

Is Responsible Innovation Possible? The Problem of Depoliticization for a Normative Framework of RI

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ABSTRACT

Global frameworks of RI face several challenges. These include (1) the extent to which economic interests can be reconciled with the concept of responsibility in innovation processes and (2) the lack of a strong political dimension in these frameworks' conception of responsibility. Responding to these challenges is crucial if RI is to ensure that societal and natural needs are sufficiently considered in the innovation process. The influence of economic incentives on innovation processes coupled with the widespread depoliticization of persons makes it more urgent that RI adopt a *political* conception of responsibility in order to safeguard the legitimacy of the values and outcomes it deems societally desirable. This paper argues that the operative conception of responsibility in RI should be broadened to include a stronger political dimension. To this end, I turn to the work of Hannah Arendt to continue rethinking the concept of "the political" and, by extension, how responsibility and politics can be understood as two sides of the same coin.¹

Keywords: Responsibility; Politics; Depoliticization; (R)RI; Hannah Arendt.

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INTRODUCTION

Innovation, by virtue of its character of novelty, confronts us with the unfamiliar and the unpredictable. While the concept of innovation has a long history, it is not until the 20th century, that it begins to develop its specifically technological and commercial connotations (Godin, 2015; von Schomberg & Blok, 2019). Alongside this conceptual development, a new generation of technology began to emerge – consider for instance the developments of AI, nanotechnology, and digital technology. Technological innovations have had both positive and negative consequences. The desire to steer innovation processes in the “right” direction and deal with the unpredictability inherent in innovation, has prompted the now vast literature of Responsible Innovation (RI). This has become important for the bodies of scientific governance that try to respond to the negative impacts understood to be the consequence of past scientific and technological innovation – an example of this is the normative “Responsible Research and Innovation” (RRI)² framework project of the European Commission (European Commission, 2014). However, there are conceptual shortcomings with the concept of Responsible Innovation (RI). For example, innovation in the context of RI is unreflectively understood as technological (von Schomberg & Blok, 2019), inherently good, and viewed from an economic vantagepoint (Blok & Lemmens, 2015). At the same time, the concept of responsibility in RI finds itself in the midst of interests – e.g., moral, political, and environmental – that are difficult to reconcile with technological and market-interests (Grunwald, 2018). In turn, this problematizes the legitimacy of the RI framework.

In this paper I aim to contribute to the literature that seeks to politicize responsible innovation (van Oudheusden, 2014; Owen & Pansera, 2019). To do so I first outline leading RI proponent Renè von Schomberg’s critical evaluation of the hinderances facing RI today and what he takes to be central departure points for a vision of responsible innovation. Second, I argue that due to RI’s insufficiently political conception of responsibility, it struggles to address the depoliticization of persons and societies which problematizes its own responsibility agenda.³ To address this, in a third step I engage with the work of philosopher and political theorist Hannah Arendt to shed light on how responsibility and politics can be understood as two sides of the same coin. In turn, this can allow us to see in what sense depoliticization problematizes the “responsible” and normative agenda of RI. In the fourth and final

² The abbreviations RI and RRI are often used interchangeably in the literature. RI is often used in academic scholarship whereas RRI is often used in European policy circles. In this article, I will use RI to denote the more general discussion of Responsible Innovation, and RRI to denote it’s specific uptake by the European Commission.

³ I will focus on the European RRI project as the main example of an active RI framework project.

step I suggest how RI can be further politicized through embracing a political conception of responsibility, questioning in turn whether responsible innovation is currently possible.

THE CRITICAL LANDSCAPE OF RI TODAY

Research and innovation processes are largely incentivized by economic interests. Critically reflecting on "what *should* steer innovation processes?", and, further, "what direction should innovation processes be steered in?" are precisely the kinds of normative questions that leading RI proponent Renè von Schomberg encourages. In "Why responsible innovation?" (2019), von Schomberg, critically reflects on the state of RI today. He highlights the major limitations that hinder RI from attaining what it sets out to do, including the task of steering innovation processes in the direction of *societally desirable outcomes*. At the same time, he advocates for – what I take to be – a stronger conception of RI by responding to these limitations with new visions. In this section, I will outline some of the main arguments of von Schomberg's work in order to set the critical landscape that RI finds itself in today.

The rapid development of RI is premised on the assumption that research and (scientific and technological) innovation practices lack, on their own, the incentive to take societal needs and desires into account. This assumption resulted from the widespread recognition in the 20th century that new and emerging technologies may have unpredictable and irreversible consequences that may be highly undesirable for both nature and society. As a result, institutional efforts were made to bridge the gap between scientific, societal, and ethical concerns by creating more concrete parameters for innovation.

Von Schomberg explains how the development and implementation of nuclear power plants in the 20th century served as a major catalyst in the efforts to create more concrete parameters for innovation:

Nuclear power plants were regularly erected during the 1950s and 1960s with very little interference from our democratic institutions... This occurred in the absence of professional risk governance and management, and in a culture of technological optimism. It was not only until the early 1970s, decades after the introduction of civil nuclear technology, that it was acknowledged that there were no solutions for the storage of nuclear waste. The institutionalization of risk identification and analysis as a distinct professional activity... emerged only at the end of the 1960s. (von Schomberg, 2019, p. 12)

This modern institutionalization of risk identification and analysis are incorporated in RI frameworks such as the European Commission's framework project of RRI. However, the current global implementation of RI frameworks is insufficiently guiding *responsible* innovation processes. Yet, what does it mean to say an innovation process

is responsible? According to von Schomberg an innovation process is responsible if, alongside risk identification and safety management, it is immediately directed toward attaining *societally desirable outcomes* (von Schomberg, 2019) – e.g., directly addressing pressing societal challenges such as environmental sustainability, health, or other welfare concerns. Furthermore, he argues that the 'right' direction of RI should be grounded in the normative anchor points found in the European Constitution and reflected in the European Framework Programme for Research and Innovation (von Schomberg, 2019, p. 16). At the same time, the 'right' direction of RI should be achieved in an ethical, sustainable, socially desirable, and democratic way (Owen *et al.*, 2012, p. 754).

The Deficits Hindering Strong RI Today

What then is hindering this form of *Responsible* Innovation? According to von Schomberg, global RI frameworks are facing several major deficits that need to be acknowledged and accommodated in order to develop stronger RI. One such deficit is the gap between government regulations and the market. This is because “[t]he state takes responsibility for the risks of products derived from new technologies, while the benefits are delegated to the market and defined in terms of success within the market” (von Schomberg, 2019, p. 14). Governments are primarily concerned with avoiding adverse effects of new and emerging technologies and insufficiently participate in steering innovations in a societally desirable and beneficial direction. In this sense, governments are engaging in a specific and narrow form of responsibility which leads to the market having increased power in deciding *what* is innovated and developed. The success of an innovation is thus largely expressed in terms of its profitability rather than an achievement of social, ethical, and political responsibilities towards citizens. As von Schomberg argues:

Whereas public debates on the societal desirability of outcomes do not have a specific entry point in governmental policy-making, specific economic considerations drive the public and private funding of research and innovation actions. A first departure point for a vision of responsible innovation is therefore to advance governance mechanisms that could drive innovation to societally desirable ends. That is, instead of an exclusive focus on the risks of new technologies, the question of directing or redirecting research and innovation towards societally desirable ends has to be given importance in research and innovation programs. This implies that we not only need to have professional bodies for risk assessment but also professional bodies that should look into the type of outcomes we want to obtain from research and innovation processes, and the establishment of governance mechanisms that should give some direction to – or steer – the innovation process. (von Schomberg, 2019, p. 14)⁴

⁴ Interestingly, while R. von Schomberg does in fact acknowledge that public debates – involved in determining the societal desirability of outcomes – do not have a specific entry point in the process of policy-making, he unfortunately does not develop this point. Given its political importance, this problem underlies and motivates my criticism of RI frameworks in this paper.

Thus, alongside the existing bodies concerned with risk and safety assessment, R. von Schomberg suggests (1) creating a professional body that explores and qualifies the desired *outcomes* of research and innovation processes and (2) establishing government mechanisms that would point innovation processes in the "right" direction (von Schomberg, 2019, p. 14).

The strong influence of economic incentives in deciding *what* gets innovated stands as an immediate hindrance to the development of RI. While there are countless new technologies and innovations entering the market, many of them lack actual societal significance (von Schomberg, 2019, p. 15). This is related to the commercial paradigm innovation processes find themselves in. Innovations and technologies are profitable, which from an economic viewpoint is a more directly *desirable* goal than the goal of "societally desirable outcomes". In this sense, economic interests function as a powerful incentive that influences various aspects of our existence.⁵

Economic incentives will point innovation processes towards achieving profit gains. On their own, however, these economic incentives will not ensure that innovations are steered in the "right" direction, e.g., *directly* benefitting humans, wildlife, or the environment more broadly speaking. Innovations that may have the direct *intention* of achieving societally desirable outcomes, but are deemed insufficiently profitable, are often sidelined completely or left for governments or philanthropic enterprises for further support (Owen & Pansera, 2019, p. 35; von Schomberg, 2019). In light of this, von Schomberg suggests that RI should strive to bridge the gap between the market and innovation processes intended to achieve societally desirable outcomes by, for instance, creating "new governance roles for public bodies and stakeholders" (von Schomberg, 2019, p. 15). Thus, instead of governments merely looking at the possible *consequences* of innovation (e.g., risk and safety consequences), they should be incentivized to include the standpoints and concerns of both the public and other relevant stakeholders.

R. von Schomberg further problematizes the macroeconomic model that is operative in the European Union which promotes scientific and technological advancements as ends in themselves. According to this model, it is not so much about *what* is being innovated, but rather *that* things are continuously being innovated. R. von Schomberg criticizes the European Union's lack of political initiative to hold innovation processes up to the normative standards that guide other European

⁵ This last point is of course not a new insight but is part of a broader criticism of the incompatibility of capitalism and democratic politics which, although dating back to the 19th century, has only become more pronounced. This paper contributes to the ongoing effort to give politics a sufficient place amid a society largely governed by economic interests and powers.

policies. In light of this, he argues that RI should require "justification of the purpose and direction of innovation in terms of broadly shared public values" (von Schomberg, 2019, p. 17).

To briefly summarize, the current weaknesses of operative modes of R(R)I are largely due to its entanglement with global structures of profit incentivization. This entanglement results in RI insufficiently stimulating the development of innovations that are meant to directly address the pressing challenges of our time. In other words, public and private funding schemes currently do not ensure the development of *responsible* innovations. Visions for stronger RI therefore need to include (a) a recognition and accommodation of the deficits created by the structures of profit incentivization, (b) the *political* will and initiative to identify and enact core public values in innovation processes, and (c) management of the entire innovation process. To enable this form of RI, R. von Schomberg suggests, for instance, adding various professional bodies to the already existing governance mechanisms in order to address the current deficits that are hindering responsible innovation. These professional bodies, alongside other societal actors or stakeholders would democratically establish the *moral* evaluative criteria used to distinguish responsible and irresponsible innovation. Thus, for an innovation process to be deemed responsible, it would need to move towards these democratically achieved ethical standards. The suggested vision for RI that R. von Schomberg suggests would be there precisely to steer innovation in this (ethically) "right" direction.

The Invisibility of Politics in RI

While R. von Schomberg's diagnosis of the problems currently facing RI is accurate, the political dimension of the suggested visions for RI remains underdeveloped (Cf. Frodeman, 2019). RI has been criticized before for not being political *enough*. Michiel van Oudheusden presents a convincing criticism of RI frameworks claiming that they "largely ignore questions about the *politics in deliberation*..., as well as the *politics of deliberation*" (van Oudheusden, 2014, p. 68). The main concern regarding the politics involved *in* deliberation questions how consensus can be achieved in practice despite various power mechanisms at play (van Oudheusden, 2014, p. 73). This opens the discussion about the difficulties inherent in the deliberative process in general and further questions "how deliberation can be made sensitive to power dynamics and discursive exclusion that are facets of its constitutive and situated nature" (Owen & Pansera, 2019, p. 40). Regarding the politics *of* deliberation, van Oudheusden highlights how "the mere act of positing a common good reflects a politically motivated choice" (van Oudheusden, 2014, p. 73). Citing Igor Mayer, van Oudheusden asserts that a deliberative context is *always already* part of a particular history and worldview (van Oudheusden, 2014, p. 73). Specially in the context of RI, the ideas,

values, and concerns are pre-set. According to van Oudheusden, this preconceived and narrow conception of politics functions as an exclusionary mechanism in RI and therefore does not facilitate fair democratic practices. Van Oudheusden argues:

...it would appear that participants who do not endorse deliberation or a commitment to deliberation and do not prioritize social and ethical concerns... over economic ones are placed on asymmetrical footing even before deliberation has officially begun. (van Oudheusden, 2014, p. 74)

For this reason, van Oudheusden asserts that this problematic aspect of the kind of politics present in RI needs to be acknowledged.

There is, however, still a lot of work to be done. I contend that, alongside RI's operative and problematic notion of politics, its conception of responsibility is also too narrow. In order to facilitate a broader and stronger conception of RI it is important to develop and incorporate a strong *political* conception of responsibility. This will enable RI to avoid the shortcomings of the primarily ethical conception of responsibility currently operative in RI. In what follows I contribute to the recent call for research to further develop an understanding of what the *political* dimension of *Responsible Innovation* could look like (Cf. van Oudheusden, 2014; Owen & Pansera, 2019; Reijers, 2020).

POLITICIZING RI: A DIALOGUE WITH HANNAH ARENDT

Attempts to define the concept of responsibility in the innovation context have been a longstanding challenge for researchers engaged in RI literature. In the last decade, much of the literature on RI has sought to move away from a consequentialist approach to responsibility and instead suggested a concept of responsibility that views innovation as a collective, uncertain, and unpredictable activity (Owen *et al.*, 2012, p. 756). Given that this strand of the literature strongly advocates for the principles of RI to be anchored in deliberative democracy, the conception of responsibility it puts forth is *value* – rather than rule-based (Owen *et al.*, 2012, p. 756), i.e., it strives to capture public *values* rather than set arbitrary normative standards. While there are certainly merits to a collective conception of responsibility, it risks neglecting the complex relationship between individual persons (citizens) and the world they experience and are inextricably a part of. This is important because the way in which persons *relate* to the world (e.g., through their work, their social status, religion, and so forth) also influences their experiences and critiques of it. Thus, to gain a deeper understanding of societal dissatisfactions and critique, European institutions should play a larger role in recognizing the relations and circumstances

that *motivate* critique.⁶ Critically reflecting on these complex relationships can aid a preliminary understanding of *why* some persons may have different opinions about the same world, e.g., different preferences about what constitutes "societally desirable outcomes". Critically reflecting on this relationship, could better enable institutions such as the European Commission and its RI framework project to accommodate the dissatisfactions and concerns of its citizens. Engaging with socio-political and institutional critique in this way can further support the European Commissions' claims of implementing responsibility frameworks in the context of innovation that are democratically legitimate.

Alongside appreciating what motivates socio-political and institutional critique, it remains important to appreciate the politics *in* deliberation and the politics *of* deliberation. Heightened sensitivity toward the prevalence and influence of power mechanisms and existing ideologies in deliberation processes, can lead to a stronger framework of RI. Here too the role of motivation is important: e.g., considering what incentives persons or stakeholders have for pushing certain policies through or setting limited regulatory norms. The importance of this in the context of RI should not be underestimated. Consider for instance how some corporations or institutions may be motivated to innovate certain products over others due to possible profit or political gains. Take R. von Schomberg's example of how innovators in the medical field may be more motivated to create a treatment for a disease rather than a cure as there may be more financial gains to be made in the former case than the latter (von Schomberg, 2019, p. 15). Developing a treatment rather than a cure, due to the unprofitability of the latter, is not only morally but also *politically* questionable. Furthermore, since it is not in the best interest of society, such decisions can be said to be "societally undesirable".⁷

As it currently stands, innovation processes are largely motivated by possible profit gains. RI frameworks have been insufficiently incentivized to try to disentangle innovation processes from the economic paradigm they find themselves in. For that, political will and action is necessary. In other words, RI needs to be politicized. To explore how we can conceptualize this, I now turn to the work of political theorist and

⁶ Robert Gianni argues that "we need to link the necessary moral responsibility to concrete social institutions in order to overcome the problems arising from a pluralist society and considering the necessity of promoting concrete and tangible measures." (Gianni, 2019, p. 64) I think Gianni makes a good point here, but I would extend this beyond moral responsibility. There should be a link between moral and political responsibility and European institutions. As Gianni further explains, "Irresponsible efforts or practices cannot be put in place if they are not supported by specific institutional conditions, such as incentives, or rules framing the scope of research and innovation." (Gianni, 2019, p. 64) Here too the political dimension is important, alongside the moral one. It is therefore worth considering the extent to which the desired norms meant to "responsibly" guide innovation processes should be politically achieved.

⁷ As we shall see, however, even the concept of "societally desirable outcomes" can be problematized for not being political enough, precisely because of the plurality inherent in society.

philosopher Hannah Arendt. We start with Arendt not only because her work has been very influential in the development of modern political theory, but also because she has dealt specifically with the question of responsibility.⁸ What is perhaps most interesting however is the conception of political responsibility we can begin to develop *from* her work. Her work will thus provide a theoretical basis upon which we will discuss the importance of a political conception of responsibility in the RI context as well as contribute to recent efforts to explore and transform her theories and conceptions in relation to the phenomenon of RI (cf. Reijers, 2020). The main objective here is to plant the seeds for a stronger conception of RI through suggesting a *political* conception of responsibility. It is only by politicizing RI, I argue, that it can *respond* to the depoliticization⁹ of the broader European public and in doing so further the critical reflection on how to legitimately obtain "societally desirable outcomes".

Hannah Arendt: The World of the Political

The development of new and emerging technologies has radically challenged operative Western liberal values, such as those of freedom and responsibility.¹⁰ This has provoked renewed interest in Arendt's work and specifically her concepts of earth- and world-alienation (Cf. Berkowitz, 2018; Dinan, 2017). This is relevant here because the consequences of world-alienation in particular, as Arendt's conceives it, is a form of depoliticization. Given the scientific, socio-political, and philosophical developments since the publication of *The Human Condition* in 1958 (where Arendt deals with these concepts explicitly) Arendt's concepts should be rethought to suit our contemporary predicament. Furthermore, given Arendt's essayistic approach, interpretations of her concept of world are often rarely commented upon and

⁸ Arendt's conception of responsibility is initially often linked to her coverage of the Eichmann trial and her criticism of those who operate within bureaucratic systems uncritically. Arendt's coverage of the Eichmann trial highlights the ease with which individuals can hide behind a bureaucratic curtain and thereby abstain from any form of moral or political responsibility. As Arendt reports, Eichmann famously argued that "[h]e did his duty, [...] he not only obeyed orders, he also obeyed the law" (Arendt, 2006 [1963], p. 135). Through arguing in this way, Eichmann abstained from taking any personal responsibility for his actions or their consequences. In this sense, Eichmann absolves himself of any guilt by diminishing his individual role in the greater system (portraying himself as 'just' a cog in a machine). While Arendt's analysis of Eichmann's intentions has been contested (Stangneth, 2011), the philosophical and political significance of her analysis still stands. Eichmann exemplifies a particular form of depoliticization precisely because he was unable "to think, namely, to think from the standpoint of somebody else" (Arendt, 2006 [1963], p. 49). In other words, he exemplifies the danger inherent in losing touch with the reality of our plural existence.

⁹ Depoliticization is a broad term that can be used to denote "a decline in democratic, political creativity" (Straume and Humphrey, 2010, p. 10). In the work of Arendt, depoliticization arises when the world is seen from one dominant perspective, which covers over other possibilities of the world. As she argues, "the end of the common world has come when it is seen only under one aspect and is permitted to present itself in only one perspective" (Arendt, 1998 [1958], p. 58). It should be noted that when I use the term "depoliticization" here I presuppose that public political participation is not always a matter of personal choice. In other words, participation in the public realm is not always a possibility but is rather context dependent.

¹⁰ Consider for instance Shoshana Zuboff's concern about the development of digital technology in *The Age of Surveillance Capitalism* (2019). There she argues that our notion of freedom has been compromised as a consequence of the commodification of our personal data.

therefore require clarification if they are to be applied to the RI context. Nonetheless, Arendt's work provides vital insights that, when re-interpreted in a critical and phenomenological context, are relevant today.¹¹ It is my contention that the RI discourse could benefit from taking this theoretical groundwork into account. Although Arendt does not explicitly provide practical guidelines for responsibility frameworks, her work can inspire us to critically reflect on the importance of including a political dimension of responsibility in European institutional frameworks such as RRI.

Since Arendt's concepts are idiosyncratic, we need to sufficiently clarify how we understand them from the outset. For instance, concepts integral to Arendt's work, such as "world" and "plurality", have several layers of meaning and need to be thoroughly unpacked in order to appreciate their role in her action-based political theory. In *Phenomenology of Plurality*, Sophie Loidolt systematically identifies and outlines Arendt's three-fold distinction of world. Loidolt distinguishes between (1) the 'appearing world', (2) the 'first in-between', and (3) 'the second in-between' (Loidolt, 2018, p. 98-99). What this all means will be elaborated here as these concepts of 'world' open the doors not only to Arendt's political theory, but also to a new development of a political conception of responsibility.

The Appearing World

The 'appearing world' refers to the most basic, phenomenological description of world in which "Being and Appearing coincide" (Arendt, 1978, p. 19; Cf. Loidolt, 2018, p. 98). Arendt argues that things *appear* by virtue of their existence – "In nothing could appear, the word 'appearance' would make no sense, if recipients of appearances did not exist" (Arendt, 1978, p. 19). Here, appearance refers to a form of being "seen", but this includes all means of sense perception – i.e., sight, sound, taste, touch, smell. The world is thus fundamentally characterized by its active appearing-quality and directed

¹¹Arendt's theory will be considered from a phenomenological viewpoint – whereby the unique interaction between the person and the world, and the political significance thereof, is taken into account. Phenomenological interpretations of Arendt's work are gaining momentum since Arendt's self-imposed distancing from philosophy. In an interview with Günter Gaus in 1964, Arendt makes the famous claim: "I do not belong to the circle of philosophy. My profession, if one can speak of it at all, is political theory" (Arendt, 1994 [1964], p. 1). This statement has been quite influential in the reception of Arendt's thought, which has generally been taken up in "explicitly political terms" (Loidolt, 2018, p. 4). As a result, the strong philosophical dimension of her work – and specifically the (existential) phenomenological aspects – have been either neglected or completely ignored. There are of course important and notable exceptions. Dana Villa, for instance, published an influential book called *Arendt and Heidegger: The Fate of the Political* (Villa, 1996) which explores the strong Heideggerian themes of her work. However, Villa's work excludes important aspects of phenomenological thought, e.g., Husserl's work on empathy and intersubjectivity in *Ideas II* – which I deem important to understanding the connection between e.g., "the world of appearances", "disclosure", and "plurality", as Arendt conceptualizes them. Recently, scholars have been appreciating that Arendt is much more than just Heidegger's student and lover. As a result, works such as Sophie Loidolt's *Phenomenology of Plurality* (Loidolt, 2018) further pave the specifically phenomenological terrain upon which Arendt's work can be rethought.

toward someone that responds by *perceiving* it. As Loidolt remarks, Arendt's two other formulations of world – the 'first in-between' and the 'second in-between'¹²– are fundamentally anchored in this basic notion of appearance. The specific human activities that correspond to these formulations of world – i.e., work and action respectively – are very important, as it is precisely through them that appearance can gain its specific *meaningful reality*.

The First In-between: The World of Objects and Objectivity

The 'first in-between' refers to the tangible "world of objects and objectivity" (Arendt, 1998 [1958], p. 137; Loidolt, 2018, p. 98) that simultaneously relates and separates individuals from other individuals and the *objects* of their shared world. This 'first in-between' is artificial in that it is made by humans (in the mode of *homo faber*) and further conceptualized by them. This world is temporal and historical, kept in existence through continuous making/fabrication and remembrance.

Through *homo faber's* activity (i.e., the human activity of work), a social and material world is built. It is therefore on this level of human activity that institutions exist. Arendt argues that while humans create and build the world through the general practice of work, it also *conditions* them. While the natural Earth exists independently of human existence, the existence of the built-world depends *entirely* on humans; further, the built-world not only influences humans, but becomes a part of their existence. As Arendt writes:

In addition to the conditions under which life has been given to man on earth, and partly out of them, men constantly create their own, self-made conditions which... possess the same conditioning power as natural things. Whatever touches or enters into a sustained relationship with human life immediately assumes the character of a condition of human existence. This is why men, no matter what they do, are always conditioned beings. Whatever enters the human world of its own accord or is drawn into it by human effort becomes part of the human condition. The impact of the world's reality upon human existence is felt and received as a conditioning force. The objectivity of the world – its object- or thing- character – and the human condition supplement each other; because human existence is conditioned existence, it would be impossible without things, and things would be a heap of unrelated articles, a non-world, if they were not the conditioners of human existence. (Arendt, 1998 [1958], p. 9)

In other words, the specific objects and practices of the human world shape and influence individuals, communities, and the status of human existence itself. The objectivity and practices of the world therefore create a sense of *meaningfulness*. This built-world relies on reification – which can also be understood as capturing ideas, stories, and events by materializing them in different ways. Once materialized, it is

¹² These two conceptions of world, corresponding to the activity of work and action respectively, are formulated most clearly in *The Human Condition* (1998 [1958]).

through remembrance that the world receives its specific historical dimension. The world therefore houses not only material objects but also makes possible, for instance, social practices, ideologies, cultures, and institutions. Through this world that is constantly being created, built, and remembered, individuals can relate to one another through their practical dealings with it. This allows individuals to refer and talk *about* the shared built-world, giving it its specific reality.

The built-world has a specific structuring dimension as well, simultaneously relating and separating individuals. For instance, when dealing with the built-world, individuals are on the one hand, concerned with the same *appearing-phenomenon*, but on the other hand, by virtue of the phenomenon standing *in-between* individuals, the specific way in which *it-seems-to-me* (Arendt, 2004, p. 433; Arendt, 1978, p. 21) remains unique.

Living things *make their appearance* like actors on a stage set for them. The stage is common to all who are alive, but it *seems* different to each species, different to each individual specimen. Seeming – the it-seems-to-me, *dokei moi* – is the mode, perhaps the only possible one, in which an appearing world is acknowledged and perceived. To appear always means to seem to others, and this seeming varies according to the standpoint and the perspective of the spectators. [...] Seeming corresponds to the fact that every appearance, its identity notwithstanding, is perceived by a plurality of spectators. (Arendt, 1978, p. 21)

In other words, while we hold the world in common, we retain our unique perspective on it – recognizing that we are simultaneously equal and radically distinct from the other. According to Arendt, "only man can express this distinction and only he can communicate himself and not merely something" (Arendt, 1998 [1958], p. 176). In other words, despite dealing with the *same* object, individuals can recognize that they not only occupy a different objective-spatial perspective, but also a different subjective perspective.

The Second In-between: The World of the Political

Arendt's conceptualizations of speech and action are central to understanding her conception of the "second, subjective in-between" (Arendt, 1998 [1958], p. 183). According to Arendt, when persons speak and act – in a way that is novel and hence not just forms of idle talk or repetitions of "clichés"¹³ – they disclose *who* they are. This disclosure is a political phenomenon that gains its specific reality through being seen and felt by others – as it actualizes a second in-between, occurring directly *between persons* (Arendt, 1998 [1958], p. 182). The specific reality actualized by speech and

¹³ Political forms of speech and action are done for their own sake and are distinct from what Arendt calls "idle talk" (Arendt, 1998 [1958], p. 208). Here we can see similarities between Arendt concepts and those of Martin Heidegger found in *Being and Time*, including for instance: Rede (Cf., Arendt's "speech"), Gerede (Cf., Arendt's "idle talk"), and das Man (Cf., Arendt's conception of mass society or bureaucracy).

action is what I will refer to here as a *political* reality.¹⁴ The 'second in-between' becomes the political space in which the person is immediately seen in their living reality before their words and actions are reified into familiar structures that *homo faber* can recognize. In other words, speech and action create an intersubjective in-between, a fleeting and intangible world that discloses unique persons, i.e., irreducible perspectives on the world. As Arendt explains:

In acting and speaking, men show who they are, reveal actively their unique personal identities and thus make their appearance in the human world, while their physical identities appear without any activity of their own in the unique shape of the body and sound of the voice. (Arendt, 1998 [1958], p. 179)

In the act of speaking or acting individuals recognize one another as something *more* than the object-body. This something more is the *person*, in the political sense, or what Arendt famously calls the "who" someone is.¹⁵ According to Arendt, "who" a person is cannot be captured in everyday language because words refer to something already *familiar and known*, while the "who" is always *unique and unfamiliar* (Arendt, 1998 [1958], p. 181). The expression of a person's uniqueness *is* a political gesture for Arendt. It requires courage as the outcome of action is risky given that the "who" that shows itself, is both unpredictable and irreversible. This unpredictability in turn is anchored in human plurality. The *appearance* of the who presupposes the other, an audience (as we know from the basic conception of world, "the appearing world"). Following from this:

The disclosure of the 'who' through speech, and the setting of a new beginning though action, always falls into an already existing web [of human relationships] where their immediate consequences can be felt. ... It is because of this already existing web of human relationships, with its innumerable, conflicting wills and intentions, that action almost never achieves its purpose[.] (Arendt, 1998 [1958], p. 184)

However, speech and action also need a *space* in order to appear to others. This space is what Arendt conceptualizes as a "space of appearances" (Arendt, 1998 [1958], p. 199), which is a political space par excellence. The political space of appearances constitutes a political reality that emerges when embodied individuals speak, act, and judge together. The emergence of this political space is thus the actualization of plurality's (political) potential. According to Arendt, "[w]hatever occurs in this space of

¹⁴ This political reality appears between persons when they freely speak and act. It should be noted that for Arendt, freedom and politics are two sides of the same coin. She even argues that "[t]he meaning of politics is freedom" (Arendt, 2005 [1993], p. 108).

¹⁵ I characterize it here as a recognition because in the disclosure, I recognize that the person, like myself, also has a unique and irreducible perspective on the world – their own it-seems-to-me.

appearances is political by definition, even when it is not a direct product of action" (Arendt, 1977 [1954], p. 155).

When a space of appearance does emerge and the temporal-historical "web" of human relationships becomes manifest, it can only remain so through *power*.¹⁶ Put simply, the reality of the political space of appearances is dependent on persons coming together *through* action, yet this reality disappears as soon as individuals cease to be politically engaged (whereby the political space of appearances is dismantled). In a telling passage Arendt writes:

Power preserves the public realm and the space of appearances, and as such it is also the lifeblood of the human artifice, which, unless it is a scene of action and speech, of the web of human affairs and relationships and the stories engendered by them, lacks its ultimate *raison d'être*. Without being talked about by men and without housing them, the world would not be a human artifice but a heap of unrelated things to which each isolated individual was at liberty to add one more object; without the human artifice to house them, human affairs would be floating, as futile and vain, as the wandering nomad tribes. (Arendt, 1998 [1958], p. 204)

In other words, the space of appearances and the public realm are connected. The former provides the latter with its source of inspiration. This inspiration can then materialize or be reified into, for instance, institutions and social practices. While the human world can persist without the political, that world would become futile, static, and without novel change. One form of depoliticization occurs when the world is seen from one dominant viewpoint whereby political action does not appear as a possibility and a political space of appearance cannot emerge.¹⁷ This is the form of depoliticization that Arendt devotes much of her work addressing. While the phenomenon of depoliticization is complex and certainly not limited to Arendt's conceptualization of it, her understanding of it highlights a problem(s) that occurs when economic incentives primarily motivate actions – and in this context, innovation processes.

Let us briefly summarize the discussion thus far. Following Loidolt's distinction, Arendt has a three-fold conception of world. At the most basic level, the world *appears* and thus presupposes a sentient being to whom it appears. The basic forms of appearance and plurality that typify the 'appearing world' anchor the first in-between (the world of objects and objectivity; the built-world) and the second in-between (the world of the political). The first in-between is created by humans and

¹⁶ Arendt has an idiosyncratic understanding of power. She argues that "[p]ower is actualized only where word and deed have not parted company, where words are not empty and deeds not brutal, where words are not used to veil intentions but to disclose realities, and deeds are not used to violate and destroy but to establish relations and create new realities." (Arendt, 1998 [1958], p. 200) Power is thus a dynamic potential that keeps the spirit of action in existence.

¹⁷ For more on the phenomenon of "depoliticization" and links to the work of Arendt, see Straume and Humphrey, 2010.

provides structure, stability, and familiarity to human existence – simultaneously conditioning it. The second in-between breaks with the familiarity created and safeguarded by *homo faber*¹⁸. Speech and action, which actualize the second in-between, result in the introduction of something new by means of *showing* a previously unseen perspective or position on the world – i.e., it shows something novel, challenging the familiar ways in which the world is understood. By virtue of plurality, this speech and action is thrown into a temporal-historical world composed of "innumerable, conflicting wills and intentions". This can provoke new dimensions to the meaning of words or concepts, institutions, or systems. Although a person's irreducible subjective experience of the world can never actually be inhabited/embodied by another person, political speech and action articulate that experience and make it accessible.

POLITICIZING RI THROUGH A POLITICAL CONCEPTION OF RESPONSIBILITY

As we saw in section one, RI is facing several challenges including (1) the impact of economic incentives in steering innovation processes and (2) its political shortcomings. It is my contention that the conception of responsibility in the RI context should include a stronger political dimension. Specifically in the context of the European Commission, and framework projects such as RRI, we find an operative conception of politics that is too narrow. By including and considering different "stakeholders", the European Commission takes itself to be sufficiently political in its democratic processes – and by extension politically responsible. To challenge this, I presented an interpretation of Arendt's conception of the political to facilitate a theoretical insight into the complex dynamics of plurality. From the interpretation presented, we can understand the political as an actualized state of plurality (Loidolt, 2019), set into motion by speech and action. At the same time, the political space of appearances – which results from such an actualization – is contingent and relies on the continuous political participation of persons. These steps have been important to be able to start our reflections on why, and in which ways, RI is insufficiently political. In this following section, we will look at how our analysis thus far can aid us in politicizing RI through a political conception of responsibility.

¹⁸ Here I refer for instance to *homo faber's* attempts to understanding something as something or a person in terms of what they are rather than who they are. It should further be noted that Arendt's conceptions of world are inter-related. For instance, while Arendt's conceptions of speech and action have an inherent character of novelty and spontaneity, they still spring from the human-built world (i.e., the world of *homo faber*). Further, it is often the world of *homo faber* that provides the subject matter and sources of inspiration for action.

It has been suggested before that Arendt's political theory *entails* a particular conception of responsibility. The link has been made, for instance, between Arendt's theory of disclosure (i.e., the disclosure of 'who' someone is) and an implicit concept of responsibility (Williams, 2015); or, as Loidolt argues, that there is an implicit ethics "that springs from *actualizing plurality*" (Loidolt, 2019, p. 234). Arendt's theory does indeed provide us with a wealth of tools to develop a conception of responsibility rooted in a conception of the political. In my opinion, what makes Arendt's theory so unique is the way in which it accounts for the person (i.e., the irreducible 'who') without forsaking the idea of something shared (i.e., plurality).¹⁹ Here it is important to recall that for Arendt action almost never achieves its aim due to the dynamics of actualized human plurality. This has implications for a conception of responsibility, namely, that it cannot end with the individual (political) act. Rather, it encapsulates the reciprocity that takes place between persons and the (plural) world.

Following these reflections on Arendt's theory of the political, political responsibility can be understood *as the enactment and maintenance of a political space of appearances*. In our specific context, if we understand political responsibility in this way, then we must urge the European Commission to critically reflect on the democratic character of European political processes. The reflection on this process should take into consideration the dissatisfaction of *all* inhabitants of European Member States – across *all* social and political classes. This would include recognizing the motivations and constraints that encourage or discourage persons to participate in the political process. If the European Commission critically reflects upon the democratic character of its political processes and actively recognizes these motivations and constraints, then it would have to acknowledge the *real* phenomenon of depoliticization and the discontent that undermines the efforts of its own framework projects.

Yet, this form of political responsibility is often limited in European institutions and governments. Political responsibility is often neglected in favor of economic responsibility. The European Commission's RRI framework is caught in this problematic as well; its conception of responsibility remains too narrow – often primarily focused on economic and moral forms of responsibility. As we saw earlier, the market largely decides what gets innovated, and by virtue of the market's impersonal nature it *cannot* question whether or not those innovations are positively impactful for society or the environment. While RI tries to accommodate this gap –

¹⁹ One possible criticism to Arendt's political theory – or more specifically, to her conception of action – is that it insufficiently considers the material conditions necessary for persons to engage in politics. Given the scope of this paper, we will not be able to address this limitation here. However, this is arguably a weakness of Arendt's work and deserves to be further developed.

between the market and "societally desirable" impacts – it avoids altering the very structure of the market-driven society it operates in. Even if, as R. von Schomberg suggests, RRI guides innovation processes according to the pre-established European values inscribed in the European Constitution (and consolidated more recently in the Lund Declaration), it still evades its political responsibility as I have outlined it here. In the RRI framework project, the political occurs within specific parameters, i.e., in a controlled, institutional environment. Van Oudheusden argues that if RI presents itself "to policy-makers as a politically neutral tool [it] risks trivializing and undermining the very policy changes RI advocates seek to instigate" (van Oudheusden, 2014, p. 81). He further argues that RI could, and perhaps should, adopt "a more politically laden language of agendas, interests, impacts, and power" (van Oudheusden, 2014, p. 81). Building on this, I argue that the concerns of the world's citizens, and their real-life experiences of the world (which motivate political speech and action), should be actively recognized, if we are to speak of political responsibility. Policy frameworks of the European Commission, such as the RRI framework, are often experienced as emanating from an ivory tower – detached from the real-life experiences of "ordinary citizens". By becoming more sensitive to the importance of political responsibility, RI can become more inclusive by responding to the actual needs and concerns of citizens. My suggestion therefore encourages RI to further reflect on its political shortcomings in order to properly distinguish responsible from irresponsible innovation processes and credibly argue for "societally desirable outcomes".

CONCLUSION

In this paper I have addressed some of the major difficulties RI is facing with regard to, on the one hand, the power of profit motives to steer innovation processes and on the other hand, the lack of a strong political dimension in its operative conception of responsibility. Alongside these difficulties, RI struggles to address the depoliticization of persons and societies which highlights the lack of a strong political dimension in its conception of responsibility. In light of this, I argued that RI needs to be further politicized. In this endeavor to broaden the political scope of RI, I have drawn on Arendt's political theory to shed light on how responsibility and politics can be understood as two sides of the same coin. RI needs to address widespread societal depoliticization by adopting a conception of responsibility that is sufficiently *political* in nature; only then can it claim to steer innovations in directions desired *by* society and more specifically, everyday persons. While there is still a great deal of work to be done, further critical reflection is urgently needed on both the political dimensions of responsibility and the impacts of depoliticization on the very possibility of *responsible* innovation.

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