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ORIGINAL RESEARCH PAPER

Where to Political Philosophy of Technology?

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Abstract Technological challenges have recently created a need to more sharply distinguish ethics from political philosophy of technology. Are there compelling arguments that warrant pursuing a political philosophy of technology as an autonomous endeavor aside from an ethics of technology and what would its content be? The present paper responds to those two questions. Via a critical discussion of three existing views on this relationship, I will argue that the best starting point for a political philosophy of technology originates from the prevalence and intractability of reasonable disagreement. I will extend this general suggestion, forcefully defended by Charles Larmore, with the condition that such reasonable disagreement needs resolution in some situations, due to urgency and the suboptimal outcomes that ensue if no decision is reached. Many current technological challenges have those characteristics. In my conclusions, I will briefly outline how investigations of technological utopias could contribute to discussions about reasonable disagreement, thereby, opening a fruitful avenue for future research in political philosophy of technology.

Keywords Political Philosophy · Ethics · Collective Action · Reasonable Disagreement · Charles Larmore · Technological Utopianism

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Introduction

There are several technological crises that are seemingly beyond the power of any single individual to resolve: Technologically induced climate change is the most pertinent, being quite obviously beyond the reach and power of any single individual.[1] Even if groups of individuals enthusiastically and ambitiously pursue their goals – such as scientists establishing climate models or devising technological or political solutions to counter climate change, or activists fighting for changes on a national level –, without a global majority of people and companies changing their emission behaviors towards more sustainability, those efforts, while perhaps not entirely ineffective in slowing climate change, might remain overall futile. Therefore, an approach that provides a more suitable

[1] Though, there are of course many authors who argue that this does not undermine the responsibilities that individuals have. Some even suggest that those responsibilities merely increase the less other people do – ethicists who focus on consequences, are consistent in demanding from those that are responsive to moral reasons that they ought to bring about the outcomes that would be much more effective to bring about if shared by many (and perhaps fairer).

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response to climate change as a complex societal problem in need of political institutions is called for – an approach that exceeds the individualist focus of classical ethical theories which has been at the fore in the past decades. Those previous works for instance focused on the virtues and vices of innovators and other agents involved in technological development [1, 2]. Others have attempted to refine and defend consequentialism to provide a useful backdrop for an ethics in a technologized and globalized world [3]. Can a political philosophy of technology deliver a more compelling and successful response to technological problems than those classical ethical theories with their individualist focus?

If the concept of a political philosophy ought to provide a response to those wicked problems of collective action, we need to establish its originality vis-a-vis previous approaches – ethical theories – that seemingly address such concerns perhaps equally well. After all, problems of collective action have not gone unnoticed in the philosophy of technology: In particular, the fact that climate change is a problem of collective action has been widely acknowledged [4]. Mathias Risse, in the introduction to his highly readable book *Political Theory of the Digital Age*, suggests that currently "many questions for political thought already arise from the increasing presence of digital technology across domains all around us," and assumes that "political thought explores how we should live together" [5]. But this definition of political thought is conspicuously close to the key question that philosophers since Socrates have attributed to ethical thought, which asks: "How should one live?" [6]. The emphasis on 'together' might cloud something that might very well already be implicit in the shorter, ethical question, as we shall explore later in more detail.

So, if political philosophy of technology is to demarcate itself from existing ways of theorizing that tackle, for instance, climate change as a problem of collective action, then what could be its distinct nature as an autonomous field of study and how can its existence be justified? Why – if at all – is it not sufficient to remind individuals of their obligations vis-à-vis the acts of other people in relation to climate change and the subsequent harms [7]?

In the present article, I explore several ways of looking at the relationship between the ethics and political philosophy of technology, wondering what makes political philosophy an autonomous branch of theorizing that might to some degree be pursued aside from ethics, or wholly independently from it.[2]

Three proposals stand out: The first, to be discussed in Section "The Limitations of Ethics, Political Bodies as Agents and Aggregate Consequences", concerns a shift towards addressing collectives instead of individuals as previously suggested. In this vein, in several talks and a recent paper, Maarten Franssen has suggested that we must make the shift from a consideration of what the individual should do, to what we ought to do [8]. However, Franssen's view, although intended to demarcate between ethics and political philosophy, demarcates only self-interest theories from ethical theories (including rational egoism) that do consider the effects of other people's behavior on one's obligations. The second approach, to be introduced and discussed in Section "The Limitations of Ethics, Political Bodies as Agents and Aggregate Consequences", attempts to bring about a collapse of the dichotomy between ethics and political philosophy. This second approach has been termed the 'enactment model' by Bernard Williams. While Utilitarianism might fare better in this pursuit and could succeed, the "can" of such collapse does not imply the "ought". Various reasons to reject such straight-forwardness will emerge from the discussion of a third approach to the relationship between ethics and political philosophy.

This approach, to be discussed in Section "Kinds of Non-compliance and the Inescapability of Individual Agency" and "Reasonable Disagreement Under Conditions of Urgency", considers political philosophy as an important supplement to ethics, because of ethics' apparent inability to motivate those, who are not already to some degree receptive to moral reasons. Carl Mitcham follows in Aristotle's footsteps suggesting that the limited influence

[2] The difference between political philosophy and political theory that Mathias Risse (2023) alludes to in the beginning of his fascinating book appears unclear. If there is a difference, it should not concern the following arguments.

of moral argumentation on behaviour justifies political intervention. Aristotle's argument lends itself in support of a particular form of political power, but it has made one step too many for our present concern by already providing an answer to the question of what kind of institutions or political power – if any – is justifiable. First, we must scrutinize whether there exists a need for it as an autonomous branch and we should not predetermine the results of such exercise. Whether it will lend support to anarchist, liberal, socialist, or other political theories focusing on technology must be left open. I argue that in the pursuit of distinguishing an ethics of technology from a political philosophy of technology, we must not underestimate that whatever the product of a political philosophy of technology is, actual political changes must be instigated by agents capable of responding to the normative demands of such theories, while being thoroughly enmeshed in an existing socio-political context, which is why these two domains must be considered as complementary and not contradictory.

My own suggestion, as I will outline in Section "Reasonable Disagreement Under Conditions of Urgency", builds upon the work of Charles Larmore, in which political philosophy has as its starting point the highly pervasive fact that there is reasonable disagreement about certain normative issues [9, 10]. This view does not imply a commitment to any form of political governance or even a particular way of theorizing about the political. While ethics is concerned with the justification of values and norms including concepts of justice and individual obligations, political philosophy is concerned with justifications of values and norms that can be seen as legitimate considering persisting, reasonable disagreements about the former ethical values. In a brief outlook, presented in Section "Conclusions - Utopianism, Realism and Other Ways of Political Theorizing About Technology", I will outline how a critical discussion about realistic and unrealistic technological utopias could inform such political philosophy of technology.

The Limitations of Ethics, Political Bodies as Agents and Aggregate Consequences

How can we justify an autonomous endeavor in political philosophy of technology and clearly demarcate it from ethical theorizing? In pursuit of an answer to this question, a worthwhile proposal has recently been put forward by Maarten Franssen in various talks, personal conversations and published articles. He emphasizes that individuals in contemporary societies act in global, large-scale technological settings in which both their actions and omissions have aggregate consequences that they would not otherwise have. Reversing or even just halting climate change, for instance, seems to require a concerted effort, i.e. a commitment to behave differently by many individuals (perhaps from some, who can give more, more than from others, who cannot give that much). Without committing to a particular ethical theory, Franssen draws a wedge between ethics as concerned with an individual's action as a disparate unit and political theories that are concerned with aggregate consequences of those individual actions. He expresses this as follows:

> *"[E]thics judges, prescribes, and assesses the actions, choices, and attitudes of individual human beings. [But] it is highly contentious … to what extent [its conclusions] remain valid once we start to ascend levels of aggregation. The 'problem of many hands' is notoriously ubiquitous in engineering and technology…. The philosopher's choice of ethics as the conceptual framework for approaching issues concerning the assessment and evaluation of technology's role in society runs a serious risk of obscuring rather than clarifying. The general domain of philosophical reflection on values and normativity is in fact separated — inevitably in view of the complexities caused by aggregation — into ethics for the individual level and political philosophy for the societal level"* [8].

One of the central premises of Franssen's version of this – as we might call it – 'limitations of ethics' view is the assumption that ethical theories draw a boundary around the individual and its sphere of influence too tightly. They allegedly consider the individual and its actions as a separate unit, somewhat causally independent of others. However, it is highly doubtful whether that is indeed how ethical theories consider individuals and their actions. On the one hand, proponents of all major ethical theories have equipped their accounts with theoretical resources to handle the far-reaching consequences of aggregate individual actions: Peter Singer's *One World Now* [3] is an example in a utilitarian spirit. Otfried Höffe and Shannon Vallor accentuate particularly the virtues of modesty and anticipation in their virtue ethical frameworks for a technological age [11, 12].

On the other hand, upon closer inspection, it seems that Franssen has inadvertently not demarcated ethical theories of the Kantian or Utilitarian sort and political theories, but ethical theories and self-interest theories. This is an important difference, and it would mean that Franssen's argument lends no support for an endeavor in political philosophy. From the literature on Prisoner Dilemmas and Tragedies of the Commons [13, 14], which are dilemmas of collective action, we learn that outcomes for everyone involved can become worse if people act selfishly without taking the actions of other involved agents into account. Tragedies of the Commons might be characterized as situations in which the worst possible outcomes ensue, if all or most agents act in their own self-interest. Prisoner Dilemmas are structurally similar, though they usually involve only two agents. The two agents end up with the highest prison sentence, if each of them cooperates with the authorities, while either one of them would individually get the least sentence (perhaps go free), if one cooperates while the other one does not. The classic case of a Tragedy of the Commons in which several agents are involved is overfishing:

> "*There are many fisherman, who earn their living by fishing separately on some large lake. If each fisherman does not restrict his catch, he will catch within the next few seasons more fish. But he will thereby lower the total catch by a much larger number. Since there are many fishermen, if each does not restrict his catch, he will only trivially affect the number caught by each of the others. The fishermen believe that such trivial effects can be morally ignored. Because they believe this, even though they never do what they believe to be wrong, they do not restrict their catches. Each thereby increases his own catch, but causes a much greater lowering in the total catch. Because they all act in this way, the result is a disaster. After a few seasons, all catch very many fewer fish. They cannot feed themselves or their children*" [14].

Taking other people's behavior into account and striving for the Pareto optimization in outcome, exceeds an individualist framework of thinking. Crucially, as Derek Parfit outlines, Prisoner Dilemmas drive a wedge not between ethics, as an endeavor that justifies individual duties and obligations seemingly disregarding other people's behavior and political philosophy that is collectivist, but between self-interest theories (S) that are individualist and common-sense morality (C). The self-interest theories can only rescue themselves from being self-defeating regarding Prisoner Dilemmas by giving up on the claim that they provide an answer on what one (we) ought to do in such situations. They can rescue themselves only if they present themselves as theories of individual rationality and not as theories of morality: "Since S is a theory of individual rationality, it need not be successful at the collective level" [14]. Parfit does not determine whether individual rationality or morality wins the standoff about what to do in Prisoner Dilemma situations. Rather, he invokes the perspectives that Franssen also alludes to, only that he more clearly sets them apart as self-interest theories and moral theories (common-sense morality), rather than as ethical and political theories. Parfit goes on to say that C, which is a theory that aspires to be a theory about what one (collectively) ought to do, is entangled in other problems of collective action: Individual acts that common-sense morality usually considers morally innocuous, become highly problematic if many people are doing them simultaneously (e.g. driving to the grocery store by car, or ignoring trivial reductions of fish each season that grows into a large reduction over time, see example above), which Parfit considers as failures of moral mathematics. Additionally, giving preference for the needs of one's own children, which C sees as morally innocuous, can form the basis of dilemmas that are structurally similar to Prisoner Dilemmas. But, Parfit makes clear that C can be amended with additional requirements and, thereby, satisfactorily handle Prisoner Dilemmas and other pitfalls of collective action. Through such revisions, C might slowly transform into a sophisticated form of consequentialism. He writes to the point: "[…] a moral theory must be successful at the collective level" (p. 113).[3] Hence, Franssen's proposal cannot provide the demarcation between ethics and political philosophy if ethics is already understood to take into account the actions of various other individuals in the way in which Parfit and many other authors do. Franssen has fallen prey to an equivocation.

A second view on the relationship between ethics and political philosophy asks whether political philosophy could be straight-forwardly conceived as a branch of ethics – a derivative of ethics, so to speak, with a collective focus. Can ethical theory deliver that? If that were so, we would not need a political philosophy of technology as a distinct theoretical undertaking. It is worth scrutinizing whether ethics would be capable in some more specific sense to resolve problems of collective action. As we have seen, ethics is often said to be primarily concerned with the actions and intentions of individuals. Kantian philosophy, for instance, is particularly constructed as a response to a decidedly metaethical problem, namely the Humean attempt to reduce ethical beliefs to moral sentiments. Kant is unconvinced by such ethical reductivism and considers this an affront against what ethics is supposed to be about. Ethics, in his view, is the exact opposite of acting based on preferences and moral sentiments.[4] Preferences are arbitrary, and ethics shall not be arbitrary – it must be universal. Kant, therefore, construes deontology in opposition to theories that allegedly ground morality in the moral sentiments of individuals. While Kant's claims about universalism suggest that moral principles are applicable in an abstract way to all agents with the capability of considering what to do and to follow reasons, this also means that his ethics is tied tied to (most) human individuals: The Categorical Imperative demands that one considers whether one can want the maxim of one's actions to become a universal law. In her introduction to the *Groundworks*, Christine Korsgaard writes about the relation between agent, maxim and duty: "Kant thinks that performing an action because you regard the action or its end as one that is required of you is equivalent to being moved by the thought of the maxim of the action as a kind of law. The dutiful person takes the maxim of helping others to express or embody a requirement, just as a law does. In Kant's terminology, she sees the maxim of helping others as having the form of a law. When we think that a certain maxim expresses a requirement, or has the form of a law, that thought itself is an incentive to perform the action. Kant calls this incentive 'respect for law'" [16].

This suggests a prima facie limitation to transfer the Kantian framework to entities and agents that do not have maxim-forming capacities, including perhaps political institutions (e.g. governments, parliaments etc.). One might think that if political institutions were incapable of forming maxims, then this causes a need to establish other principles or duties for such bodies incongruent with those of deontology, which do not contain reference to maxims – such

[3] And he is very clear that this is an aspiration that Kant's theory definitely contains: "One example is a Kantian morality. This tells each to do only what he could rationally will everyone to do. The plans or policies of each must be tested at the collective level. For a Kantian, the essence of morality is the move from *each* to *we*." (p. 92) Of course, Parfit also acknowledges that politics can provide solutions for Prison Dilemmas and Tragedies of Commons (p. 87). Politics can redesign these situations and, thereby, prevent the dilemmas from emerging: It can facilitate communication between the prisoners, or deter overfishing, by setting thresholds to the amount each fisherman is allowed to take out without penalty. Thereby, these situations lose their dilemmatic character and what is morally best starts to coincide with what is best in terms of self-interest. However, if morality were to work (against self-interest), then there would be no need for political intervention. Whether morality or ethics work is, however, a different question to be addressed in Section "Reasonable Disagreement Under Conditions of Urgency" below.

[4] David Wiggins analysis of this intriguing philosophical opposition is highly illuminating [15].

practice could form the central goal of a political philosophy.[5]

Such reasoning, however, is fallacious. The argument only shows the limitation of applying Kant's theory. The need for a political philosophy to determine the principles of political institutions and bodies is not implied by the limitation argument that I have just sketched. One could argue to the contrary: If everyone were to act according to deontology, then there would be no need for such an exercise of thinking about the duties of political institutions, because there would be, perhaps, no need for such institutions at all. Of course, many – including Kant himself – would disagree and suggest that non-compliance with deontological demands is widespread. Kant explains and justifies a distinct need for a type of social contract and political sovereignty in his *Idea for a Universal History with a Cosmopolitan Aim*, in which he underscores that "out of wood so crooked and perverse as that with which man is made of, nothing absolutely straight can ever be wrought" [18]. So, his political theorizing is established as semi-independent from his ethics. I will return to this suggestion later in my analysis of Aristotle's version of the "limitations of ethics" argument – an argument that has been endorsed by Carl Mitcham.

So far, we have seen an example of an ethical theory that justifies principles, duties or virtues applicable to individuals, which is essentially limited in its scope to individuals, and seems at first sight unapplicable to political institutions. It may seem that political theory is, therefore, justified to fill in the theoretical vacuum that has emerged here. However, even if we were to grant the unsuitability of Kant's theory, a distinct argument is still missing for why a political philosophy is needed that fills the vacuum left by the limits of ethical theory better than economics, game theory or other forms of theorizing about institutions.

Of course, there are other ethical theories that are not tied to maxims, and are, therefore, not limited in their scope of application to human individuals capable of employing maxims: Utilitarianism is one such theory that has often been proposed as lending itself as the most natural candidate to normatively guide political action [19]. We shall return to this in a moment. A crucial step in the previous argumentation concerned the possibility of viewing a political institution or body as a form of agent, capable of forming maxims or intention. There is substantive dispute about this possibility in the philosophical literature, which cannot be resolved within the scope of the present article. I have expressed elsewhere, why I am skeptical about such attribution [20]. For now, we must note that it does not instill much confidence, if the justification of a political philosophy of technology as an autonomous domain hinges on a premise about the agential status of political institutions or bodies – namely that it is dubious or impossible to attribute them such status. In fact, it might be all too easy to enhance ethical theorizing under the auspice of accounting for this – simply assuming the condition that these bodies can, in fact, be treated as agents of sorts and then impose moral duties on them. Thus, we are still in search for a compelling feature that clearly demarcates and justifies an autonomous endeavor that is the political philosophy of technology. Or, are there better candidates that allow us to fully overcome the dichotomy between ethics and political theory?

Utilitarianism seems the most obvious candidate to look at: At first sight, utilitarianism seems to lend itself well in its ambition to take aggregate consequences into account as both Derek Parfit and Peter Singer underscore, and it does not rely as obviously

[5] There is, of course, another formulation of the Categorical Imperative, whose application does not run into the same predicament. Furthermore, Kant has much to say about political philosophy. He develops an expansive theory of (legal) rights and a contractarian idea of political power. His account of rights is based on what he calls the "universal law of freedom" and suggests that right "is therefore the sum of conditions under which the choice of one can be united with the choice of another in accordance with a universal law of freedom." (6:230) In subsequent passages of the *Metaphysics of Morals*, he is quite explicit about the distinction or limitation that I have outlined before. He writes: "All duties are either *duties of right* […], that is, duties for which external lawgiving is possible, or *duties of virtue* […] which external lawgiving is not possible. Duties of virtue cannot be subject to external lawgiving simply because they have to do with an end which […] is also a duty. No external lawgiving can bring about someone's setting and end for himself (because this is an internal act of the mind), although it may prescribe external actions that lead to an end without the subject making it his end." (6:239) He goes on to suggest that the "concept of right" can only be explicated after we have grasp of the "moral imperative". In other writings (e.g. Theory and Practice), he also suggests that there are particular (moral) duties that citizens have in relation to their states and the laws that its rules have established (8:301). Here, maxims play an important role. For a more general introduction into Kant's political philosophy (see [17]).

as Kant's theory on the attribution of a questionable form of agency to political institutions. Shelly Kagan suggests that applied ethics is a mere application of the principle that normative ethics reveals as being consistent and valid.[6] Political philosophy denominates the very same practice only concerning acts and values within the political domain: Who ought to hold power over whom, what are those authorities allowed to do, etc.? As Kagan writes: "Accordingly, the attempt to apply the general principles of normative ethics to particular difficult or complex cases is itself an important part of moral philosophy. It is called applied ethics, and doing it well can be a quite challenging and subtle undertaking […]. Indeed, in some cases entire specialized subfields have developed, devoted to problems in medical ethics, business ethics, and so on. I think in fact that the entire field of political philosophy can legitimately be viewed in this way, as one (vitally important) branch of applied ethics – one devoted to problems about the justification of the state, the use of power, and the merits of alternative forms of government" [21]. This view suggests the distinguishability of ethics and political philosophy not by nature or in terms of the principles defended, but merely in terms of the domain. Stronger even, the view suggests that political philosophy just like applied ethics is a derivative of normative ethical theory.

Bernard Williams calls this the 'enactment model': "The model is that political theory formulates principles, concepts, ideal and values; and politics […] seeks to express these in political action, through persuasion, the use of power, and so forth" [22]. Hence, one would first have to establish and justify the normative principles that can be consistently upheld and then resolve cases in which individuals act and determine what they ought to do and how to enact political decisions.

The view is familiar from the utilitarian tradition, which Williams considers a paradigmatic case of the enactment model: Many utilitarians consider its core principles to be equally applicable to the realms of individual action and politics. Henry Sidgwick, for example, suggested that "utilitarian ethics seems independent of politics, and naturally prior to it; we *first* consider what conduct is right for private individuals, and *then* consider how much of this they can advantageously be compelled to by legal penalties" (own emphasis, 1981, p. 457).

That seems to be one of the key appeals; the neatness of the view that all sorts of normative problems both in the realm of individual action and politics ought to be guided by utility considerations [23]. The same principles ought to guide policy making that in turn guides individual decision making. For each act (or policy) a utility calculation could give an answer concerning its desirability. Utilitarianism is flexible enough to lend itself to provide meaningful answers to various socio-political challenges – including those that involve technologies: Whether to prohibit freedom of movement during pandemics, to get into armed conflicts with other groups or nations, or to technologically enhance human beings – utilitarians know how to answer such concerns in principle. Whether one agrees with them or not, such proposals are socio-politically viable views that have been held and continue to be held.

Miller and Dagger, therefore, suggest that "[t]he strongest argument that can be made on its behalf is perhaps that [utilitarianism] can provide coherent guidance to legislators and policymakers, who must consider the general long-term consequences of the decisions they make and the overall welfare of the people affected by those decisions" [19]. In

[6] Kagan's simplistic views on the relationship between ethics and politics are somewhat surprising. He is an apt scholar of Henry Sidgwick, whose remarks on that relationship are more complex and must have been known to him. Sidgwick believes that ethics sets the boundaries for what morally acceptable political interventions can be and that laws give rise to *prima facie* duties: "It is the business of government by laying down and enforcing laws, to regulate the outward conduct of the governed, not in one department only, but in all their social relations, so far as such conduct is a proper subject for coercive rules. And not only ought this regulation to be in harmony with morality – [a] for obviously people ought not to be compelled to do what they ought not to do – but further, [b] to an important extent the Law of a man's state will properly determine the details of his moral duty, even beyond the sphere of legal enforcement." (1981, p. 16) Regarding b), Sidgwick goes on to wonder whether one ought to be guided by the laws as they are, or by the law, as how they ought (ideally) to be and seems to be sceptic about the latter way of approaching this. He suggests: "For the method that proposes universal happiness as an ultimate end and supreme standard, the question is simpler: In our efforts to promote human happiness here and now, how much are we likely to be helped by systematically considering the social relations of an ideally happy group of human beings? I shan't deny here that this approach might be useful, but it's easy to show that it is involved in serious difficulties." (pp. 20 f.)

this sentiment they echo Williams' assessment of the "simplicity" and quasi-aesthetic appeal of the utilitarian theory and its universalizability not only over all sorts of agents, but also across the individual and political sphere of action. So, why not then consider political philosophy as an extension of the branch of ethics because we only need to rely on suitable ethical theories? So far, we have only shown that there are ethical theories that aspire and might succeed in substituting political theories and that they can provide principles which could guide institutional and individual actions alike – but we have not yet shown that politics should be guided by them. 'Ought' implies 'can' but it is not the other way round. Utilitarianism could function as a political theory, so much can be granted. But ought it?

There are two distinct problems that the application of any ethical theory to politics causes, which are interwoven. The first problem is that the mere application of ethical theory to the realm of politics will face disagreement: Certainly, no majority of people will in the foreseeable future willingly endorse or follow the policies that are suggested by utilitarian calculations. Even, if the demands of utilitarianism are lowered so that a majority would agree and comply with them, unanimous acceptance of those demands is improbable. This leads to fundamental practical and moral problems that challenge the straight-forward application of any ethical theory in practical politics, namely that their implementation will predictably lead to resistance, and might, therefore, fail to foster compliance or prove entirely illegitimate. The second problem concerns the apparent lack of justification for adhering to the enactment model in the first place. Why should we derive political decision-making from any ethical theory in the first place? Aristotle attempted an answer to this question underscoring the non-compliance of many people with the demands of morality. We will see that this argument does not support the application of ethical theory to politics, and – additionally – that Aristotle equivocates a justification of particular forms of political intervention with a justification for the need of political theorizing by assuming that certain political responses are appropriate to deal with non-compliance (e.g. coercion and punishment).

The Aristotelian view is interesting and will help us to introduce and explore both problems in more detail in the following section. The existence of policies that are disagreed with, or, agreed with but not complied with, creates the major challenge that provides the grounds for a political philosophy of technology to commence as an autonomous field of study, as I will outline in the following section. Yet, we will first have to clarify that the real challenge that supports this endeavor is not the Aristotelian concern about non-compliance, but the problem of reasonable disagreement that is somewhat hidden between the options sketched above. To this, we shall turn now.

Kinds of Non-compliance and the Inescapability of Individual Agency

Carl Mitcham, in his brief provocation on the importance of a political philosophy of technology, sides with Aristotle's view on the matter [24]. He affirmatively refers to a passage in which Aristotle suggests that ethical arguments "are insufficient to encourage the many to nobility and goodness" [25] (NE X, 9). According to Aristotle, such ethical arguments can only stimulate those who already have reached a decent threshold of virtue and are disposed to take them into account. Mitcham believes that this way of reasoning supports his plea for a need for a political philosophy (of technology). But does it?

It is crucial to point out that if we utilize the Aristotelian argument in defense of a political philosophy of technology, we are falling prey to another form of equivocation. We can understand the argument in a similar way in which Hobbes' views are often understood [26]: Hobbes suggested that human nature is selfish and corruptible. Political authority and political power are justified, because without them, we would descend back into chaos and violence [27]. It is, therefore, rational to relinquish some degree of sovereignty and hand it over to a state to prevent chaos and life in permanent insecurity. Although it is beyond the scope of the present paper to engage with either of these authors in an exegetically adequate way, we can understand Aristotle here as making a very similar argument: Moral imperfections make humans only partially receptive to moral arguments, therefore, we need government and politics to further – as Mitcham writes – "deal with questions of good and evil in an engineered and engineering world" [24]. Mitcham seems to understand "dealing" here as exercising certain forms of political power through the law and the executive branch etc. (see footnote 8). That argument, however – and herein lies the equivocation – is an argument for a particular form of exercise in political power and the rationality of relinquishing some degree of individual sovereignty. It does not serve as an argument for a political philosophy (of technology). The argument has gone a step too far. Defending this as a particular form of politics might be the result of engaging philosophically with political theory, but it is not entailed by it.

There is an additional concern worth exploring: Once we separate and understand the manifold causes for the non-compliance with moral arguments that Aristotle points out, we see that many of these causes pose a moral challenge for the exercise of political power and coercion rather than supporting them. Again, without the aspiration to provide an exegetically comprehensive analysis, there are passages to be found in the Nicomachean Ethics (NE) in which Aristotle is quite explicit regarding the use of (severe) political force: "The bounty of nature is clearly beyond our control […]. And when a man is in that state [being non-receptive to reason, listening only to feelings], how is it possible to persuade him out of it? In general, feeling seems to yield not to argument but only to force" ([25] 1179b, pp.21–29). He goes on to suggest rather harshly that "[legislators] ought also to inflict chastisement and penalties on any who disobey through deficiency of character, and to deport the incorrigible altogether".[7] (1180a, 5–11) But, is such exercise of force really justifiable, or do these cases make the exercise of coercion and punishment rather particularly dubious? I will in the following neglect the a subtle difference between obstacles to the receptiveness to moral reasons and the obstacles to act upon such moral reasons to which I will return later in Section "Reasonable Disagreement Under Conditions of Urgency".[8]

First, non-compliance with moral reasons might be the product of an inability or too high demands. There are moral demands that, for instance, ask so much sacrifice of a person that most people cannot bring themselves to such commitment. Consider a person who would have to sacrifice an important relationship or even the life of a loved one to rescue a drowning person. Such sacrifice is usually considered as supererogatory and absolves the agent from blame: Agents are excused if they do not comply with such demands [28].

If agents are not able to do something that is requested from them because they are incapable or the demand is too great, then they also should not be politically coerced to do it. Just as in ethics, the political or legal 'ought' must also imply a 'can' (see [29]).

Hence, once Aristotle's remark is analyzed in this way, we see that some forms of non-compliance are also shielded from political coercion: We must morally restrict the political influence that would demand those things.

For each of the foregoing discussed cases, there are, of course, policies that are very unlike prohibitions, coercions or direct exercises of power. Those interventions are on the surface less morally problematic than direct political force and might work in increasing the compliance of those who perceive the demands that are placed on them as being too high. Consider the Dutch policy of reducing taxes for experts in certain job areas (e.g. academia) who come to the Netherlands to work there. Such policies are in fact enablers rather than prohibitors. They do not sanction or coerce behavior; they are intended to incentivize certain behavior or nudge behavior towards the right ends [30, 31]. Such measures cannot sway people that are incapable of living up to a demand, but they might yield positive results in the case of people who perceive their sacrifice as being too high to comply with a demand. The nudge might tip the scale and render the sacrifice worthwhile in view

[7] "For it is the nature of the many to be ruled by fear rather than by shame, and to refrain from veil not because of the disgrace but because of the punishments. […] What discourse could ever reform people like that? To dislodge by argument habits long embedded in character is a difficult if not impossible task." (1179b, 11–19).

[8] Aristotle himself is ambiguous about his primary target, sometimes speaking about "reform" with a view on people's behavior, sometimes of the receptiveness to moral reason: "Now if discourses [sic] were enough to make people moral […] to provide such discourses is would be what is needed. But as it is we find that although they [the discourses] have the power to stimulate and encourage those of the young who are liberal-minded […] they are incapable of impelling the masses towards human perfection." (1179b, 4–11).

of the newly emerged expected benefit (e.g. tax reduction). But, on the one hand, it is unclear what the scope of application for such nudging policies is: How could non-coercive policies such as these be broadly applied so as to disincentivize fast and drunken driving or separating garbage? On the other hand, depending on the type of nudge or incentivizing structure, the politically intended results might have been ensued by way of morally problematic manipulation [32].

Hence, in this interpretation of Aristotle's concern with non-compliance with moral reason, we find politics to be no great response either, oftentimes verging towards the imposition of morally unacceptable demands.

But, let us set aside for a moment the moral issues entailed in coercing those who cannot comply or would have too much to sacrifice. Such policies would still face another concern. It is after all individuals who enact political schemes. If the problems of inactivity and non-compliance is a problem that affects ethics, then the move to "unload" or "defer" it to the realm of politics does not entirely resolve it. It only moves it upwards. The very same concern about inactivity – it is not only a lack of individual compliance that poses a problem for effective climate change mitigation that needs to be politically solved, but also a lack of wholehearted politicians who strive for such political goals – reappears on another level of social organization. Political agents are the agents who must be capable of engaging with ethical reasons to remain responsive to political needs [1]. There is an inescapable prerogative of agency to be addressed in ethics and political reform. Contra Kagan, who thinks that political philosophy is a derivative of ethics, we see now instead that ethics and political philosophy appear more complementary – either directly addressed at the citizens or addressed at the politicians and stakeholders to exercise their political powers. This indicates that – if there is a distinction between political theory and ethics – they need to be complementary, and neither will have a "methodological prerogative". Agents are constrained or empowered by socio-political systems in which they already act and if they ought to reform those systems, they must be susceptible to the reasons that demand them to implement some changes or other towards an improved socio-political system. There is currently no Münchhausen trick in sight that would allow us to reform political systems without a reformer or have politics without politicians.

If those attempts at a justification of political theorizing fail as they overshoot their target and underestimate the relevance of agential reason-responsiveness, how, then, can we justify political philosophy of technology as a more or less autonomous branch?

Reasonable Disagreement Under Conditions of Urgency

There is another interpretation of the Aristotelian concern about non-compliance with moral reasoning that is the most intriguing one. There are people who do not want to do certain acts, not because they are incapable or too high demands are imposed on them, but because they disagree with them. They might disagree either because they entertain misleading or faulty reasons, or they disagree for reasons that are good.

Consider, a person, who thinks – wrongly, I believe – that climate change is a fiction and, therefore, although they accept in general the moral idea that there are duties towards living and future people, their consumption and omission habits might remain unchanged. The descriptive premise plays a role in the moral argument, and they entertain a different belief than many of us about that premise – a wrong belief, we would say. Politics, Aristotle might argue, is there to coerce or incentivize such people that are both able and not in danger of sacrificing anything of great magnitude to reduce their emissions. It is a shame, he might add, that they themselves do not have a clearer view on the moral importance of that ambition and the factual basis of the argument.

Still, this is morally and epistemically contentious. It is morally contentious because we are overriding the autonomous desire of someone.[9] And it is epistemically contentious, because we assume the position of someone who claims to know better – in this case concerning a factual matter, but more often

[9] I am very grateful to a thoughtful reviewer who pointed out that the moral concern I am expressing here about the Aristotelian argument for practical intervention underlies a difference in our understanding of liberty and autonomy. Indeed, implicit in my present claim is that autonomy worthy of being protected from force, can entail the rejection of something that is seen as objectively good or valuable. Aristotle might not negate the autonomy and – subsequently – merit of someone who disobeys or rejects what he considers to be virtuous or good.

regarding which duties and obligations individuals have. Both of these concerns intertwine: Because there is a possibility of factual and moral error on our side, the imposition of coercive measures is morally contentious as they would directly conflict with the reasoned wish of an autonomous person [33].[10] This tension is heightened if the non-compliant person disagrees for reasons that are compelling or, at least, considerable.

In short, Aristotle's idea that politics jumps into action when ethics fails to motivate is both morally as well as epistemically problematic. It is morally problematic because the reasons for non-compliance with moral demands might undermine the legitimacy of political actions or cause practical, and thereby, subsequently moral problems. If there are no such concerns, e.g. regarding some forms of nudging, then there is at least controversy. Such controversy about what to do, I believe, forms the hallmark and nexus of political theorizing proper – not the justification of particular political interventions or institutions.

The previous discussion has naturally moved us to recognize an important difference that Charles Larmore has carefully outlined and wherein he expounds the sources for political theorizing as an autonomous realm. It is the difference between having reasons to do certain things and having reasons to demand others to do those things. Many of us are convinced of the reasons – say *R*—to reduce meat consumption, stop using social media technologies and travel less to reduce our impact on climate change. But this does not imply that those who might not agree with those reasons ought, or should even be forced to do those things. The reason for the act of "demanding from someone to Φ" or "coercing someone to Φ" are incongruent with *R* [9]. In this gap, between demanding something from others and having a reason to do said thing, lies a gap to be filled by political theorizing. The gap is most complex and opens a distinct avenue to be filled by political theorizing with a particular class of arguments to be considered:

> "*For it must adopt a more reflective stance than is typical of moral philosophy. It needs to concern itself with how our common life should be authoritatively structured in light of the fact that moral philosophy, and moral thinking in general, so often proves controversial and divisive, even among the most reasonable people. Therein lies the autonomy of political philosophy*" [9].

This general idea of Larmore is, I believe, correct. Though, there is one condition that needs to be added. It still seems that reasonable disagreement, of such kind, is a salient feature not only in politics but also in ethics: It seems that there are reasonable disagreements about what ought to be done concerning individual actions and ethical reasoning seems perfectly well-equipped to deal with it. I often have such disagreements with my wife regarding the education of our child or similar concerns, and I invite the reader to think of their own examples here. In my view – though perhaps not in my wife's – we entertain equally compelling viewpoints about these matters of education and upbringing that remain unfortunately incompatible. In many of these instances, it would seem preposterous, if I were to claim that my wife's views are simply wrong. They are the product of differences in how we evaluate and perceive certain risks and opportunities, and how much of those risks we think are acceptable to impose on our child. They are, thus, also a product of different values and how much we value certain things (e.g. a liberal education). There is no decisive rational flaw in either of our viewpoints – still they are mutually incompatible and contradictory. Such situations are, thus, not unfamiliar. Those are situations of reasonable disagreements.[11] Reasonable viewpoints stand in such ordinary situations diametrically opposed. In many of these instances, though, we can afford to not having to settle those matters immediately without undermining the

[10] Scanlon is quite correct in saying that the grounds to object to coercion are varied and that the concerns about all sorts of coercion that Libertarians articulate are not equally compelling (p. 102). Nagel suggests in the same vein that those who want to protect individual liberty must reasonably accept some constrains to their freedom to make use of their liberties in a safe, flourishing and politically stable society [34].

[11] In agreement with my colleague Eugen Popa, I doubt that all those disagreements remain indefinitely irresolvable [35]. I would rather add that the urgency makes it important to find a resolution on how to proceed before an argumentative resolution can be found. In this sense, my view of political theorizing is that it could provide and justify the norms for what Popa calls "rational conduct" to get out of the disagreements.

possibility of having constructive conversations about those matters in the future. Ethics is not immediately at a loss here; it provides us with heuristics about moral dissent in ordinary life. The questions at hand are hardly ever irreversible and we can often afford to return to such conversations, after processing more information, to then consider the issues from a different angle. My wife and I must at one point enlist our child at a particular school, though we know months in advance that the deadline for enrollment is coming, and, in the worst case, we can revise our decision and enroll him to a different school, if our initial choice is disappointing. Such reversion has costs, but they are neither unbearable nor disproportionate. Hence, we have a possibility for reversibility. That, I believe, is the privilege that we do not have in many instances of political decision making – in particular in light of large-scale, global and highly transformative technological developments. Reasonable disagreement under conditions of urgency are highly prevalent and they provide the crucial challenge for ethical theorizing, so as to warrant a political theory to step in. Climate change, global justice, superintelligent technology, state surveillance, and germline editing might be topics of a very different nature than child upbringing: if they remain unsettled, conversations about them postponed until the disagreements about them are settled and either side contently agrees with the other, it will most likely be too late [36]. Our very livelihood and the conditions for an ongoing conversation about morality might be threatened or undermined. Hence, political theorizing will have to provide an answer how to move forward in such situations of reasonable disagreement under the auspice of enormous urgency to avoid worst case scenarios that have those consequences and undermine the possibility of future moral discourse. The situation resembles more the question which movie to watch on a certain occasion. If one cannot agree about the two movies that the cinema is playing, there remains an urge to settle the matter and not settling it might lead to the worst outcome – that time to watch any of the two movies has run out. Political theorizing has much to contribute to the resolution of such equilibria. This, I believe, justifies the need for a distinct form of political theorizing, clearly demarcated from ethics.[12] In the particular case of the movie, one might probably suggest flipping a coin to simplify the decision and avoid the collateral damage [37]. Though, such simple solutions are unavailable in the high stakes contexts that technological societies have maneuvered themselves into, not least because there are not only two agents involved that entertain contrary views, but instead very many agents that hold a variety of different views and entertain a variety of different assumptions.

Conclusions—Utopianism, Realism and Other Ways of Political Theorizing About Technology

What I have defended so far is that the need for a political philosophy of technology arises out of the existence of reasonable disagreements about what one ought to do, conjoined with the urgency that those disputes lead to the worst possible outcomes, if they remain unresolved. This is often the case in the context of technological developments. Of course, a justification of the need for a political philosophy of technology to resolve such issues does not yet entail what the content of such a project would be. In other words, my arguments until this point do not entail how to respond to the challenge of reasonable disagreement in situations of urgency.

In the following concluding remarks, I want to outline one possible avenue for a political philosophy to fruitfully commence.[13] In attempting to resolve the

[12] Ethics, of course, knows disagreements about what one ought to do, but it is not unusual in this domain that such issues can remain unsettled: I would be glad and it would be better, if my neighbor at the table agreed with me on the moral need for vegetarianism, but we will not be overall terribly worse-off, if we do not resolve the matter on that very evening.

[13] It will be clear in the following that although the justification for a distinct need for political philosophy is based on the realist assumption about disagreement, that idealizations of the sort present in technological and other utopias can play a role in resolving those disagreements in an acceptable manner. I am here in agreement with Larmore, who writes: “Both [idealism and realism] contain an important element of truth, but both are also unsatisfactory, and to remedy their failings political philosophy needs to move beyond this habitual opposition. It must indeed focus on the characteristic problems of political life, which include widespread disagreement about morality, and for just that reason it demands a significant autonomy from moral philosophy. Yet it cannot determine how these problems are to be addressed except by reference to moral principles understood as having an antecedent validity, inasmuch as they serve to determine how the authoritative rules of society are to be established. Political philosophy must be a more complex enterprise than either of the customary positions assumes, if it is to heed these two imperatives.” (2013, p. 280).

problems of reasonable disagreement, as described above, one might abstract from or ignore one or more features of the situation. One could, for instance, suggest that one way of approaching such situations of reasonable disagreement would be to ask oneself what the best thing that ought to happen next would be. Note, that this shifts the way we approach reasonable disagreements such as these from the concern about which one of the two given pathways A and B open to the agents is more justified and should, therefore, be followed. Instead, the process of idealizing takes a step back and wonders whether other options C or D that have not immediately come to our attention, because they appeared unrealistic at first, would be even better. Regarding the movie night, for instance, we could imagine that the best thing would be, if there was a third movie at play, or it would be best, if one could watch both movies, one after the other, or that one would in general be less under the influence of the entertainment industry and rather have different preferences altogether. Suggestions such as these divert the discussion about what ought to be done away from the given pathways – often perceived to be without alternatives – and force one to creatively rethink the dilemma one finds oneself in.

Thinking in terms of ideal scenarios – utopian thinking in other words – is beneficial: It might encourage one to take a step back and abstract from one's current particular circumstances (estrangement), critique previous approaches to this and similar topics (subversiveness) and innovate in important regards the outlook that one perceives as inevitable (innovate). Together, these cognitive functions are joined by practical functions: The confrontation with utopian thinking, including technological utopias, presses us to rethink the context of action and the problem at hand, and it might also lead to regain the motivation to tackle the problem differently and instill hope that what feels like an inescapable impasse, remains only a temporary one. As I have argued elsewhere [38], in a way that is familiar to Utopian Studies [39] – where technological utopias are often decried as elitist and dangerously shortsighted [40] –, looking at various technological utopias can help us understanding better how we could resolve reasonable disagreements and which role technologies could play in this regard. Both of these questions – what is the good society that political interventions ought to bring about and how to bring it about – are intertwined. While it often appears that technological utopias focus on the latter – the instruments that bring about the good society – these instruments are not only means. They are constitutive of how the good society can possibly look like.

One's view on the good society naturally tends to be much bleaker if one assumes that human nature is inescapable, including its lack of altruism, mortality, the divergencies in natural endowments, combined with the other realistic assumptions such as material scarcity and informational constrains [41]. Technological utopias challenge those presumptions about the scope and location of justice in manifold ways and by doing so they might contribute to a more advanced picture of a good society. They suggest that human nature can and should be altered, that material scarcity and mortality are not inevitable and that we can overcome information and knowledge constrains. Whether realistic or not, such pondering might fulfill the functions of estranging us from contemporary disagreements about practical questions and seeing the disagreements and our own positions in them in a different light, and to develop innovative ways of overcoming them. Therefore, technological utopians and investigation of the content, structure and the role they attribute to technology in achieving such ideal societies are worthwhile engaging with.[14]

This way of approaching reasonable disagreement under conditions of urgency by way of studying technological utopias and their impact on our idea of the good society is by no means the only way of approaching this unique challenge for a political theory. Other studies – e.g. about the solidification of power structures and their manifestation in technological artefacts as proposed by Glen Miller [42], for example – could be intertwined with the foregoing reflections (Which role does power play in technological utopias, can technologies dissolve the perceived need for political sovereignty?) or pursued in parallel. So, while this might not be the only point of departure for a political philosophy, I would suggest an investigation into what ideal technologies are and what we can learn from them about the possibility of creating a more just society.

[14] The same, of course, appertains to dystopias – whose functions are also cognitive and critical, as well as motivational. Though, they aim at deterring from (e.g. usage of certain technologies) rather than galvanizing action for (e.g. experimenting with new forms of communal living).

At this point, we can return to the concern with which we began: We asked whether we could justify an autonomous way of approaching philosophy of technology, one that is decidedly political and, thereby, distinct from an ethics of technology. The pervasive fact of reasonable disagreement under conditions of urgency provides such a starting point. We risk morally illegitimate political interventions into engineering projects and technological processes if we do not take the pervasiveness of reasonable disagreement into account and merely start with the observation that many people do not comply with the demands of morality. The conclusion from this – assuming that some people have good reasons for their non-compliance – must not be that we ought to coerce them to do the right thing. Political philosophy must be sharply distinguished from politics as the complex activity of social collaboration that entails campaigning, legislating, governing and the forming of coalitions. Both ethics and political philosophy are theoretical disciplines that analyze values and norms and justify them, whereby the latter focuses on the norms that ought to resolve situations in which people reasonably disagree. Political philosophy, in this view, falls in-between the Aristotelian view of politics as a practice that shapes people according to predetermined ethical norms and their mere justification in theoretical ethics that potentially remain impractical. This rather realistic view on the pervasiveness of disagreement and its normative importance, as I have argued in the last section, must not deter us from studying and developing idealizations of how politics ought to resolve them and whether they could even be entirely overcome by technologies that, for instance, enable us to be more empathetic and better reasoners. Such narratives, or technological utopias, as I have called them, can have a big theoretical and practical impact to resolve the realist problem at hand.

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