8.

THE TECHNOLOGICAL INFRASTRUCTURE OF DEMOCRACY

— DANIEL INNERARITY

The relationship between technology and democracy is examined here from a fundamentally theoretical perspective in relation to the conceptual framework in which we should think about it. We cannot ask whether a technology is suitable for democracy if we do not address the kind of conditioning that technology exerts on humans, whether it is determinant, whether it is neutral, or whether it all depends on the use that is made of it. This chapter looks specifically at the case of algorithmic governance and asks about the desirability and feasibility of politicizing algorithmic decisions.

Technology, and especially digital technologies, have already become the main subject of expectations and fears about democracy. The future of democracy depends to a large extent on how we shape them and where they are placed within political procedures. An answer to the question of what democracy the current digital ecosystem enables or impedes requires prior reflection on the role that technology in general and technology in particular play in society.

Many of the current discussions on this topic are framed in binary terms: are new technologies good or bad? Does digitalization provide more freedom or does it restrict it? Should we expect algorithmic governance to enhance democracy or to eliminate it? Human life has unfolded in the tension between the utilities of technology and its threats. Optimists and pessimists posit scenarios that have in common that they grant technology too much power and reveal that they oversimplified the issue. Instead of technological determinism, what I propose is to explore the possible conditioning that digital technologies exert on democracy, which will allow us to examine to what extent algorithmic governance is capable of taking over political decisions and to answer the question of whether there will be an AI taking over democracy.

Technical conditioning is "the blind spot of democracy theory."[1] Digitalization should not be blamed for the current fragility of representative democracy; it can also be understood as a space of alternative possibilities. Exhaustion and distrust of representative institutions are also due to the shaping of a more active and demanding public opinion. To explain the current transformation of democracy solely in terms of digitalization is to overestimate the determinacy of technology and underestimate the capacity of political actors and institutions to take advantage of the possibilities that such technologies offer for democracy's revitalization. Digital media can be put at the service of both the liquidation and the revival of traditional (i.e., analog) politics. Digital technologies do not determine social and political change, but the can offer a potential (albeit limited) for distributed action. The relationship between digitalization and democracy should not be thought of as a causal relationship but as a constellation in which political action and modes of communication condition each other.

THE RELATIONSHIP BETWEEN TECHNOLOGY AND HUMAN DECISION-MAKING

When Meta Platforms' CEO Mark Zuckerberg appeared before the U.S. Senate to talk about misinformation, hate speech, and privacy, he proudly defended the technological solution: "artificial intelligence will fix everything in five to ten years." This "technosolutionism"[2] redefines complex social issues as problems that have computational solutions, i.e., it assumes that the power of technology is capable of solving any kind of problem. This conception of technology is also shared by certain governmental discourses and strategies that insist on the inevitability of technological development and the need to adapt to the economic opportunities it offers.

Technology solves many problems, causes some specific ones and, above all, raises the need to decide democratically what issues it is relevant for and to what extent. The advance of technology not only raises problems of applicability, but also of reconsideration of what we should understand as technologically solvable. The great democratic debate about technologies is about resituating them in a broad scope beyond the calculable world.

Although they may seem contradictory, technological neutralism and technological determinism are two ways of disengaging from the intertwining of the technological and the social. Neutralism and determinism conceive of technology independently of its social use, and as something closed, defined, and not susceptible to modulation; in the first case, because it is not necessary, and in the second, because it is not possible. Technology alters the landscape in which human interactions take place, but it does not facilitate every outcome. The cliché that "technology is just a tool" undervalues its capacity to structure situations, whereas its deterministic conception overvalues it.

Technological determinism often goes hand in hand with a reductionist view of technology that does not consider it as a social and cultural phenomenon such that technical devices are understood as predetermining their use without allowing each society to appropriate them according to its own idiosyncrasies and cultural patterns. If I draw attention to deterministic reductionism, I do not say this out of a lack of appreciation for technology, but quite the opposite: deterministic reductionism does not do justice to the whole phenomenon of technology, which consists not only of artefacts, but also of social uses and cultural dispositions within which technical innovations are put at the service of certain values.

Everything is affected by the technology we use, sometimes in very subtle ways, but this is not a question of seeing technology as a threatening reality; digitalization is not the problem, and thinking about it and carrying it out as something that does not require any format, any kind of express "political" intervention is.

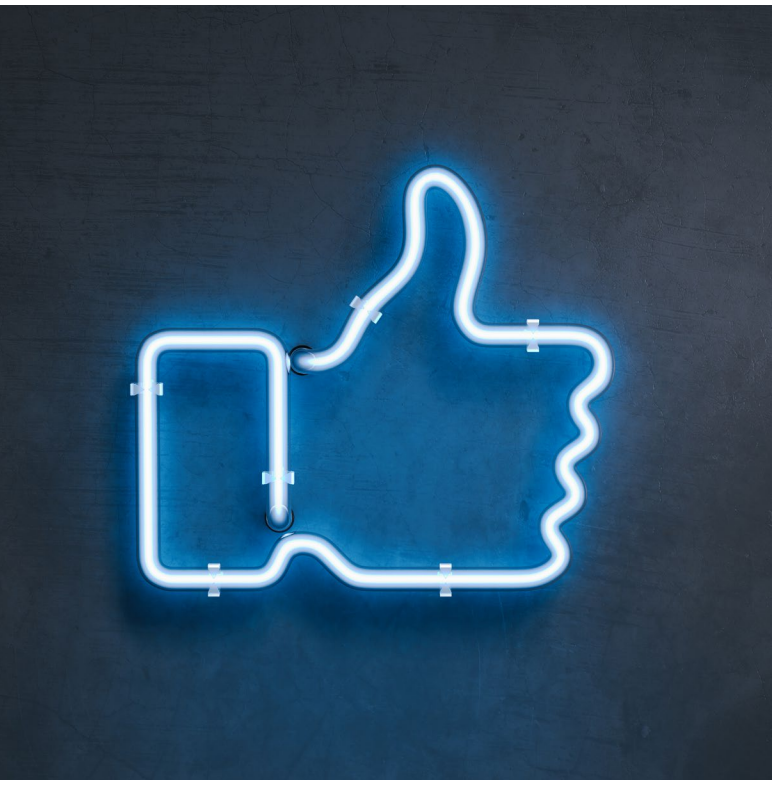
> We must be careful not to neither consider political issues as technical issues nor consider technical issues apolitical.

My proposal is an alternative to neutralism and determinism that considers the relations between technology and society based on the idea of conditioning. Technology does not determine human actions or societies; it opens corridors that must be politically configured, and not everything is possible on the basis of the technology at our disposal. Instead of thinking of this conditioning as an unappealable determination, we would do better to understand it as an incitement to be critically examined, which allows choices to be made, albeit within a given framework. Each technology prevents certain things and compels, prompts, and discourages others. In between, there are plenty of indeterminate and open-ended choices.

The classic example of weapons well illustrates the limitations of the neutralist model. Some claim that a gun is neutral and it all depends on how it is used, whether to hunt or to kill.[3] This is a very simple statement. The question of conditioning does not refer to the possible use but to what the mere mass possession of weapons in a society, as is the case in the U.S., reveals. Their pervasive presence means not only mean that they could be used to kill, but also conceptions of individual sovereignty, conflict resolution, security, and justice are very different from societies where, as a rule, there are

no guns in the home. Another example of this conditioning can be found in the series "Dopesick" about the wave of drug addiction that has recently spread in the U.S. as a result of the voracity of a pharmaceutical company and the ease with which opioid painkillers are prescribed. The owners of the pharmaceutical company, downplaying the risks of addiction, argue in their defense that they cannot prevent the misuse of painkillers, as if the problem lies solely with the consumers.

Something similar can be said of any technology and specifically of digital ones; they are more than media and assert a certain way of understanding and experiencing communication, space, time, work, and opinion that is different from analog technologies. The misuse of social networks to offend and launch hoaxes is not an inevitability, but the ease of issuing opinions and the way in which collective trust is built or destroyed are some of the conditioning factors produced by the new digital space with which we are going to have to coexist. Neither will the network bear an irresistible democratization, nor will it necessarily degrade public discussion. We should not trivialize technology's conditioning force by appealing to its good or bad use. Democracy in the digital world will have properties about which we are still largely unaware.



ALGORITHMIC GOVERNANCE AND DEMOCRACY

Governing is already to a large extent (and will become even more so) an algorithmic act; a large part of government decisions are taken by automated systems.[4,5] One might call this system, in which algorithms are used to collect, collate, and organize the data on the basis of which decisions are made, an "algocracy."[6] Algorithmic governance greatly enhances management capabilities across large amounts of data and in relation to complex problems.

The spread of algorithm- and data-driven decision systems means that machines support humans in their decisions and even replace them, in part or completely. The question all this raises is to what extent and in what way the use of automated decision-making systems is compatible with what we consider a political decision-making system. What does the massive introduction of automated decision-making procedures for government action really mean? Is this type of governance congruent with democracy?

The great promise of this technology is that it allows us to know the real will of the people.[7,8] With a world full of sensors, algorithms, data, and intelligent objects, a kind of social sensorium is configured that allows us to personalize health, transport, and energy. Thanks to data engineering, we are moving toward an increasingly granular understanding of individual interactions and systems that are better able to respond to individual needs.

Algorithmic systems serve to categorize individuals and predict their preferences from a wealth of data about them. The business model of many digital companies relies on the fact that they know users better than they know themselves and, by virtue of predicting their behavior, can offer them the right thing at the right time.

The comfortable paternalism of an algorithmic society is that it gives people what they want, that it governs with proportionate incentives, and that it anticipates,

invites, and suggests. Transposing this model to politics would not be a major problem were it not for the fact that the cost of these benefits is usually the sacrifice of some sphere of personal freedom. Given that there is a discrepancy in the self-determination we supposedly demand and the self-determination we are in fact willing to exercise when comforts and benefits are involved, the satisfaction of needs is often done in exchange for spaces of freedom.

What then is the democratic value of data, recommendations, and predictions? Some would say that all these are our free decisions from the past, invitations to decide in the present, or bets on how we will decide in the future, i.e., they are our decisions in any case. From this point of view, is no tension between Big Data and democracy. But democracy is not the immediate and aggregate translation of what we decide individually; the dynamic and transformative character of democratic life includes an element of change, discovery, and emergence for which a system designed to make us discover only what we already know is useless. At the present time, AI does not seem to be appropriate for this willingness to transform that is an essential element of our democratic decision-making.

The problem is that most algorithmic forecasts are based on the premise that the future will be as close as possible to the past, i.e., that our future preferences will represent a continuity of our previous behavior as recorded in our mobility or consumption data. Policy, however, does not aim only to reflect what is there. It changes certain things in an intentional way. Perhaps the most unsatisfactory thing about this data revolution is that it is not revolutionary at all. Data analysis acts as a recording device, to the point of having great difficulty identifying what there is in that reality of aspiration, desire or contradiction. But if we are to take our freedom seriously, it is also part of our aspiration to modify what we have been, thus giving rise to situations that are to some extent unpredictable. In this respect, algorithms that claim to be predictive are very conservative. They are predictive because they continually hypothesize that our future will be a reproduction of our past. They do not enter into the complex subjectivity of people and societies, where desires and aspirations also arise. How do we want to understand the reality of our societies if we do not introduce into our analyses, in addition to consumer behavior, the enormous asymmetries in terms of power, the injustices of this world, and our aspirations to change it?

Algorithmic governance is not a threat to democracy because it conditions our present decisions but, above all, because it disregards our future decisions. Democracy is not about doing what we want but, often, about being able to change what we want. Do algorithms really know our deepest will or only its most superficial dimension, the routines rather than the desires?

Politics is not simply a continuist administration of the past but the ever-open possibility of breaking the inertia of the past.

> How do we specify our goals such that machines have to do nothing but pursue them efficiently? Are we sure that what we want now will be what we want in the future? Machine learning algorithms can anticipate our future propensities and thus threaten to make alternative futures impossible.[9]

A PARLIAMENT OF ALGORITHMS

Democratization is synonymous with politicization. If anything characterizes the political system of a democracy, it is that it is open to questioning, stimulates controversy, increases the number of interlocutors, does not prohibit new issues, does not exclude criticism as a matter of principle, and admits the configuration of alternatives. Politics is a reflexive thematization of life in common. Durkheim defined democracy as the political form of reflection.[10] The very vitality of a democracy shifts issues that were originally considered non-political into the space of the political. Many areas that were managed by the state and the protagonists of science and technology have been opened up to democratic discourse. Politics is about alternatives, options, interpretations, and perspectives. All positions, certainties, objectives, and decisions are provisional in principle and can be subject to revision.

All the technologies that accompany digitalization imply a greater depoliticization than previous technologies for at least two reasons: because of their exorbitant promises of de-ideologized objectivity and by virtue of their tacit and discreet nature. Let us examine the first of these promises. Algorithmic politics is a peculiar form of depoliticization in the name of objectivity. Algorithms depoliticize not because they are themselves apolitical but because they make it difficult or even impossible to deal politically with their results. The success of algorithmic techniques is not due to their ability to handle huge amounts of data but to their logic of incontestable clarity, their unambiguity, especially where there is little time or resources to decide.

Algorithms are political when their results are beyond political questioning, i.e., when they depoliticize discourses, actions, and decisions.

The second peculiarity of algorithmic depoliticization is due to its thoughtlessness. The most radical conditioning and the most political dimension of digitalization takes place in a tacit space as a subtle modification of our individual and collective behavior. When we speak of the political dimension of algorithms, we must think not only of their use, but also of the specific logic with which they are inscribed in the social world. Digitalization not only makes life more efficient, faster, and more comfortable, but also modifies it in such a profound way that it is not easy to understand to what extent.

The democratic problem posed by both properties (de-ideologization and unreflexivity) is not that algorithms make decisions but that we do not know or consent to them in some way. The question is whether we can in our turn politicize algorithms and consider algorithmic decisions as possibilities for our own self-determination or whether we have no choice but to surrender to them. The compatibility of democracy and AI depends on their politicization, i.e., their insertion into broader contexts in which algorithms do with algorithms what modern democratic revolutions did with power: divide and problematize it, give it a limited term and limit its powers, expose it to contestation and criticism. If we do not accept that one authority can wield undisputed political power, then when algorithmic procedures are introduced into government, we must establish the spaces and channels that allow it to be questioned, monitored, and audited. The increasing technification of political affairs must be balanced by a corresponding politicization of technical procedures.

It is in the nature of democracy to value technical and scientific evidence, as long as it does not call into question the pluralism of interpretations of reality or the diversity of ways in which such evidence can be brought into play when it comes to decisions in which other criteria also have to be asserted. In recent years, it has been emphasized that expert knowledge is more plural and that there are more epistemic authorities than are often assumed.[11] This principle of plurality should also apply when it comes to granting a monopoly of objectivity and validity to such epistemic procedures as algorithms and Big Data. The democratization of these technologies requires, as has always been the case when an authority of any kind has been configured, their insertion in spaces where the pluralism inherent to democratic societies is articulated.

We will mention a number of issues in which our digital environment precisely poses problems of lack of diversity

and which would require ensuring pluralism. There is a lack of diversity in machine learning systems.[12] Lack of diversity in the very design of AI systems can reinforce discrimination by giving them an appearance of objectivity.[13] There is a whole discussion about how to achieve greater diversity in computer science, a discipline overly dependent on engineering and with a stereotypical model of masculinity.[14] We also have a problem in the balance of values when building and curating datasets.[15] The lack of facial diversity has led to identified discrimination in facial recognition that do not sufficiently take into account local and global differences.[16,17]

If we cannot consider a society that limits pluralism as democratic, we should also be concerned with a lack of diversity in training data. There are not only parliaments where our political representatives sit; there must also be parliaments for them to discuss data, algorithms, and artifacts. This is what we are ultimately referring to when we talk about politicizing digitalization. Democracy in the digital age is impossible without an explicit thematization of technologies. Algorithms always involve choices between competing values that cannot be made on purely technical grounds and require extensive public deliberation. The "fairness" of algorithms must be understood as a political question and resolved politically, i.e., not optimizing or improving algorithmic techniques but "considering and accommodating diverse, conflicting interests in a society."[18] This parliamentarization of diversity can be found at the heart of the recommendation to companies and governments that when basing their decisions on machine learning they should "explore and enable alternative ways of datafying and modeling the same event, person or action" and the European Commission's proposal that automated processes should be explained in such a way that they can be "duly contested."[19]

Politicization always involves recognizing the constructive nature of political differences. We ought not renounce the epistemological advantages of institutionalized disagreement not only between humans, but also between us and our artifacts. We could even think of the metaphor of a parliament of algorithms and artifacts because there is not one technology but a variety of technologies that assert different procedures and principles. It is in this digital parliament that we would have to weigh and balance technological justifications, the validity of data, the biases of algorithms, the usefulness of automation in a way that resembles how we handle our ideological and interest differences in parliamentary institutions.

CONCLUSION

The debates surrounding the current development of technology are polarized around two positions: those who see this development as an external force that follows its own logic and to which everything must adapt (including states) and those who consider that there can only be legitimacy where a political centrality that accompanies and controls this technological development is assured.

> This polarization is at the origin of another dualism in our way of conceiving the new digital sphere: the utopia that posits that technology solves everything and the dystopia that sees only dangers.

Both have a profoundly ahistorical vision that places power solely in technology and not in the way we humans appropriate it. This chapter argues for the necessity and resilience of politics as a human activity that is not replaceable by technology, although it should undoubtedly benefit from it. For all the shortcomings and dissatisfactions with the way politics is currently conducted, we do not seem to have found a functional substitute for that task which ultimately refers to a collective decision about the common issues that concern us. The great challenge ahead is to resist the charms of the depoliticization of our societies, overcome the inertia of traditional modes of governance, and not be seduced by the falsely apolitical discourse without insisting on practices that do not correspond at all to the new social realities. There is politics where, despite all the sophistication of calculations, we are finally compelled to make a decision that is neither preceded by overwhelming reasons nor driven by infallible technologies.

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