms.¹¹ These conversion factors vary because of environmental, physical, and relational differences—for example, illness, disability, or other detrimental conditions hinder one's ability to convert the same goods, resources or other benefits into well-being.¹² Providing benefits without considering such differences ends up reinforcing inequality.¹³

These weaknesses suggest that the future of work debate needs a nondeterministic, normative paradigm that would transcend cost-benefit comparisons. To that end, I explore whether the Capability Approach (CA) and its flourishing-centred paradigm can contribute to the future of work debate and, if so, the forms that this contribution might take.¹⁴

⁹ FORD, Martin. *Rule of the Robots: How Artificial Intelligence Will Transform Everything*. London: Basic Books, 2021.

¹⁰ INSTITUTE FOR THE FUTURE OF WORK. *Introducing the Pissarides Review into the Future of Work and Wellbeing*. London: Institute for the Future of Work, 2022.

¹¹ SEN, Amartya. *Development as Freedom*. Oxford: Oxford University Press, 2001.

¹² ROBEYNS, Ingrid; BYSKOV, Morten Fibieger. The Capability Approach. In: ZALTA, Edward N.; NODELMAN, Uri (eds.) *The Stanford Encyclopedia of Philosophy*. Stanford: Stanford University, 2023; SEN, *Development as Freedom*.

¹³ NUSSBAUM, Martha. Capabilities and Social Justice, in *International Studies Review*, v. 4, n. 2, 2002, p. 123-135.

¹⁴ The approach also appears in the literature (albeit with slight differences in meaning) as the Capabilities Approach, the Human Development Approach, or Capabilitarianism. NUSSBAUM, Martha. *Creating Capabilities: The Human Development Approach*. Cambridge, MA: Harvard University Press, 2011; ROBEYNS; BYSKOV, The Capability Approach.

The ensuing section provides an overview of the CA, which was pioneered by Amartya Sen as an alternative approach to international development and adapted by Martha Nussbaum as a (partial) theory of justice.¹⁵ Despite the increasing scholarly and policy interest in the CA, even with respect to technology broadly speaking, so far it has not been used to evaluate the future of work more specifically.¹⁶ Thus, I apply the CA to the governance of AI-driven automation, highlighting the freedom to work alongside the capability for leisure. I address objections against this application, specifically those of paternalism and illiberalism, which are more salient in light of the CA's thick or substantive account of the good.¹⁷ I conclude by evaluating the CA's differences—and potential synergies—with other approaches, alongside its overall contribution to the future of work debate.

1. Human freedoms and capabilities

The CA is a normative paradigm to assess well-being, societal and distributive configurations, and social policy.¹⁸ It concentrates on functionings and capabilities.¹⁹ Functionings describe what an individual values doing or being. Valuable doings and beings are simple (e.g., sustenance) or complex (e.g., self-respect). Functionings reflect the realm of actuality (what one is actually doing), whereas capabilities the realm of opportunity (what one is really free to do). Capabilities are the set of alternative functionings available to an individual; they denote “the substantive freedom to achieve alternative functioning combinations”.²⁰ Given that capabilities imply real freedoms to achieve valuable doings and beings, I use “capabilities” and “freedoms” interchangeably.²¹

¹⁵ Amartya Sen and Martha Nussbaum developed the approach both in collaboration and independently, so my discussion refers to each scholar to clarify differences in their versions. Other scholars have developed versions of capability theory, but I have chosen Sen's and Nussbaum's as the most prominent and authoritative ones: ROBEYNS; BYSKOV, *The Capability Approach*. As for Nussbaum's version being a partial theory of justice, she explains that “it does not purport to solve all distributional problems; it just specifies a rather ample social minimum”: NUSSBAUM, *Creating Capabilities*, p. 40.

¹⁶ See, e.g., OOSTERLAKEN, Ilse; VAN DEN HOVEN, Jeroen (eds.), *The Capability Approach, Technology and Design* (v. 5). Dordrecht: Springer Netherlands, 2012.

¹⁷ “A thin conception of the common good describes a set of formal criteria that must be satisfied for a theory to count as a conception of the common good; by contrast, thick conceptions provide an account of the substance of the good”: SOLUM, Lawrence B. *Flourishing, Virtue, and Common Good Constitutionalism*, in *Harvard Journal of Law and Public Policy*, v. 46, n. 3, 2023, p. 1151.

¹⁸ ROBEYNS, Ingrid. *Capability Ethics* In: LAFOLLETTE, Hugh; PERSSON, Ingmar (eds.) *The Blackwell Guide to Ethical Theory*. West Sussex, UK: Blackwell Publishing, 2013, p. 412-432.

¹⁹ SEN, *Development as Freedom*.

²⁰ SEN, *Development as Freedom*, p. 75.

²¹ Although Sen uses the terms interchangeably, Nussbaum is hesitant about referring to capabilities as freedoms. ROBEYNS, *Capability Ethics*.

In applications of the CA, functionings or capabilities are the key metric of well-being. Sen resists choosing either of these as a lone metric and instead considers this a public choice to be exercised through democratic procedures.²² To that end, political freedoms are essential: they not only directly contribute to political and social activity but also indirectly facilitate the formation and articulation of needs. Understanding one's needs and how these could be met is based partly on assumptions about what is considered feasible or preventable as well as on implicit values or priorities. In shaping but also challenging these assumptions and deriving considered choices, political freedoms—particularly those that safeguard public discussion, debate and dissent—are crucial.²³

In general, Sen's version of the CA highlights the role of social, economic, and political arrangements in one's freedom.²⁴ From his perspective, the exercise of reasoned agency requires eliminating "unfreedoms" that restrict choices and opportunities. Freedom encapsulates both the processes that enable one's actions and decisions and the opportunities that one is afforded in light of personal and social conditions. Freedom is thus valuable in itself and because of its outcomes: process-related aspects are valued not as a mere means but as constitutive of the valued outcomes. Sen highlights the following freedoms: economic facilities, political freedoms, social opportunities, transparency guarantees, and protective security.²⁵ Overall, the range of substantive freedom enjoyed by society's members determines that society's success.²⁶

Nussbaum explicitly takes capabilities to be the key metric.²⁷ For her, the kinds of lives that humans have reason to value are identified by assessing functions that distinguish human life and how they can be exercised in a fully human way. She formulates a working list that guides attention to essential human functions, identifying both abilities/powers and limita-

²² SEN, *Development as Freedom*.

²³ SEN, *Development as Freedom*.

²⁴ SEN, *Development as Freedom*.

²⁵ Economic facilities cover economic entitlements to consume, produce, and exchange resources, depending on the availability and distribution of said resources as well as the conditions of exchange. Political freedoms cover political entitlements commonly identified with democratic arrangements (e.g., voting rights, political dialogue, freedom of expression, and freedom of press). Social opportunities cover society's provisions for education, health care and the like, which contribute to individuals' private life as well as their economic and political participation. Transparency guarantees cover conditions of openness, clarity and disclosure, which facilitate social interaction within an environment of trust whilst hindering corruption and other shady (financial) practices. Lastly, protective security covers institutional provisions (e.g., unemployment benefits, income supplements, emergency relief, or employment assistance) that serve as a safety net for at-risk individuals. SEN, *Development as Freedom*.

²⁶ SEN, *Development as Freedom*.

²⁷ NUSSBAUM, *Capabilities and Social Justice*. This preference for capabilities over functionings is justified in the sub-section 3.3 *Emphasis on opportunities regardless of utilisation*.

tions/needs common across humanity.²⁸ In assembling these functions, she acknowledges their incommensurability: each carries a value that cannot be exchanged for that of another.²⁹

Based on this list, Nussbaum proposes a series of central human capabilities: life; bodily health; bodily integrity; senses, imagination, and thought; emotions; practical reason; affiliation; relation to other species; play; and control over one's environment.³⁰ Although each is valuable on its own, practical reason and affiliation are "architectonic" in that they supervene on and render the others distinctively human.³¹ Practical reason allows us to satisfy in different ways needs that are otherwise shared with other animals (e.g., nutrition), while affiliation allows us to satisfy those needs within interpersonal relationships.³²

These central capabilities are not of interest as powers that dwell inside individuals—"internal capabilities"—but as "combined capabilities" that interact with the political, social and economic environment.³³ Humans' effort to flourish occurs within a web of interactions with human and non-human parts of that environment.³⁴ Individuals may possess basic, lower-level cognitive, emotional, and physical dispositions to achieve essential human functions, yet it is their combination with favourable external conditions that converts these dispositions into "combined" or high-level capabilities.³⁵ If conversion of lower- into high-level capabilities cannot occur (e.g., because the environment does not nurture human dignity or distinctly human functions) individuals suffer a loss. Political arrangements should thus create environments favourable for this conversion.³⁶

2. The future of work from a capabilities perspective

The CA, for both Sen and Nussbaum, advances a moral as well as political imperative for the development of human capabilities. The role of the state is neither to merely refrain from hindering citizens' functioning

²⁸ NUSSBAUM, Martha, Aristotelian Social Democracy. In: DOUGLASS, R. Bruce; MARA, Gerald M.; RICHARDSON, Henry S. (eds.) *Liberalism and the Good*. New York: Routledge, 1990, p. 203-252.

²⁹ NUSSBAUM, Capabilities and Social Justice.

³⁰ NUSSBAUM, *Creating Capabilities*, p. 33-34.

³¹ NUSSBAUM, *Creating Capabilities*, p. 39.

³² NUSSBAUM, Aristotelian Social Democracy.

³³ NUSSBAUM, *Creating Capabilities*.

³⁴ NUSSBAUM, Aristotelian Social Democracy.

³⁵ NUSSBAUM, Capabilities and Social Justice; NUSSBAUM, *Creating Capabilities*.

³⁶ NUSSBAUM, Aristotelian Social Democracy.

nor to step into their lives only after their own efforts towards flourishing have failed.³⁷ Rather, the task of politics is expansive in its personal and material scope. On the one hand, it aims to offer the entire citizenry—not factions thereof—the ability to flourish.³⁸ On the other hand, it is concerned with all the important dimensions of such an ability and not only those reflected in the availability of funds, property, or positions. Even if political arrangements grant individuals a considerable amount of income or other resources, they are inadequate if they do not enhance what individuals are able to do with said income and resources. They are still inadequate if they improve the status of those who are already in a good place rather than assist each and every citizen in enjoying a minimally good life. Hence, the state is responsible for effectuating the institutional, material, social, and educational conditions needed so that all citizens are placed above the threshold of capability and may choose to live and function well.³⁹

Achieving such conditions, however, is more demanding than merely distributing income or other resources, which thin accounts of the good support. For Nussbaum, it requires “radical institutional and societal change”, which includes a wholesale reconfiguration of the polity’s structure and of the ways people work, learn, and live.⁴⁰ Such a reconfiguration may be so holistic that it comprises:

[n]ot only programs of allocation, but also the division of land, the arrangement for forms of ownership, the structure of labor relations, institutional support for forms of family and social affiliation, ecological policy and policy toward animals, institutions of political participation, recreational institutions—all these, as well as more concrete programs and policies within these areas.⁴¹

What follows evaluates AI-driven automation in light of its potential role in such a reconfiguration, especially with respect to its interaction with citizens’ capabilities and freedoms.

³⁷ Nussbaum refers to the latter as “residual” welfarism, contrary to the “institutional welfarism” characteristic of the Aristotelian conception. NUSSBAUM, *Aristotelian Social Democracy*, p. 228.

³⁸ NUSSBAUM, *Aristotelian Social Democracy*. I do not take a stance on whether this task of politics is also expansive in terms of minimal or maximal development of capabilities or, in other words, whether the task described is a sufficientarian or egalitarian one. I adopt the view that threshold levels of capability should be met for all citizens whilst leaving unaddressed what should happen beyond these thresholds, i.e., if inequalities above these thresholds are permissible (sufficientarian) or not (egalitarian). Although Sen’s and Nussbaum’s versions to which the paper appeals seem to favour a minimal, sufficientarian orientation, I believe that the CA can support both readings but choosing one or the other does not affect my arguments here.

³⁹ NUSSBAUM, *Aristotelian Social Democracy*.

⁴⁰ NUSSBAUM, *Aristotelian Social Democracy*.

⁴¹ NUSSBAUM, *Aristotelian Social Democracy*, p. 230.

2.1 The capability to work

Applying the CA to the future of work debate shines a light on how AI-induced changes in work affect functionings and capabilities—that is, what individuals are able to do and be, the range of choices available to them, and how they interact with the subject of their work and co-workers, be they human or artificial agents. Given that the CA encompasses opportunity and process aspects of freedom, its evaluation concerns dimensions of work that are substantive (e.g., working hours, wages, types of work, and occupational health and safety) alongside the procedural dimensions that shape the substantive ones (e.g., freedom to associate and to negotiate).⁴²

Sen places great significance on the freedom to work as a sub-category of the economic facilities he lists among the five main freedoms.⁴³ He emphasises the freedom to participate in economic exchange, specifically the freedom to enter labour markets and contracts. The significance of this freedom is based on three dimensions of employment: income, production, and recognition. The ability to access the means of subsistence and produce useful outputs is an obvious benefit of employment. He underlines, however, the role of recognition, as employment offers psychological validation that one is involved in something valuable, regardless of one's outputs. Sen thus assigns instrumental and intrinsic value to work, seeing it as an end in itself and a means to other ends. Following his approach, a scenario in which AI undermines individuals' freedom to participate in the labour market would be undesirable, even if they could access the means of subsistence and produce valuable outputs in alternative ways, because they would still lack the recognition involved in employment.

Relatedly, mere transfers of income cannot mitigate the repercussions of unemployment.⁴⁴ Such repercussions have both monetary and non-monetary dimensions, including social exclusion and family upheavals, mental and physical harm, weakened self-reliance and self-confidence, and exacerbated racial and gender disparities. Thus, threats to employment and livelihood, which economic shifts can cause, should be countered through social security safety nets (e.g., unemployment insurance, emergency public employment, and job creation). In addition, transition to new working conditions should be gradual and accompanied by training opportunities. Overall, engaging previously unemployed individuals with work—provided by the state or another institution—is preferable to providing monetary benefits, because employment enhances individual agency.⁴⁵

⁴² LANGILLE, Brian, Introduction: The Capability Approach to Labour Law—Why are We Here? In: LANGILLE, Brian (ed.) *The Capability Approach to Labour Law*, Oxford: Oxford University Press, 2019, p. 1-18.

⁴³ SEN, *Development as Freedom*.

⁴⁴ SEN, *Development as Freedom*.

⁴⁵ SEN, *Development as Freedom*.

Although Sen's suggestions refer to unemployment in the abstract, they are applicable to technological unemployment as a specification thereof. Therefore, following his approach, commonplace suggestions to mitigate AI-induced unemployment through job guarantees by the state, the creation of new jobs, and lifelong learning would be desirable.⁴⁶ Ultimately, policy should protect citizens' freedom to work from the destructive forces of AI-driven automation.

2.2 The capability to engage in leisure

It is surprising that Sen does not introduce a corresponding freedom *not* to work, considering the significance he attributes to participatory politics. Sen sees the enlargement of capabilities and freedoms not only as the result of public policy but also as a means of fostering participation in the development of public policy itself.⁴⁷ This mutually reinforcing relationship between capabilities and public policy allows individuals to rise above the passive receipt of state provisions and exercise their agency. He describes this as "the liberty of acting as citizens who matter and whose voices count, rather than living as well-fed, well-clothed and well-entertained vassals".⁴⁸

However, a politically active life—one in which citizens discuss and shape political decisions, while shaping their own preferences and values—arguably requires time away from work.⁴⁹ Leisure may provide the temporal and mental space needed so that citizens can engage in political processes and act for their societal well-being, thereby enhancing their agency. From a capabilitarian perspective, I would, therefore, argue for the freedom to leisure as a prerequisite to political freedoms, even if Sen does not do so directly. To the extent that the effective exercise of civil and political freedoms thereby relies on private circumstances, such as individual capability for leisure, the CA challenges traditional boundaries between the public and private realms.⁵⁰ It concurrently challenges the commonplace

⁴⁶ See, e.g., the suggestions in EUROPEAN GROUP ON ETHICS IN SCIENCE AND NEW TECHNOLOGIES. *Future of Work, Future of Society*. Brussels, Belgium: Directorate-General for Research and Innovation, European Commission, 2019. Although the suggestions about creating new jobs and lifelong learning are self-explanatory, suggestions about job guarantees by the state refer to the blanket offer of state-sponsored jobs for anyone willing and able to work; they guarantee a state of full employment by rendering the government an employer of last resort.

⁴⁷ SEN, *Development as Freedom*.

⁴⁸ SEN, *Development as Freedom*, p. 288.

⁴⁹ In an essay commenting on the work of David Graeber, Eliane Glaser has poignantly alluded to that relationship between leisure and a politically active life stating that "a population that is busy and tired is less likely to revolt": GLASER, Eliane. Beyond Bullshit Jobs: Why Do Pointless Jobs Continue to Proliferate in These Lean Times?, in *Soundings*, n. 57, 2014, p. 82–94.

⁵⁰ NUSSBAUM, *Creating Capabilities*.

distinction between first-generation rights (civil and political ones) and second-generation rights (economic and social ones).

On the contrary, Nussbaum's version of the CA expressly valorises opportunities for time away from work.⁵¹ Nussbaum lists play, recreation and leisure among humans' distinguishing features and, accordingly, their central capabilities. If institutions were to be shaped and resources distributed with human capabilities in mind, the state should take measures conducive to the capability for leisure. Such measures include the availability of funds, amenities, and infrastructures for leisure alongside work opportunities that leave room for leisure.⁵² Consequently, to the extent that AI-driven automation may help citizens source the prosperity and free time required for exercising their capability for leisure, its deployment would be desirable.

2.3 The capability to work—but as a human

Far from considering work unconditionally good, Nussbaum argues for the capability "to work as a human, exercising practical reason and entering into meaningful relationships of mutual recognition with other workers" as part of the capability to control one's material environment.⁵³ The capability to work as a human is restricted to work that fosters the architectonic capabilities of practical reason and affiliation, and so work "must involve being able to behave as a thinking being, not just a cog in a machine; and it must be capable of being done with and toward others in a way that involves mutual recognition of humanity".⁵⁴ Not all types of work, then, contribute to human flourishing; some are so mechanistic and tedious that mostly resemble the operation of machines, undermining workers' dignity and, more broadly, their distinct humanity.⁵⁵

Thus, the CA calls for work-related measures that exceed the scope of liberal theories, which advocate merely for providing workers with sufficient resources and protecting them from blatant abuse.⁵⁶ Beyond such liberal interventions, work—and the relations of production more broadly—should be shaped in ways that support human capabilities. AI-driven automation may have a role to play in this regard, if its deployment is prioritised for the replacement of the most harmful, dangerous, monotonous, or dehumanising tasks and types of work. In this way, the division of labour

⁵¹ NUSSBAUM, Aristotelian Social Democracy.

⁵² NUSSBAUM, Aristotelian Social Democracy.

⁵³ NUSSBAUM, *Creating Capabilities*, p. 34.

⁵⁴ NUSSBAUM, *Creating Capabilities*, p. 82.

⁵⁵ NUSSBAUM, Aristotelian Social Democracy.

⁵⁶ NUSSBAUM, Aristotelian Social Democracy.

between humans and AI could be arranged to enable the development and exercise of workers' capabilities. AI may additionally facilitate the division of labour between workers themselves, if deployed to improve the matchmaking between specific tasks or types of work and workers, while taking into account differences across the workers' conversion factors (e.g., differences related to gender, age, disability, language, location, infrastructure, or education). However, AI is undesirable if its deployment is prioritised to manage human work in ways that render the latter more gruelling and machine-like.

2.4 A broader expansion of freedom

At first glance, the significance of work in the CA suggests that AI-driven automation is undesirable, whereas the significance of leisure suggests that it is desirable. Instead of understanding this as a trade-off between incommensurable capabilities, we should return to the CA's overarching objective: expansion of real freedom. This expansion requires the removal of unfreedoms that curtail choices and opportunities, with such unfreedoms being caused by social and material obstacles to individuals' pursuits, including poverty and lack of economic prospects.⁵⁷ Conversely, freedom from necessity and material want expands individual capabilities and freedoms in a horizontal manner, that is, across different areas of life.⁵⁸

Any possible gains in prosperity from AI-driven automation could thus be used to reduce material want and expand freedom horizontally. If increases in productivity because of AI ensured the material well-being of all citizens and removed or lessened the need for earning income through work, citizens could replace work with other activities that provide valuable outputs and social recognition, thereby counteracting the monetary and non-monetary repercussions that Sen associates with unemployment. Hence, in a strong formulation—and assuming that the productivity gains of AI are distributed accordingly—the CA may justify the desirability of full AI-driven automation, in light of its potential to free citizens from, or at least reduce, material (and thereby capability) deprivation.

In a weak formulation, and in line with the significance of working as a human, the CA may justify the desirability of partial AI-driven automation to the extent that it shapes—rather than replaces—work, as well as leisure,

⁵⁷ SEN, *Development as Freedom*.

⁵⁸ Following the distinction by Wolff and de-Shalit, material deprivation can be interpreted as a “corrosive disadvantage”, meaning one that leads to further disadvantages, with freedom from material deprivation conversely being a “fertile functioning”, meaning one with positive spillovers in other domains: WOLFF, Jonathan; DE-SHALIT, Avner. *Disadvantage*, 1. ed. Oxford, United Kingdom: Oxford University Press, 2007, p. 121-122, 134.

in ways that expand capability and freedom. To be real and effective, this vertical expansion of capabilities in the areas of work and leisure could take the form of legal entitlements. The CA would justify a socioeconomic right to meaningful (worthwhile or fulfilling) work and leisure, with meaningfulness pointing to work and leisure that contributes to human flourishing through this very expansion and exercise of capabilities.⁵⁹ This added qualification about meaningfulness implies a right more demanding in terms of its material and personal scope than are the current rights that guarantee the provision of work opportunities and paid time off work. In that regard, even if political and legal arrangements granted access to numerous vacancies or hours free from work, they would be inadequate if they did not translate into a real freedom for citizens to develop themselves as human beings through their work and leisure. The arrangements would still be inadequate if they were not extended to the entire citizenry but were reserved for those with a formal working status, as happens with similar entitlements today.

The CA is not content with the lack of formal restrictions on one's freedoms (e.g., through the freedom of contract) but examines one's actual ability to achieve valuable beings and doings.⁶⁰ As a result, the aforementioned right to meaningful work/leisure entails a two-pronged duty for the state (or other institutional mechanisms): a negative duty to refrain from activity that interferes with the exercise of said right (e.g., by refraining from unemployment or workfare measures that force citizens into any sort of work, even if it undermines their capabilities) coupled with a positive duty to safeguard citizens' unobstructed exercise of the same right through the provision of necessary resources (e.g., by providing access to material/immaterial support to escape meaningless work) and the protection of this right from violations by actors other than the state itself (e.g., by granting horizontal effects that extend the reach of the right to private actors, such as employers).

Given that resource availability is a determining factor in the progressive realisation of social and economic rights, AI-driven automation may provide the (financial, material, or other) means to accelerate the establishment

⁵⁹ Such an interpretation may also be justified by the links between Nussbaum's version of the CA and human rights approaches as well as her overall acknowledgement of the role of law in safeguarding capabilities: NUSSBAUM, Martha. *Frontiers of Justice: Disability, Nationality, Species Membership*. Cambridge, MA: Harvard University Press, 2007; NUSSBAUM, *Creating Capabilities*. Sen, however, accentuates the moral rather than legal dimensions of rights. This legal entitlement could additionally be envisaged in a holistic manner, that is, as a right to develop one's capabilities regardless of the activity through which this development may occur (i.e., whether that activity is work, leisure or something different). Although it is implicit in my arguments, I do not explore this possibility further. The case for such a right is explicitly made, albeit with a different justification in STEINVORTH, Ulrich. The Right to Work and the Right to Develop One's Capabilities, in *Analyse & Kritik*, v. 31, n. 1, 2009, p. 101-113.

⁶⁰ LANGILLE, Introduction: The Capability Approach to Labour Law—Why are We Here?

and implementation of the right to meaningful work and leisure. Taken together, the provision of appropriate legal and political entitlements and the appropriate distribution of AI-driven resources would render participation in meaningful work and leisure a possible reality for all citizens rather than a privilege of a few groups or sectors.

From a capabilitarian perspective, AI-induced shifts in work may challenge the role and normative foundations of labour law itself, transforming it from a countervailing force against bargaining inequalities into a vehicle for the formation and safeguarding of human capabilities.⁶¹ Such a transformation would expand the objectives of labour law well beyond its current focus on workers' financial prosperity and subordination and into the realm of capabilities and freedoms.

An expansion of this sort, from the realm of protection to that of liberation, is necessary, given that the traditional subject of labour law—regulating contractual employment relationships—is losing its significance as the landscape of work changes.⁶² The greater the possibility that the traditional employment relationship becomes less common or even ceases to exist (for technological but not only reasons), the greater the risk that labour law becomes self-effacing, especially if its scope remains as narrow as it currently is. Brian Langille, therefore, proposes a re-conceptualisation of (international) labour law as a legal field aimed at “both the instrumental and intermediate end of productivity and the intrinsic and ultimate end of the maximizing of human freedom”.⁶³

As an application of this expansive view of labour law, the CA could provide the basis for a legal provision that AI-driven automation be deployed for the sake of or without endangering workers' capabilities and freedoms, regardless of workers' exact status (i.e., formal employees or not). It may thus introduce heightened responsibilities for employers, managers, and business owners to ensure that the partially/fully automated workplace remains or becomes supportive of worker dignity, humanity, and freedom.

The realisation of citizens' right to meaningful work/leisure through the aforementioned positive (rather than merely negative) obligations entails a possible restriction on the freedoms of, say, employers and AI developers. To the extent that the latter invoke their economic freedoms to impose detrimental working or living conditions on citizens, the CA is not bound to deem these freedoms worthy of protection, since it assumes that “one

⁶¹ COLLINS, Hugh. What Can Sen's Capability Approach Offer to Labour Law? In: LANGILLE, Brian (ed.), *The Capability Approach to Labour Law*. Oxford: Oxford University Press, 2019, p. 21-41.

⁶² LANGILLE, Introduction: The Capability Approach to Labour Law—Why are We Here?

⁶³ LANGILLE, Brian. Labour Law's Theory of Justice. In: DAVIDOV, Guy; LANGILLE, Brian (eds.), *The Idea of Labour Law*. Oxford: Oxford University Press, 2011, p. 114.

person loses any legitimate claim to exercise their capabilities in a certain way when such action undermines the central, or fundamental, capabilities of others”.⁶⁴ Delineating and addressing antagonistic freedoms is, however, easier said than done, a point that once again illustrates the significance of the democratic, participatory decision-making that Sen supports.

2.5 Means and ends: A reconsideration

AI-driven automation may act as a radical reconfiguration that could remove citizens from the realm of material and capability deprivation by enabling more prosperity and, subsequently, more opportunities for meaningful work and leisure. However, a distinguishing feature of the CA is that, without negating the value of instrumental activities and goods, it shifts the focus back to the end goal. Therefore, AI-driven automation would be desirable not for its own sake but for its ability to bring about prosperity and opportunities for meaningful work and leisure. Yet, there is not just one means to achieve these ends: if the same prosperity and opportunities could be brought about by (technological or not) means other than AI-driven automation, these would also be *prima facie* desirable. At the same time, if AI-driven automation proves unable to drive the productivity gains needed for such prosperity, its desirability would not be affirmed.

Accordingly, the desirability of prosperity, to which AI-driven automation may contribute, is subject to constraints. Sen considers economic growth and wealth desirable but only as “general-purpose means for having more freedom to lead the kind of lives we have reason to value” rather than ends in themselves.⁶⁵ Owing to its instrumental character, prosperity is valued to the extent that it contributes to human capability but ceases to be valuable when it exceeds that point. An unending quest for prosperity might even harm individuals—for instance, by cultivating extreme competitiveness and distracting them from other valuable activities.⁶⁶

Similarly, the loss of income that AI-driven automation might engender should not be feared as such; rather, we should attend to the potential deprivation or enhancement of capabilities. This does not imply that income is not valuable, as it broadens the range of available (especially purchasing) options, but that its value is conditional on its effect on capabilities.⁶⁷ The same applies to ownership of other resources or possessions: citizens are not entitled to monetary or material possessions as such but to the

⁶⁴ DIXON, Rosalind; NUSSBAUM, Martha. Children’s Rights and a Capabilities Approach: The Question of Special Priority, in *Cornell Law Review*, v. 97, n. 3, 2012, p. 565-566.

⁶⁵ SEN, *Development as Freedom*, p. 14.

⁶⁶ NUSSBAUM, Aristotelian Social Democracy.

⁶⁷ SEN, *Development as Freedom*.

provision of sustenance.⁶⁸ If, in a post-work scenario, sustenance could be provided through means other than income earned through work, these means should be considered readily substitutable.

Universal Basic Income (UBI) and Universal Basic Services (UBS) are suggested as ways to compensate for the loss of income and redistribute the gains of AI-driven automation.⁶⁹ In general, the CA is not concerned with the equal distribution of resources as such unless the distribution allows individuals to reach capability thresholds. Nevertheless, capability insights about income provision are applicable to evaluating UBI. Sen considers that a state-provided income could adversely affect individuals' incentives by dissuading them from taking initiative and exerting effort.⁷⁰ However, insofar as individuals seek work for reasons beyond remuneration, income support from the state may not necessarily exhaust their incentive to pursue other types of work (if available), or, by extension, other activities that require initiative and effort. Income support may enhance individuals' bargaining power and, consequently, their freedom by allowing them to leave or refuse types of work that do not provide sufficient income, valuable production, or recognition. Serving as an exit route, a UBI would thus facilitate the exercise of a right to meaningful work. In a broader sense, income support may provide citizens with a foundation from which they can pursue their valuable doings and beings and develop their capabilities inside or outside the sphere of work.

Similarly, Sen's evaluation of state-provided services applies to evaluating UBS. The free, direct provision of specific and non-transferable services is preferable to the distribution of monetary amounts that are earmarked for the use of such services: it is less vulnerable to abuse and allows policy-makers to evade problematic means-testing procedures. Nonetheless, it allows discrepancies between the rich and poor to grow, if services are provided equally to those who could not otherwise afford them and those who are well off.⁷¹

The distinction between means and ends in the CA and its emphasis on the latter are also evident in contradistinction with approaches that focus on human capital.⁷² Like the CA, these approaches evaluate individual

⁶⁸ NUSSBAUM, Aristotelian Social Democracy.

⁶⁹ EUROPEAN GROUP, *Future of Work, Future of Society*. At their core, suggestions for a Universal Basic Income refer to the universal and unconditional provision of a regular monetary payment from the state to each individual. In the same vein, suggestions for Universal Basic Services refer to the universal and unconditional provision of services, such as healthcare, education, transportation, and housing from the state to each individual. Both approaches aim at securing the satisfaction of basic needs for each individual, regardless of their work status.

⁷⁰ SEN, *Development as Freedom*.

⁷¹ SEN, *Development as Freedom*. As already mentioned, however, this paper remains agnostic in terms of inequalities beyond threshold levels of capability.

⁷² SEN, *Development as Freedom*.

abilities. They do so, however, from the reductionist perspective of the usefulness of such abilities for increasing production and economic growth, ignoring their contribution to other areas, such as social and political change. Conversely, the CA does not consider individuals a mere means of production, comparable to other types of capital, but the ultimate end thereof.⁷³ Its ultimate objective is not that individuals become more efficient in economic production but that they lead lives they have reason to value. Thus, AI-driven automation should be governed to serve and enhance individual capabilities, avoiding a scenario in which workers serve and adapt to AI's capabilities such that they are treated as tools rather than the ends of AI-enabled production. Such a demand is broadly applicable yet particularly pertinent to the instrumentalisation of those workers (e.g., crowd/micro-workers) that fuel the training and development of AI systems themselves by performing a type of invisible work known for its machine-like, dehumanising attributes.⁷⁴

This means-ends distinction has implications for education. Human capital approaches value education to the extent that it increases individuals' contribution to economic growth as well as individuals' own productivity and wealth.⁷⁵ However, skills and knowledge that are useful for the labour market are not necessarily so in the logic of capabilities: training that helps individuals in their role as economic actors does not as such help them choose to function well and flourish. From a capabilitarian perspective, the value of education is broader than that of human capital formation and encompasses the benefits that education confers in terms of freedom in general.⁷⁶ Therefore, in light of AI-driven automation, educational policy should adopt an orientation broader than student employability and preparation for the "jobs of the future".⁷⁷

⁷³ SEN, *Development as Freedom*.

⁷⁴ SIAPKA, Anastasia. On Artificial Artificial Intelligence. *CiTIP Blog*, 26 January 2021. Available at <https://www.law.kuleuven.be/citip/blog/on-artificial-artificial-intelligence/>.

⁷⁵ COLLINS, Sen's Capability Approach; LANGILLE, Introduction: The Capability Approach to Labour Law—Why are We Here? See, e.g., the reference to "human capital investment" in the context of an education suitable for workers of the future in AUTOR, *Why Are There Still So Many Jobs?*

⁷⁶ COLLINS, Sen's Capability Approach; LANGILLE, Introduction: The Capability Approach to Labour Law—Why are We Here?

⁷⁷ See, e.g., the policy messaging on "education for jobs" by the European Commission and the "learning for the jobs of the future" by the OECD. EUROPEAN COMMISSION, *Education for Jobs and Growth*, European Education Area, available at <https://education.ec.europa.eu/node/1493>; OECD, *Learning for the Jobs of the Future*, Organisation for Economic Co-operation and Development, available at <https://web.archive.org/web/20211124122521/https://www.oecd.org/skills/learning-jobs-future.pdf>. Conversely, a capabilitarian orientation broader than student employability would be more aligned with the right to education as "directed to the full development of the human personality", pursuant to the International Covenant on Economic, Social and Cultural Rights; UNITED NATIONS GENERAL ASSEMBLY, *International Covenant on Economic, Social and Cultural Rights*, Article 13, United Nations, 1966.

2.6 Specificity, practical reason and affiliation

From the exposition of freedoms and capabilities as central concepts in the CA, I deduce three requirements that qualify the capability for work and leisure: specificity, practical reason, and affiliation.

Given individuals' differences in conversion factors, specificity calls for well-being assessments and interventions that are, to the extent possible, context- and subject-specific. In Nussbaum's words, "[c]apabilities belong first and foremost to individual persons, and only derivatively to groups."⁷⁸ When considering work- or leisure-related measures for AI-driven automation, the state should not introduce one-size-fits-all provisions across citizens or provisions that treat workers and employers as homogeneous groups. Rather, it should consider variations in the conversion of these measures into an actual freedom to work and leisure. Accordingly, the state should seek to determine and mitigate personal, social, or environmental factors that hinder such a conversion.

Practical reason demands engagement in (work and leisure) activities that develop and utilise humans' reasoning faculties. Respect for practical reason also necessitates institutional safeguards for citizens' freedom of choice, including their choices in shaping political arrangements themselves. Given the importance of political freedoms in the CA, citizens should be able to participate in decision-making about the future of work and to negotiate and influence the content of resulting decisions.

The requirement for practical reasoning additionally qualifies education-related policies. Education should focus on student capabilities, heeding the formation of adaptive preferences. Individuals' preferences do not always rely on evidence or reason, considering that "preferences are not exogenous, given independently of economic and social conditions. They are at least in part constructed by those conditions".⁷⁹ This is especially true for those systematically exposed to adversity and deprivation (including educational deprivation): given their need to withstand conditions of hardship, they might capitulate and formulate desires that do not stray from what such conditions permit.⁸⁰ By supporting students' ability to reason about the choices and possibilities available, educators are well-placed to counter students' existing—or likely to be formed—adaptive preferences, which, as a means of coping in deprived environments, keep preferences for meaningful work and leisure outside the sphere of what is possible.

⁷⁸ NUSSBAUM, *Creating Capabilities*, p. 35.

⁷⁹ NUSSBAUM, *Capabilities and Social Justice*, p. 127.

⁸⁰ SEN, *Development as Freedom*.

Nussbaum stresses that humans are affiliated with and embedded in an environment comprising human and non-human elements.⁸¹ This tendency for affiliation carries three implications. First, affiliation denotes interpersonal ties to friends and family and political or civic ties to other citizens.⁸² State interventions should protect this multi-faceted social activity and the institutions that nourish it. Individuals often channel this sociality in their workplace, so the full automation of human work should be countered by encouraging other sociable pastimes and associations (e.g., charitable and community initiatives). Likewise, the partial automation of human work should be prioritised such that human workers are left with the tasks that require interpersonal contact and have the necessary time for successfully undertaking those tasks. Pursuant to the importance of participatory decision-making, CA's support for affiliation transfers to protecting the freedom of assembly, institutions of collective bargaining, trade unions, or other forms of interpersonal relations, associations, and collective action in the workplace.

Second, affiliation is possible with regard to the non-human environment, entailing a state obligation to protect the natural environment and non-human animals. Concerning the first, policy should steer AI-driven automation towards environmental sustainability—for instance, by reducing and redistributing working hours to decrease carbon footprints.⁸³ Meanwhile, the state should assess the energy costs of AI itself.⁸⁴ An additional limit is thus placed on the quest for prosperity and thereby on the exploitation of our planet's finite natural resources for the sake of AI-driven automation. Concerning the second, AI could be deployed to replace or ameliorate both the work humans do and the work humans impose on other sentient beings (i.e., working animals). In this way, AI-driven automation could contribute to animal well-being.

Third, while the non-human environment may be natural, it may equally be artificial. Nussbaum holds that the state must consider humans' situa-

⁸¹ NUSSBAUM, Aristotelian Social Democracy.

⁸² NUSSBAUM, Aristotelian Social Democracy.

⁸³ A number of studies have shown a link between reduced working hours and reduced carbon footprints, e.g., KNIGHT, Kyle; ROSA, Eugene A.; SCHOR, Juliet B. Reducing Growth to Achieve Environmental Sustainability: The Role of Work Hours. In: WICKS-LIM, Jeanette; POLLIN, Robert (eds.) *Capitalism on Trial: Explorations in the Tradition of Thomas E. Weisskopf*. Cheltenham, UK: Edward Elgar, 2013, p. 187-204; MOMPELAT, Laurie; MINIO-PALUELLO, Mika; PLATFORM LONDON. *Stop the Clock: The Environmental Benefits of a Shorter Working Week*, London: Platform, 2021.

⁸⁴ See VRIES, Alex de. The Growing Energy Footprint of Artificial Intelligence, in *Joule*, v. 7, n. 10, 2023, p. 2191-2194. A striking example is found in a recent study by the AI start up Hugging Face: training its language model, BLOOM, resulted in carbon dioxide emissions of 50 metric tons, roughly equal to the environmental impact of 60 flights between London and New York: LUCCIONI, Alexandra Sasha; VIGUIER, Sylvain; LIGOZAT, Anne-Laure. Estimating the Carbon Footprint of BLOOM, a 176B Parameter Language Model, arXiv:2211.02001, 3 November 2022.

tedness and foster “forms of interdependence that are human rather than slavish”.⁸⁵ The environment in which humans are situated comprises non-human elements that are nonetheless human-made. Technological creations, such as AI, are indicative of these. Therefore, policy should cultivate forms of interdependence such that AI supports humans’ efforts to overcome their limitations and develop their capabilities rather than have humans compromise their capabilities to amplify those of AI.

3. Objections: Paternalism and illiberalism

The CA mandates the detection and prioritisation of substantive areas of life in which the state is asked to intervene for the sake of citizens’ flourishing. As such, its application to AI governance could be challenged on the grounds that it disregards individual preferences and supports only certain ways of life.⁸⁶ That is, one could criticise the CA for espousing paternalism and illiberalism at the expense of pluralism, autonomy, and freedom of choice. At least four counter-arguments are available.

3.1 Plural and local specification

First, the CA adopts a thick account of the good insofar as it identifies capabilities important to human flourishing, yet it does not precisely determine what these capabilities include. It allows for both plural and local specifications, accounting for sectoral, regional, or other disparities.⁸⁷ Plural specification means that the general description of capabilities accommodates a wide array of interpretations.⁸⁸ While it admits of exceptions to what is suitable for human functioning, citizens are afforded enough leeway to define their conception of the good and organise life around it.⁸⁹ In this definition process, they might be restricted in choosing ways of living, or specifically ways of engaging in leisure and work, that directly contradict, for instance, Nussbaum’s lists of human functions and capabilities.⁹⁰ They

⁸⁵ NUSSBAUM, Aristotelian Social Democracy, p. 243.

⁸⁶ Additional objections could be levelled against this approach (e.g., that it violates neutrality and that it is utopian) but are not addressed here for reasons of scope and brevity. I take up these objections in SIAPKA, Anastasia. *Work, AI, and Aristotle: Towards a Flourishing-Centred Paradigm for the Future of Work*, PhD Thesis at KU Leuven, Leuven: Belgium, 2025.

⁸⁷ Despite their distinctiveness, local and plural specifications sometimes converge: NUSSBAUM, Aristotelian Social Democracy.

⁸⁸ NUSSBAUM, Capabilities and Social Justice.

⁸⁹ NUSSBAUM, Aristotelian Social Democracy.

⁹⁰ The existence of these restrictions, however, implies that the CA does not collapse into relativism.

remain, however, able to conceive of and pursue numerous alternatives in keeping with their circumstances and tastes.⁹¹

Local specification means that such a high-level description tolerates different culturally-based instantiations. The CA does not take a single nation as its focal point but has intercultural ethical and political aspirations.⁹² For instance, the capability for leisure might be acknowledged as significant across cultures (allowing a shared conversation on its encouragement to take off) but be specified differently according to local conditions, traditions, or histories. Such cross-cultural adaptability is necessary for Nussbaum, who argues that considerations of well-being and justice must be approached from an international perspective if they are to be comprehensive, up-to-date, and practically relevant.⁹³ This holds especially for AI-driven automation, a global development that crosses national jurisdictions and necessitates an equally global governance.⁹⁴

Although this abstract articulation of capabilities counteracts the possibility of a strict specification of the good, it comes with measurement limitations.⁹⁵ The CA is limited to using imperfect proxies for capability assessments (e.g., hours away from work as a proxy for the capability for leisure). Nonetheless, compared to other approaches that use income or preferences as similarly imperfect proxies, the target of capability measurement is a richer account of human functioning.⁹⁶ If information gathering becomes more directed towards this target, especially by incorporating input from those experiencing capability deprivation, capability measurement and its proxies will become more accurate.⁹⁷

3.2 Shared responsibilities

Second, the CA does not negate the importance of political and civil rights and so does not impose authoritarian or illiberal political configurations. Nussbaum and Sen underscore the primacy of active political participation in keeping with democratic procedures. Nussbaum's emphasis on practical

⁹¹ NUSSBAUM, Aristotelian Social Democracy.

⁹² NUSSBAUM, Capabilities and Social Justice.

⁹³ NUSSBAUM, Aristotelian Social Democracy.

⁹⁴ ERMAN, Eva; FURENDAL, Markus. The Global Governance of Artificial Intelligence: Some Normative Concerns, in *Moral Philosophy and Politics*, v. 9, n. 2, 2022, p. 267-291; ÓHEIGEARTAIGH, Seán S. *et al.* Overcoming Barriers to Cross-cultural Cooperation in AI Ethics and Governance, in *Philosophy & Technology*, v. 33, n. 4, 2020, p. 571-593.

⁹⁵ This limitation is more pronounced when comparing capabilities with functionings, as the totality of freedoms available to an individual is harder to measure than the totality of the same individual's achievements.

⁹⁶ NUSSBAUM, Capabilities and Social Justice.

⁹⁷ NUSSBAUM, Capabilities and Social Justice.

reason implies that citizens should participate in decision-making that affects their likelihood of flourishing, lest their reasoning abilities would be disregarded.⁹⁸ Sen's approach highlights mechanisms of democratic confrontation, such as public debates and organised opposition, as a means of assessing the acceptability of policy interventions.⁹⁹ Such democratic confrontation would be essential in the context of AI-driven automation, shaping what should count as meaningful work and leisure for policy purposes and thereby safeguarding a flourishing-centred polity from corruption, coercion, or authoritarianism. Hence, participatory decision-making and democratic confrontation reduce the likelihood of illiberal state action. Nonetheless, citizen involvement in democratic confrontation and debate itself presupposes the existence of leisure: shaping the capability for leisure thereby requires leisure in a self-reflexive manner.

In addition, the CA attributes a significant yet not exclusive role to public policy institutions, whose work interacts with that of other institutions, be they political, social, community-based, non-governmental, media, or market ones.¹⁰⁰ For instance, legal entitlements may facilitate the capability for (meaningful) work and leisure, but the latter may additionally require interventions outside the scope of law and policy, such as cultural and societal changes, especially in attitudes towards work and productivity. However, capability-oriented state interventions coupled with those by non-state actors do not bring about a "nanny state" that threatens individual responsibility; they furnish the actual (not just theoretical) capabilities needed for individuals to make their own choices.¹⁰¹ Once state and non-state actors provide these capabilities, individuals are responsible for determining whether they will utilise them or which of the available options they will pursue. Hence, combining social and personal responsibility, the CA challenges the artificial, atomistic view of individuals as fully independent, isolated units.¹⁰²

3.3 Emphasis on opportunities regardless of use

Third, Nussbaum considers capabilities, not functionings, the ultimate end of policy.¹⁰³ Although functionings and capabilities are linked, the space between one's achievements and one's freedom to achieve is not negligible. Functioning implies realised capabilities and so would risk limiting citizens'

⁹⁸ NUSSBAUM, *Capabilities and Social Justice*.

⁹⁹ SEN, *Development as Freedom*.

¹⁰⁰ SEN, *Development as Freedom*.

¹⁰¹ SEN, *Development as Freedom*, p. 284.

¹⁰² SEN, *Development as Freedom*.

¹⁰³ NUSSBAUM, *Capabilities and Social Justice*.

choices, if it were a policy goal. Capability does not confine citizens to a particular course of action or way of life and so preserves diversity and pluralism.¹⁰⁴ It focuses on providing as many citizens as possible with a real (i.e., effective) opportunity for certain functionings, that is, with the skills and resources citizens need in case they choose to pursue these functionings.¹⁰⁵ Everything else is in the hands of citizens themselves: they might choose to forgo these functionings or deliberately act in ways counterproductive to them. Choosing in this way is no less welcome, given that the exercise of citizens' reasoning is a capability valuable in itself. As Nussbaum states, "[t]o promote capabilities is to promote areas of freedom, and this is not the same as making people function in a certain way".¹⁰⁶

Likewise, in line with his emphasis on both process and outcome aspects of freedom, Sen attaches value to the process of choosing as a functioning in itself and to the availability of opportunities ("intrinsic importance of freedom") regardless of whether individuals eventually grasp them ("derivative importance of freedom").¹⁰⁷ He writes that "having an x when there is no alternative may be sensibly distinguished from choosing x when substantial alternatives exist".¹⁰⁸ Accordingly, there is value in using AI to offer opportunities for meaningful work and leisure, even if citizens choose not to seize them, compared to citizens being deprived of such opportunities and the freedom to choose differently in the first place. State intervention in the CA aspires to the potential for flourishing but does not forcefully bring about its achievement.

3.4 Genuine decision-making

Fourth, the CA views freedom of choice and a thick conception of the good as aligned rather than opposed.¹⁰⁹ It resists seeing choice as arising on the spur of the moment, independently of one's environment. A genuine capability to choose presupposes intricate institutional, social, and material conditions that cannot be engendered by the thin account of the good and light-touch state intervention to which liberal theories confine themselves.¹¹⁰ Besides being inadequate, liberal non-intervention is inimical to freedom of choice when it allows oppressive conditions favourable for the formation of adaptive preferences. Contrary to liberalism's minimalism about the state, the CA recommends that policy-makers intervene to create

¹⁰⁴ NUSSBAUM, *Capabilities and Social Justice*.

¹⁰⁵ NUSSBAUM, *Aristotelian Social Democracy*.

¹⁰⁶ NUSSBAUM, *Creating Capabilities*, p. 25.

¹⁰⁷ SEN, *Development as Freedom*, p. 292.

¹⁰⁸ SEN, *Development as Freedom*, p. 76.

¹⁰⁹ NUSSBAUM, *Aristotelian Social Democracy*.

¹¹⁰ NUSSBAUM, *Aristotelian Social Democracy*.

a space in which others cannot do so and thereby promote unhindered decision-making.

Freedom of choice would be enlarged if the technological possibilities of AI-driven automation alongside the social, economic, and political context made it feasible for citizens to conceive, desire and pursue options beyond work—to choose, in other words, if they prefer to receive the income, production, and recognition that Sen associates with employment from other sources. With the centrality of work decreased, citizens' freedom not to work and to partake in a multitude of other activities becomes real. Furthermore, citizens would be able to construe preferences, which, by hitherto being considered unattainable and thereby not worth pursuing, were replaced by adaptive ones.¹¹¹ One such adaptive preference might be the contentment with work that is not meaningful. Or, it might even be the desire to work itself, understood as an epistemically corrupt desire formulated under unjust labour conditions.¹¹²

Relatedly, the CA aims at “combined capabilities” that comprise appropriate internal dispositions alongside the material, social, and institutional conditions that contribute to such dispositions.¹¹³ For instance, a lack of the capability for leisure might mean that one is incapable of forming an appropriate internal disposition (e.g., because one has been brought up accordingly) or that one is capable of forming the appropriate disposition but incapable of engaging in leisure because of environmental constraints (e.g., because of excessive work obligations). Although the CA recognises the role of internal dispositions, it does not forcibly ingrain them in citizens but urges governments to cultivate an environment that empowers citizens to develop and exercise such dispositions.¹¹⁴ Therefore, it does not inappropriately interfere with citizens' internal states of mind.

To summarise, the objections of paternalism and illiberalism are addressed through four features of the CA: the abstract articulation of capabilities, which allows for pluralism in their specification; the coupling of state responsibility with that exercised by other institutions and citizens themselves; the wide availability of opportunities regardless of whether citizens

¹¹¹ For instance, adjusting to an exploitative workplace or a strictly Protestant family, one might come to believe that one is unworthy of leisure and so form a workaholic preference for working until exhaustion rather than a preference for work-life balance. Alternatively, adjusting to an environment that offers limited employment opportunities, one's occupational choices might be shaped such that one forms a preference for, e.g., low-paying or illegal activities available in that environment rather than a preference for jobs to which they might have been drawn had they considered them to be attainable.

¹¹² CHOLBI, Michael. The Desire for Work as an Adaptive Preference, in *Autonomy*, v. 04, 2018, available at: <http://autonomy.work/wp-content/uploads/2018/07/The-Desire-For-Work-As-An-Adaptive-Preference-V2-.pdf>.

¹¹³ NUSSBAUM, Capabilities and Social Justice.

¹¹⁴ NUSSBAUM, Capabilities and Social Justice.

take advantage of them; and the effort to ensure that citizens' choices are not marred by adaptive preferences while protecting their *forum internum*.

Conclusion

Aside from being technologically disruptive, AI forces governments globally to question how work and its automation should be regulated. In light of this question, I have undertaken the exploratory task of providing a relevant for the contemporary future of work debate rendering of the CA. While the CA is well-established, its application to the future of work is innovative. Nonetheless, this paper neither exhausts all possible connections between the CA and AI nor provides all-things-considered answers to the relevant policy questions. It sketches the potential of AI-driven automation as a radical reconfiguration that could be used to secure (at least) basic levels of capability for all citizens. It assigns policy-makers to the task of achieving such a reconfiguration and offers a direction of travel for corresponding policies.

In short, this paper offers a capabilitarian paradigm for the future of work, making the case for less *and* better work with the help of AI. In a strong formulation, the replacement of human work by AI appears desirable insofar as the resulting productivity gains would eliminate material and subsequently capability deprivation across all areas of life. In a weak formulation, AI should not fully replace but shape human work. The ultimate end would be that the types of work that are "saved from" or created by AI support the development and exercise of human capability, whereas the types of work that do not provide such support are prioritised for automation.

This paradigm departs from the predictive and consequentialist ones prevalent in the literature. Contrary to the predictive paradigm, a capabilitarian one moves in the reverse direction: it starts from the premise that certain freedoms and capabilities are desirable and proceeds to normatively assess how AI-driven automation should be shaped in order to support these. By considering yet not relying on the exact specifications of different AI systems, such assessment applies to both partial and full workplace automation in the near and distant future. Contrary to the consequentialist paradigm, this assessment revolves around real freedoms, valued as both processes and outcomes, thereby being more comprehensive than comparisons fixated on (positive/negative) outcomes only. Moreover, despite acknowledging the significance of AI-enabled (productivity or other) gains, it examines how such gains are distributed and how they translate into what all citizens are able to do and be. In sum, a capabilitarian paradigm for the future of work not only avoids the trap of determinism but also

adopts a multidimensional view of human well-being: it recognises that individuals' ability to harness the opportunities afforded by AI differs based on their circumstances, the resources and infrastructure available to them, and other conversion factors.

The suggested paradigm may help scholars identify or re-conceptualise the salient aspects of the saturated future of work debate. Empirical and normative studies could flesh out the relationship between capabilities and AI-driven automation alongside the ways in which AI development and related policies (ought to) embody the objectives of the CA. Although work and leisure have been most relevant to the present normative exercise, future research could evaluate AI-driven automation from the perspective of other capabilities.

This paradigm may additionally be operationalised by policy-makers and AI developers, steering technology development towards human capability. It could inform choices about the kinds of work to be created by or prioritised for automation, the ways in which AI should be deployed in the workplace, and the broader purposes for which AI should be optimised. It could be integrated into AI auditing, monitoring, or licencing as well as technology and policy impact assessments. Although the abstract articulation of capabilities hinders the extraction of precise measurement proxies, such proxies could be iteratively refined as more capability-related data are captured. Empirical researchers could facilitate this refinement by constructing indicators suitable for capability measurements. Such measurements and assessments would benefit from a bottom-up inclusion of workers' perspectives, as they explicitly and implicitly know which parts of their work enhance or hinder capabilities and so can advise on which tasks should be automated or not.

By way of illustration, CA-inspired audits and assessments could examine the degree to which AI-driven automation and relevant policies:

- convert productivity gains into expansion of citizens' capabilities across the board (rather than for those in specific sectors or groups);
- provide citizens with opportunities for work and leisure that foster their capabilities as well as the resources needed to seize these opportunities;
- replace work-related tasks that hinder human capabilities, are excessively mechanistic and tedious, or might even be dehumanising; and
- foster the exercise of citizens' reasoning and their affiliation with other human beings and the natural environment.

Furthermore, the CA enables an evaluation of the ways in which AI-driven automation may frustrate and promote capabilities. For businesses, employers, and managers, such evaluation facilitates the design and provision

of capability-enhancing organisational arrangements. For workers and citizens more broadly, such evaluation entails a better understanding of what is at stake with the future of work and, consequently, what their demands and negotiations should prioritise. By advocating for participatory decision-making in technology and policy development, the CA elevates their status to active agents rather than passive recipients of technological or policy influences. As such, it underscores that there is nothing inevitable about workers being the ones who bear the brunt of AI-driven automation.

Notwithstanding its merits, the CA is not advanced here as an exclusive normative basis for the future of work debate. Given the complexity of the debate, a requirement of exclusivity would set an impossible standard for any theory. Rather, thanks to its comprehensiveness, the CA applies to AI-driven automation in a direct, supplementary and indirect manner.¹¹⁵ In a direct application, the evaluation of AI-driven automation would rely on capabilities only, replacing existing metrics or evaluative criteria. In a supplementary or indirect application, capabilities would respectively enrich or adjust—rather than replace—such metrics or evaluative criteria. Taking the preceding CA-inspired assessment as an example, it could use capabilities to evaluate AI-driven automation instead of (direct application) or together with (supplementary or indirect application) common measurements of productivity growth, number of vacancies lost or created, and increases or decreases of income.

Overall, moving beyond quantitative and cost-benefit projections, this capabilityarian, flourishing-centred paradigm stresses that AI-driven automation may be desirable, not for its own sake but insofar as it nurtures freedom and capability; hence, this is what our political and legal arrangements should aim at.

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