

The information society: cause for a philosophical paradigm shift? A response to Luciano Floridi¹

1. The grand narrative of the mature information society

Luciano Floridi has presented a »grand narrative« with his essay »The Green and the Blue«. Beyond his internationally renowned work on ethical questions of digitalisation, and especially AI, he proclaims nothing less than the need for a paradigm shift in the philosophical foundations of the social order and politics. The ongoing digitalisation over the past decades and its influence on all areas of life is, in his view, not just another wave of mechanisation like that driven by coal and steel in the 19th century or the triumphant success of plastics in the 20th century. Rather, it requires fundamental reconsideration, including the ontological assumptions underlying the political. The object- and individual-oriented ontology (referred to as »Ur-philosophy«), which, according to Luciano Floridi's diagnosis, goes back to Aristotle and Newton, should be overcome in favour of a determination of the basic elements of the political based on *relations*. The traditional »individual human project« should at least be supplemented or even replaced by a »social human project« (319 ff.). Instead of thinking society in terms of the individuals and putting them together like children build a castle from Lego bricks – the author often uses the metaphor »lego« –, the ontological starting point should be sought in the relationships between them. For example, he states very clearly: »society is not lego« (315) but »society is the totality of the relations that constitute it« (327). Based on this thesis, Floridi develops a set of rules for the »mature information society« consisting of

¹ I would like to sincerely thank Sylke Wintzer and Miriam Miklitz from ITAS for the translation of this paper.

69 paragraphs, which I read as a proposal for a philosophical »constitution« of this future society (327 ff.).

In an original, sometimes daring and often stunning way, Luciano Floridi combines themes, people and issues that at first seem far apart. Besides his main protagonists Aristotle and Newton, whom he identifies as the forefathers of the traditional political ontology he criticizes as inadequate, he draws on a number of figures of contemporary politics such as Margaret Thatcher and Donald Trump. But also the Evangelist Matthew, the European Union, Thomas Hobbes, the Apostle [107] Paul, Brexit, Karl Marx, James Madison and the Peace of Westphalia, among many others, play a role on the stage of the world theatre created by Luciano Floridi. The intention of this drama is to outline the cornerstones of a future »mature information society«, a visionary social system built on the core values of tolerance, justice, peace and freedom (327).

In the current situation where the grand narratives have become rare, and are often met with distrust, and where even philosophy increasingly surrenders to the dictates of the smallest publishable unit, the contribution is remarkable, if only because of the high-altitude perspective chosen. Among the concert of voices in the debate on digitalisation, Floridi's narrative competes on the same level with other great narratives, such as »Superintelligence«², »The Singularity is Near«³ and Post- and Transhumanism⁴, each of which, in its own way, looks at the end of humanity as we know it. Unlike these, however, Floridi's approach takes a humanistic perspective. The values he placed at the top of the »constitution«, such as tolerance and freedom, which are supposed to establish a proper order in the »mature information society«, stem from the European Enlightenment and its predecessors in Judaism, Christianity and Ancient Greek philosophy. This converges in some ways with the calls for a »digital humanism«⁵ and »digital maturity«⁶ – except, of course, for the central question of *whose* humanism and maturity we are talking about when it is no longer individuals but rather relations that are to form the basic elements of the political (see Section 2.2).

² Bostrom (2014).

³ Kurzweil (2005).

⁴ Hurlbut/Tiroshi-Samuels (2016).

⁵ Nida-Rümelin/Weidenfeld (2018).

⁶ Grunwald 2(019a).

Luciano Floridi's methodical approach is unusual. While authors often tend to hedge their bets and provide a wealth of references, he relies on »naivety« combined with a reference to the Gospel according to Matthew (310). This includes, firstly, almost complete avoidance of references to authors and literature with the argument that »they do not serve but hinder the development of ideas and the flow of reasoning« (311). The challenge of establishing a new order for the information society is to be addressed in a purely problem-oriented rather than author-oriented manner. Secondly, »naïve« means not getting too close to the problems of an increasingly digital society, such as lost privacy or threats to democracy. Rather, the author wants to take one or two steps back in order to gain a more detached view of the major developments in the human history and the history of mind, on the one hand, and the challenges of digitalisation, on the other. Thirdly, and finally, Floridi also wants to be »naïve« in his normative reflections in order to prevent the visionary ideas from being thwarted by doubts about the realism of his thoughts: his ideas want to »avoid being too abstract« and »ultimately inapplicable«, but they do not want to be »overly applied either« (307). Therefore, questions of feasibility and strategies for implementation do not play a role in his contribution.

To elucidate the intellectual-historical thesis of the necessity of a new political [108] ontology, Luciano Floridi's essay contains a whole series of apt observations and subtle distinctions and insights, of which only three will be highlighted here. Firstly, the criticised ontology focused on individuals in public and politics, for which Margaret Thatcher's remark quoted by Floridi (314) may paradigmatically stand, can be observed in many current debates. For example, mass media regularly search for responsible individuals and ignore systemic effects. This could be observed, for example, in the global economic crisis of 2008, when mercenary bankers and investment advisors were identified as the culprits. The incentive and value structures in the global financial system were not questioned, with the result that practically no consequences were drawn. Another example is the ethical debate on human enhancement.⁷ It focuses on technical interventions in individuals to improve their physical or cognitive performance as well as on their ethical justifiability, while there are

⁷ E.g. Coenen (2010); Ferrari et al. (2012).

no indications of a »social human project« according to Floridi (319 ff.)⁸:

Like all new technologies, cognitive enhancement can be used well or poorly. We should welcome new methods of improving our brain function. In a world in which human workspans and lifespans are increasing, cognitive enhancement tools – including the pharmacological – will be increasingly useful for improved quality of life and extended work productivity⁹.

A second observation concerns the question of how the social movements of the last decades relate to the dominance of »lego« thinking stated by Floridi. These movements, such as the hippie, ecological and peace movements of the late 20th century, were not a »social human project« but merely the other of the »individual social project« (321) he criticises as inadequate. Although, or precisely because, these movements set out to solve some of the problems of the »individual human project«, they involuntarily contributed to a stabilisation of the »lego« interpretation of society instead of attacking its foundations. For example, strong voluntary commitment, however positive it is, compensates for the loss of political substance instead of driving the transition to a, in Floridi's words, »mature information society«, as he explains using Italy as an example (321). The genuinely political comes to a standstill. This dialectic, a somewhat tragic constellation, is well known from many other areas: Repairing the symptoms of problematic conditions can make them more bearable and thus unintentionally stabilise them. However, fundamentally overcoming them, which would indeed be necessary, is made more difficult or even prevented. As an example, in the efforts towards sustainable development there is continuous reflection on whether well-intentioned reductions of the non-sustainable, e.g. through more efficient technology, might not ultimately hinder the necessary system change away from the ideal of quantitative growth to more sustainable forms of life. Sustainability research, advocating more sustainability, would thus only support the non-sustainable.¹⁰

Thirdly, the concept of an »infraethics« (323 ff.) developed by Luciano Floridi is highly innovative and will certainly shape the future

⁸ Coenen et al. (2018).

⁹ Greely et al., (2008), 705.

¹⁰ Blühdorn (2007).

ethical debate on the informa[109]tion society. It directs the enlightened epistemological interest and then also the practical design interest to the intermediate areas created by digitalisation between thinking, which is reflected in rules and morals, and action, which is increasingly influenced by software applications. This aptly describes what is presumably evident in every social change of media, but which has reached critical dimensions in digitalisation. While, in principle, all media interposing themselves between phenomena and their perception by humans contain hidden structures that influence the perception of the phenomena,¹¹ modern software has produced an ethically highly relevant layer that not only guides action but also regulates it. Software applications contain infrastructures of action prescribed or at least pre-structured by the software or its producers. It is true that every technology influences the people who use it, as Martin Heidegger has already explained using the example of the hammer. However, in a subtle and effective way, »software as an institution«¹² regulates human action and also the perception of the world incomparably stronger than traditional technology (323). Search engines, for example, guide the perception and subsequent actions of users by ranking the results for a specific search term in a specific order. Software has an impact on social rules and values also by controlling digital rights, by influencing communication patterns in social media, by determining results of Big Data analytics, and so forth. Notions such as »code is law«¹³, »regulation by software«¹⁴ or »regulation by machine«¹⁵ have been used.¹⁶ They all demonstrate that a value-based »infraethics« already exists in the current information society, which often overrules existing conventions and rules¹⁷ without being transparent or democratically legitimised¹⁸. These observations, along with Luciano Floridi's conceptual reflections, point to an area that needs to be shaped not only with respect to values and business models of big companies but also with respect to ethically justified and universal values (Sect. 3).

¹¹ McLuhan (1962).

¹² Orwat et al. (2010).

¹³ Lessig (1999).

¹⁴ Grimmelmann (2005).

¹⁵ Radin (2004).

¹⁶ Grunwald (2019a).

¹⁷ Orwat (2011).

¹⁸ Brown/Marsden (2013).

Overall, the picture Luciano Floridi paints of the »mature information society« yet to be created seems like a vision of a better world that is in complete contrast to the current developments in today's information society. The latter is dominated by manipulation, deepfakes, social bots, surveillance and behavioural control, fake news and hate campaigns, paedophilia and terrorism, immeasurable power of data monopolists on the one hand, carelessness of most users of digital technologies and inability or even unwillingness of governments to enforce even minimal standards of ethically necessary action on the other. This discrepancy could give the impression that Luciano Floridi has presented a seemingly unworldly and even deliberately naive (see above) narrative, just as naively ignoring reality as Matthew's Sermon on the Mount. However, caution is advised against brushing aside his analysis [110] and direction too quickly. Because that would ignore the power of positive-normative grand narratives, which in view of the sober reality often must be counterfactual in order not to merely cynically affirm what exists. Human reasoning involves not only the »is« but also the »ought«¹⁹. It includes not only knowledge of how the world functions but also ideas of how it *should function*. Without the dimension of the »ought« nothing would improve, neither in technology nor in society. Naive in the best sense, Luciano Floridi points out that further development is open to design and that it is worthwhile to stand up for a normatively motivated »mature information society«: for tolerance, justice, peace and freedom (327).

2. Questions to Luciano Floridi

Of course – how could it be otherwise – many questions remain open, and some diagnoses and positions motivate critical remarks. In the following, I will not criticise the central philosophical classifications, e.g. whether Luciano Floridi's characterization of »Ur-philosophy« and interpretation of Aristotle withstand philosophical and philological criticism. For the purpose of this commentary, I will accept them as introduced by Floridi. My interest and critical inquiries are rather directed to the subsequent line of argumentation. Is the paradigm shift in political ontology from the centrality of objects and individuals to

¹⁹ E.g. Anscombe (1958); MacIntyre (1981).

the centrality of relations, as postulated by Luciano Floridi, plausible or even necessary? Is it the appropriate philosophical treatment of criticised phenomena in the contemporary political sphere? And is it the adequate response to the specific phenomenon of the information society in the midst of the ecological crisis, as the combination of »blue« and »green« in the title promises? The diagnosis of the paradigm shift he calls for, »It is going to be a hard selling« (314), shows that the persuasiveness of his arguments must be very strong in order to gain acceptance for his thesis. Beyond dealing with the central questions, it is unfortunately not possible in this commentary to do justice to the abundance of arguments and individual observations presented in the essay. I ask for your understanding.

2.1 On the argumentative role of digital transformation

In the title of his essay, Luciano Floridi speaks programmatically of a »mature information society«, which is obviously meant to be a future one. This leads directly to questions about the underlying problem diagnosis: (1) Under the goal »to understand and improve the world« (307), it must be clear what is to be improved and why, i.e. what is currently in a bad state. The distinction between »mature« and »immature« raises the question of how the diagnosis of »immature« is supported by criticism of manifestations of the current social and political system. (2) Moreover, it must be asked what the word »information« specifically means. After all, the »information society« is part of the essay's title. Both questions aim to understand [111] what exactly the problem is that Floridi wants to answer. In order to judge the suitability of the means he proposes to solve the problem – a new political ontology – the problem itself must be well understood.

(ad 1) Luciano Floridi underpins his diagnosis of the need for a turnaround in political ontology primarily through criticisms of certain characteristics of current politics. He argues, for example, that political communication is no longer about content and arguments, but about the *form* of communication. Today, he says, the communication mechanisms of politics are often no longer distinguishable from those of marketing (308). Floridi cites as an example the populist marketing of the Brexiteers, in particular the constant repetition of the assertion that Brexit will solve all problems. In terms of commu-

nication, this is usually linked to TINA – there is no alternative. For example, during the election campaign, Trump exclusively associated the real alternative Biden administration with the decline and even the intended destruction of the USA. Floridi fears that such mechanisms, which are often successful, result in »a downward spiral of negativity that eventually leads to useless polarization and a corruption of society's confidence in its political abilities« (309). Presumably, there is wide agreement with this diagnosis in view of the developments in many countries, such as the rise of Trumpism in the United States and similar phenomena in many countries.

(ad 2) So while Luciano Floridi's concern about the political is understandable, the relation to the »information society« remains unclear. There have been crises of the political at other times, too, such as in the 1920s and 1930s with the takeover by fascist and totalitarian forces in many European countries. We must ask what the digital transformation contributes *in a specific way* to the crisis of the political. Why else would Floridi call for a return to the values of tolerance, justice, peace and freedom under the keyword »information society« (327)? This demand would have been at least as appropriate in the 1920s and 1930s. The effects of digitalisation are in fact mentioned several times, and it is even said that the emergence of the information society raises new political questions (311). There is certainly no doubt about that. However, it is not specified in what way this statement supports the author's extremely far-reaching argumentation. In most passages of the essay, the word »information« in »information society« could simply be omitted or replaced by »modern« or »late modern« without becoming incomprehensible or losing substance. In the »constitution« of a »mature information society« (327 ff.), information-related terms appear in only five of 69 articles (58–61 and 69). By far the largest part of the essay has a universal claim and would be meaningful also without reference to the information society. Some of the remarks even appear to be timelessly valid. For example, the association of object-related ontology with war and relational ontology with a path to diplomacy (316) is in no way related to the digital transformation, but could just as plausibly be transferred to large parts of human history. Thus the question remains open as to which attributes of the information society *specifically* contribute to Floridi's overall argumentation (Chap. 3).

The intention here is not to downplay the digital transformation through historical relativisation; on the contrary, it is undoubtedly of

epochal significance. It is certainly not limited to quantitative shifts such as the acceleration of communication and the instant and mobile access to practically any information. Rather, it entails qualitatively new challenges, also and especially for the political through to its philosophical and cultural foundations. Nevertheless, I would have liked to better understand what, in Luciano Floridi's eyes, is this *qualitative* novelty that leads him to call for a change in the political in its ontological core. The hypothetical story following the quotation from James Madison (325), about whether people needed politics and governments even if they were angels, makes the point clear. Because his plausible argumentation that angels also need rules of understanding, of decision making and thus politics and governance was already valid before the advent of the information society, as Floridi himself indirectly notes: »This cost [impacts of missing governance, A.G.] can be very high and morally negative in any society« (325). The need for a paradigm shift and a »social human project« (319 ff.) is, argumentatively, not recognisably related to the digital transformation.

2.2 On ontological individualism

Luciano Floridi is not satisfied with looking at the surface of the political, where one can discuss many measures against the crisis phenomena mentioned above. Rather, he sees the deeper cause in the political ontology underlying the phenomena, the »Ur-philosophy« (311), as he calls it, going back to Aristotle and Newton. In the first paragraph of the »constitution« for a »mature information society« (327), he gets serious about the paradigm shift repeatedly called for: »A society is the totality of the relations that constitute it«. It becomes very clear that in his eyes this is not only a supplement or a new interpretation: »Our way of thinking [i.e. the »Ur-philosophy«, A.G.] ... is now obsolete« (311).

Two questions arise here: (1) Is it possible at all to make a clear distinction between the orientation towards *objects* (which, according to Floridi, also include individuals) and the orientation towards *relations* in the sphere of the political? (2) Is the diagnosis correct that the political ontology linked to the »Ur-philosophy« is the cause of the above-mentioned current crisis phenomena of the political? If both questions are answered in the affirmative, Luciano Floridi's

argumentation is in principle valid, irrespective of whether or not it can be specifically related to the digital transformation (see above).

(ad1) The author speaks of the two discussed options of political ontology as logical alternatives in the sense of an either/or and of a paradigm shift as of a binary switch. This undoubtedly benefits analytical clarity. However, it must be asked whether this binarity can be maintained logically and practically. But exactly this is not the case in both directions: individuals cannot be conceived of without relations, and relations cannot be conceived of without individuals. Individuals are no atoms of the social, no dead and immutable »bricks« or »elements« (311/312) like in a »naive set theory« (312). The mechanistic image of a society consisting of »atomic entities« that underlies his »lego« analogy does not apply. Although the exaggeration is always illustrative, especially when it comes to examples from libertarian neoliberalism, it has something of the creation of a powerful straw man just to knock it down. This needs to be explained. [113]

Individuals are not elements with fixed properties but develop, as Floridi himself notes, *through relations* to which they contribute themselves. Individuality is not an inherent quality but develops in the medium of manifold relations. In the formulation of German sociologist Georg Simmel, for example, individuality develops through the crossing of social circles.²⁰ This description was motivated by the observation that individuality could develop even in the rapidly growing large cities with their mass phenomena towards the end of the 19th century. Another influential perspective on the relation between individuals and relations was established by Jewish philosopher Martin Buber in the dialogical principle.²¹ The Internet can multiply the possibilities of crossing the circles of others and thus contribute to further individualisation.²² Thus, individuals do not exist statically against or without relations but develop dynamically *through relations*. Floridi's description of the »personal fabric« (318) at least seems compatible with such a dynamic view of individuals (see also § 52 and § 56, 333f). Individuals and relations are not alternatives, but individuals need relations to be and become individuals. The often so illustrative analogy between traditional society and »lego« is

²⁰ Simmel (1890).

²¹ Buber (1923).

²² Grunwald (2018).

therefore ultimately misleading. However, then the question arises as to who actually represents Floridi's criticised position of a mechanistic, or following Newton, even *physical* society as a philosophical view of society.

Conversely, relations need individuals among whom they can develop and exist. The relations that constitute the political cannot be borne otherwise than by individuals, who are bearers of rights. Relations have no human rights, no right to demonstrate and no active or passive right to vote. Nor can relations form a political opinion or assume responsibility. Politics is therefore inconceivable without individuals as bearers of relations. The political cannot do without a *methodological* individualism for the corresponding epistemology, nor without a *deontological* individualism for the individuals' possibilities of participation in the political sphere. There is no contradiction in methodologically starting from individuals, deontologically ascribing rights to them and at the same time seeing relations as a characteristic of the political. Therefore, the sentence »Society [...] builds itself in terms of ›lego‹« does not apply (313), while the reformulation »Society [...] builds itself in terms of individuals« seems to make sense for methodological and deontological reasons, at least as long as the individuals are not understood ontologically analogous to simple physical elements. Individuals are not Lego bricks.

In the light of this, I miss the dimension of rights, such as civil and human rights, in the »constitution« of the »mature information society«. I see a danger here: the exclusive orientation towards relations can – this is certainly not intended by Luciano Floridi – contribute to a descriptive and functionalist narrowing of the political. If we were to radically extrapolate thinking in functionalist categories of relations in a thought experiment, there would be no barrier against an occasionally delineated future in which individuals would be merely functional »end devices« in [114] a globally networked system.²³ This purely hypothetical consideration is intended to make clear that something is at stake when the deontologically supported role of individuals equipped with rights is lost sight of due to the higher weighting of relations.

The political is thus genuinely relational on the one hand and dependent on individuals with rights on the other. There is no either/or alternative or possibility of a binary switch between

²³ Grunwald (2018).

paradigms, but it is a matter of a both/and in the sense of a dialectical complementarity. This is no different in the analogy to physics Luciano Floridi uses: the wave-particle dualism is not a logical either/or alternative but a both/and which is actually not always easy to understand. In this *complementary* (here the analogy to the wave-particle dualism of physics applies) but also *asymmetrical* (here it does not apply) relationship between individuals and relations in the ontological foundations of the political, their relative weighting can vary historically and culturally. In the current digital transformation, the importance of the relational and the networks must certainly be emphasised, and this must also be reflected in political philosophy. In this line of thought, I follow Luciano Floridi.

The complementary but asymmetrical relationship between individuals and relations has been modelled many times in political philosophy. John Dewey, for example, presented a model of modern and democratic society. Dewey's point of departure is a liberal view on citizens, i.e. individuals with civil and freedom rights, in modern society. His basic observation is that indirect consequences of human action occur which may affect the rights and freedom of others. Dewey regards the regulation of these indirect consequences as the main business of politics, while the common awareness of these indirect consequences forms relations building »the public«. In accordance with the normative fundament of liberalism and individual human rights, he introduces democracy as a combination of the regulation of indirect consequences and the normative expectation that everyone should be involved.²⁴ I see no logical reason why a deontological individualism of this kind should not allow for a social human project, whether in the American society of the early 20th century or in today's information society.

As a constructive suggestion and interim conclusion, I want to motivate an expansion of the first paragraph of the »constitution« of the mature information society: Society is the totality of the individuals and the relations among them. In addition, of course, my question to Luciano Floridi would be what he thinks of the proposal, and what would change in the other 68 paragraphs. I think: not much.

(ad 2) Is ontological individualism in the sense of the »Ur-philosophy« the cause of the present political crisis? On a radical understanding of object- and individual-based ontology as the ignoring

²⁴ Dewey (1927), 147.

of relations, a »yes« answer would be plausible. The above considerations in the context of the quotation from James Madison are relevant here. The political as an organisational form of society is inconceivable without relations between the individuals: »Politics belongs to this kind of relational phenomena« (308). Misjudging them leads either astray, as the quotation from Mar[115]garet Thatcher shows, or to a flattening of political communication to slogans designed to manipulate unrelated individuals (308). This radical interpretation, however, is an artefact. It misses the core not only of the idea but also of the reality of the political sphere, probably even the philosophical foundations of the »Ur-philosophy«. Even Aristotle in his *Nicomachian Ethics*, which I read more as political philosophy, did not model individuals like Lego bricks, but as being capable of developing and learning in the medium of relations, as far as the practice of virtues is concerned. I am therefore not convinced that the »Ur-philosophy« as a subliminal way of thinking deeply rooted in culture can be clearly identified as the cause of the aberration of the political in the present.

However, the examples put forward by Luciano Floridi for his thesis of an ontological hypostasisation of the individual are quite convincing, especially in the quotation from Margaret Thatcher and in the criticism of aberrations in the political sphere, such as populism in the last ten years or so. But if the »Ur-philosophy« cannot serve as their cause or its overcoming as the solution to the problem, what could it be? Here I would like to make an assumption. Reading Luciano Floridi's remarks not as a plea for a fundamentally new political ontology but as harsh criticism of the libertarian metaphysics of neoliberalism with its individualistic view of humans, it all seems plausible, the examples as well as the call for a »social human project«. Then the above questions and doubts about the argumentation lose their power and relevance. Is Luciano Floridi not primarily focusing on Aristotle and Newton, but rather on developments since »Reagonomics« and »Thatcherism« with their ontological foundations? The frequent mention of the »grande dame« of militant neoliberalism Margaret Thatcher, the diagnosis of political deliberation turning into marketing, the references to Trumpism and Brexit, and also the criticism that today it is not a matter of a »happy society« but of a society in which every individual has the opportunity to become happy (320): all these indications in fact suggest this. The many examples from the economy can also be meaningfully integrated here, because, in

neoliberal thinking, states are often seen as companies which should try to make »deals« among themselves instead of laboriously negotiating fair contracts. Finally, also the second quotation from Margaret Thatcher, where she compares politics with the management of a private household (314), fits in with this. Neoliberal thinking in its radical forms attempts to marginalise the political, while at the individual level the greatest possible satisfaction of needs in the sense of the »pursuit of happiness« should be ensured.

If this assumption is correct, the paradigm shift called for by Luciano would be too heavy artillery. For there is no automatism leading from Aristotle to Margaret Thatcher. Historically, this is illustrated by the fact that the »Ur-philosophy« certainly also allowed for »social human projects« in the sense of Floridi. Here, I would like to mention only the »New Deal« by Franklin D. Roosevelt and the »Social Market Economy« in Germany. Even the most justified criticism of neoliberalism and its ontological foundations alone does not legitimise the abandonment of the structures of Aristotelian logic. Floridi's broad intellectual-historical perspective combining Aristotle and Newton in the »Ur-philosophy« contrasts too strongly with the very specific political references from recent decades. Margaret Thatcher as an illustration of an individualistically narrowed ontology of the political seems more like a caricature or aberration than a telos of a more than 2000-year-old history of thought that should be disposed of.

2.3 On the integration of »blue« and »green«

Luciano Floridi's »grand narrative« programmatically claims in its title to bring together two of the greatest current challenges of politics: the shaping of the digital transformation (the »blue«) and the implementation of sustainable development (the »green«). While the essay does repeatedly mention the digital transformation, even if it is not specifically reflected in the argumentation (cf. Sect. 2.1), there are hardly any references to the »green«. Sustainability is mentioned as a goal, and the »sharing economy« is cited as a linking element between »blue« and »green« (309). However, no reference is made to the foundations of a programmatic integration of the two fields. Without this being explicitly stated, the impression arises that the object-oriented »Ur-philosophy« criticised by Floridi is both the

cause of the crisis of the political in today's information society and the cause of the ecological crisis. This might make it possible to address the challenges of both the »blue« and the »green« simultaneously with a single approach. The thesis that both crisis phenomena have a common cause and that they can be cured by the same therapy is, however, neither explained nor substantiated.

This is regrettable, especially because Floridi's focus on relations would certainly have provided an opportunity to address the relationship of humans to nature, to criticise traditional relationship patterns and to advocate the reorganisation of this relationship in the face of the ecological crisis.²⁵ The author at least hints at this in passing (316). Elaborating this reading of relational ontology might open a way to think the human-nature relation beyond the exploitation scheme that is at least a concomitant of the political phenomena Floridi criticises, especially Thatcherism and Trumpism. Of course, this consideration leads back again to the assumption that Luciano Floridi's real target is individualistic neoliberalism (see above). It is plausible that this would neither allow a »social human project« nor an »ecological human project« and certainly no justification of a »mature information society«, but be its negation. These thoughts would require deeper consideration.²⁶

2.4 On the frames of reference underlying the argumentation

The »naivety« Luciano Floridi consistently adheres to leads, as intended by the author, to a very nice flow of argumentation, unencumbered by too many footnotes and references, which often turn scientific texts into a linguistic labyrinth. However, there is a downside to this »naivety«: again and again, questions about the frame of reference of the arguments and assertions arise while reading. To give just a few examples, there is frequent talk of »good« and »bad« politics, often also of the [117] »right« choice, without specifying the criteria for good and bad. Sentences like »Today, there is no lack of good policies« remain uncommented, as if these assertions were general consensus. There is no explanation of which policies are meant and which actors find them good and for what reasons. Floridi presupposes

²⁵ Jahn/Becker (2006).

²⁶ WBGU (2019).

the consensus instead of substantiating the sentence as a thesis or at least illustrating it by examples. Similarly, the philosophical »constitution« for a future information society (327 ff.) is not introduced on an argumentative basis, but appears like a constitutional text awaiting a referendum, not as a draft that would first have to be philosophically and ethically discussed.

In the self-imposed »naivety«, Floridi assumes a consensus with his readership on the meaning of »good« and »bad« in the context of politics, of the meaning of »right« and of »mature«. But this consensus apparently does not exist. Between libertarian and communitarian, deliberative and representative, European and East Asian conceptions not only a political but also a political science and philosophical debate is going on. The appeal to a common understanding therefore goes nowhere – and raises the question of what understanding Floridi's labels of »good« and »bad« are based on. The same applies to the diagnosis of the information society. Does a sentence such as »... information societies ... are maturing before our eyes« (320) mean that they are developing according to certain normative criteria, and if so, according to which criteria, or merely that they are aging?

I also have questions about the »constitution« of a »mature information society« (327). With the certainly consensual values of tolerance, justice, peace and freedom (327), Floridi follows the European Enlightenment. Non-European cultures, where the values are possibly weighted differently and which do not have the problem with the »Ur-philosophy« to the same extent because they only got to know Aristotle in the modern age, are not addressed. I note this because I think the »mature information society« can only be understood as a global and thus intercultural form of the political. Moreover, as is well known, there is no direct path from abstract values or even principles to social order and political action. Above all, conflicts of values and goals must be resolved. However, the essay makes no reference to procedures of conflict resolution, the core element of the political (327 ff.), although Floridi sees their necessity.²⁷

In this way, parts of the argumentation remain in argumentative limbo. The essay's tone is stating, not discursive. It assumes certain consensus and demands agreement. A philosophical discussion, however, would have to descend into the depths of reference frames

²⁷ Cf. e.g. the discussion of the quotation from James Madison (325).

and theories, of presuppositions and premises, of concepts and sets of criteria in order to enable argumentative transparency. Of course, I readily concede that these desiderata cannot be satisfied within the narrow confines of an essay. Luciano Floridi's »grand narrative« rather needs a monographic book project as a suitable form. [118]

3. Résumé

These were my main questions. Ultimately, they can be grouped around two main themes: (1) the uncertainty about the specific difference the word »information« makes in the reasoning for a new political ontology and (2) the double problem in the »lego« metaphor: individuals in the political sphere are neither simple building bricks, but develop in the medium of relations, nor are they physical objects, but bearers of political rights. Therefore, in sum, I think the call for a binary shift from an object-centred to a relation-based ontology is both unnecessary and impossible without significantly curtailing the nature of the political.

Beyond this critical résumé, there is much approval in detail, for example regarding the future of the EU as a normative project (311, 317), the call for universal inclusion²⁸, which in particular »must include the »silent world« (322), the call for recognition of human fragility (§ 56, 334), as opposed to the neoliberal meritocracy or performance enhancement society.²⁹ I also completely agree with the humanistic tone and appreciate that Luciano Floridi, with this essay, as with other publications, is not satisfied with optimising the philosophical ivory tower, but that he naively, in the best sense of the word, formulates the goal »to improve the world« (307).

In my opinion, the main merit of Luciano Floridi's essay is having opened up a major and urgent discussion. Even if there is need for further clarification, I agree with him that – in my words – the challenges of digital transformation cannot be met with some ethical guidelines on artificial intelligence or a General Data Protection Regulation. The transformation goes considerably deeper, as discussed in the essay, into the foundations of political philosophy, but also into

²⁸ Grunwald (2019b).

²⁹ Grunwald (2013).

other areas of philosophy, such as anthropology, by raising radical questions about the self-image and role of the human being.³⁰ Digital transformation brings about shifts in fundamental configurations, for example, when decision-making power is transferred to autonomous systems. The traditional subject-object constellation with the human being as subject and technology as object is challenged, partially even becoming obsolete, or is at least undergoing a major transformation. Increasingly, technology is becoming the subject and human beings the objects of machine decisions. Here, philosophy is called upon not so much in its role as ethics, but rather in a hermeneutic role to recognise and understand the ongoing and sometimes insidious changes. The concept of hermeneutic technology assessment is a proposal in this direction.³¹ There is plenty for philosophy to do.

I would like to emphasise Floridi's observation and diagnosis of an »infraethics« (323 ff., cp. Sect. 1 above). Even though traditional mass media such as daily newspapers, radio and television are not value-neutral information infrastructures, but are each subject to preferences and interests that restrict the freedom and autonomy of their users and even lead to filter bubble phenomena and manipulation, the im[119]portance of the intermediary between the world of phenomena and social mass communication has multiplied in the information society. The concept of »infraethics« is a central finding of Luciano Floridi's essay and is, unlike the call for a new political ontology, specifically linked to the information society. Floridi demonstrates how the conditions for moral judgment and hence also its outcomes are influenced by software here. The essay provides a basis for further reflection, which I would like to touch upon only briefly.

It is striking that Luciano Floridi uses the word »power« very sporadically, and if so, then always as »political power«. However, a characteristic of the information society is that power is to a considerable extent transferred to the developers and providers of software applications. We must urgently ask who is shaping the »infraethics«, that is, who is developing and implementing the underlying technical infrastructure and thus exercising significant power. This moral and political power, for instance of Silicon Valley companies, is owed to an economic monopoly position and is not authorised by any demo-

³⁰ Grunwald (2021).

³¹ Grunwald/Hubig (2018); Grunwald (2019b).

cratic legitimation to regulate moral judgement and human action at a global level (cf. the short discussion on »software as an institution«, Sec. 1). This situation is not compatible with a »mature information society« according to the philosophical »constitution« (327 ff.). What can be done?

At present, public debate is dominated by the impression of a self-dynamic development of digitalisation in the fatalistic tradition of technological determinism.³² Digitalisation is viewed like a high-speed train that can neither be stopped nor influenced in its direction. Accordingly, society and individuals would be forced to merely adapt to the »infraethics« used by a few to exercise power over the many. This rhetoric operates with (supposed) arguments of practical constraints and a (likewise supposed) lack of alternatives. But it no longer asks about the actors behind the digital progress, their values and interests, about power, influence, responsibility and legitimation. It is important to expose this narrative as ideology.

Because: Technology and innovation must be *made*. Every single line of a source code is written by humans. Software runs on hardware, which is also produced by humans, or by machines which have been developed and programmed by humans for this purpose. Algorithms, robots, digital services, business models for digital platforms or applications for service robots are invented, designed, manufactured and used by humans. Search engine software, the algorithms of Big Data technologies and *social media* are all developed and implemented by human actors – namely by *specific* actors. The makers of digitalisation usually work in companies, organisations or secret services. They pursue certain values, have opinions and interests, follow a corporate strategy, political guidelines, military considerations, etc., which influence their decisions and thus global »infraethics«. ³³ Voices from citizens and civil society are ignored. The principle of universal participation (§ 17, 331) or inclusion³⁴ is severely violated when values and interests of a few global corporations [120] implement the »infraethics« for the whole world and thus exert non-legitimate influence.

However, there is not *the* digitalisation or *the only* way of digitalisation into the future. Instead, the future of digitalisation is

³² Grunwald (2019a/b).

³³ van den Hoven et al. (2015).

³⁴ Grunwald (2019b).

a space of possibilities full of alternatives whose diversity is also related to the values and interests of their creators. Which of these will one day become reality is not determined by technology but depends on many decisions at the most diverse levels, in companies and data corporations, in politics and regulation, in markets and user behaviour. Therefore, we can regain a *formative view* on the further development of digital transformation. Instead of anticipatory adaptation to the supposedly self-dynamic development of digitalisation, it is about shaping this development in terms of a social will, perhaps even a »social human project« in the sense of Luciano Floridi. I think a mature information society cannot be achieved without society regaining its ability to shape itself including its technologies, which is ultimately also a question of power. Luciano Floridi indicates this briefly in the final section of the essay: it is about the »governance of the digital« and about overcoming the risks of the »colonising monopoly«. It is not only worthwhile to continue thinking in this direction, but I think it is even essential.

I enjoyed writing this commentary and it provided me with new ideas. I think the approach is refreshing, although provocative in its radicalism. But the latter also belongs to the best of philosophy: exploring new ways of thinking. I hope that Luciano Floridi's witty suggestions will be widely disseminated and actually will make an at least small contribution to improving the world (307).

Bibliography

- Anscombe, E. (1958), »Modern Moral Philosophy«, in: *Philosophy* 33(124), 1–19.
- Blühdorn, I. (2007), »Sustaining the unsustainable: Symbolic politics and the politics of simulation«, in: *Environmental Politics* 2, 251–275.
- Bostrom, N. (2014), *Superintelligence: Paths, Dangers, Strategies*, Oxford.
- Brown, I./Marsden, C. T. (2013), *Regulating Code. Good Governance and Better Regulation in the Information Age*, Cambridge, MA.
- Buber, M. (1923[2008]), *Ich und Du*, Stuttgart.
- Coenen, C. (2010), »Deliberating Visions: The Case of Human Enhancement in the Discourse on Nanotechnology and Convergence«, in: Kaiser, M./Kurath, M./Maasen, S./Rehmann-Sutter, C. (eds) (2010), *Governing Future Technologies. Nanotechnology and the Rise of an Assessment Regime*, Dordrecht, 73–88.

- Coenen, C./Ferrari, A./Grunwald, A. (2018), »Wider die Begrenzung der Enhancement-Debatte auf angewandte Ethik«, in: Erny, N./Herrgen, M./Schmidt, J. (eds) (2018), *Die Leistungssteigerung des menschlichen Gehirns*, Wiesbaden, 57–85.
- Ferrari, A./Coenen, C./Grunwald, A. (2012), »Visions and Ethics in Current Discourse on Human Enhancement«, *Nanoethics* 6(3), 215–229.
- Frank, M. (1986), *Die Unhintergebarkeit von Individualität: Reflexionen über Subjekt, Person und Individuum aus Anlaß ihrer ›postmodernen‹ Toterklärung*, Berlin.
- Greely, H./Sahakian, B./Harris, J./Kessler, R./Gazzaniga, M./Campbell, P./Farah, M. (2008), »Towards responsible use of cognitive-enhancing drugs by the healthy«, in: *Nature* 456, 702–706.
- Grimmelmann, J. (2005), »Regulation by Software«, in: *Yale Law Journal* 114 (2005), 1721–1758. [121]
- Grunwald, A. (2017), »Abschied vom Individuum – werden wir zu Endgeräten eines global-digitalen Netzes?«, in: Burk, S./Hennig, M./Heurich, B. et al. (eds) (2017), *Privatheit in der digitalen Gesellschaft*, Berlin, 35–48.
- (2013), »Are we heading towards an ›Enhancement Society?«, in: Hildt, E./Franke, A. G. (eds) (2013), *Cognitive Enhancement: An Interdisciplinary Perspective*, Dordrecht, 201–216.
- (2019a), *Der unterlegene Mensch. Die Zukunft der Menschheit im Angesicht von Algorithmen, Robotern und Künstlicher Intelligenz*, München.
- (2019b), *Technology Assessment in Practice and Theory*, Abingdon.
- (ed) (2021), *Mensch, wer bist Du? Transformationen menschlicher Selbstverständnisse im wissenschaftlich-technischen Fortschritt*, Freiburg.
- Grunwald, A./Julliard, Y. (2005), »Technik als Reflexionsbegriff – Überlegungen zur semantischen Struktur des Redens über Technik«, in: *Philosophia naturalis* 42 (2005), 127–157.
- Grunwald, A./Hubig, C. (2018), »Technikhermeneutik: ein kritischer Austausch zwischen Armin Grunwald und Christoph Hubig«, in: *Jahrbuch Technikphilosophie* 2018. Arbeit und Spiel, Baden-Baden, 321–352.S
- Hurlbut, J. B./Tiroshi-Samuels, H. (eds) (2016), *Perfecting human futures. Transhuman visions and technological imaginations*, Wiesbaden.
- Jahn, T./Becker, E. (2006), *Soziale Ökologie. Wissenschaft von den gesellschaftlichen Naturverhältnissen*, Frankfurt/New York.
- Kurzweil, R. (2005), *The Singularity Is Near: When Humans Transcend Biology*, New York.
- Lessig, L. (1999), *Code and other laws of cyberspace*, New York.
- MacIntyre, A. (1981), *After Virtue: A Study in Moral Philosophy*, Notre Dame.
- McLuhan, M. (1962), *The Gutenberg Galaxy: The Making of Typographic Man*, Toronto.
- Nida-Rümelin, J./Weidenfeld, N. (2018), *Digitaler Humanismus: Eine Ethik für das Zeitalter der Künstlichen Intelligenz*, München.

- Orwat, C. (2011), »Technology assessment of software-intensive critical infrastructures – A research perspective«, in: Heiß, H.-U./Pepper, P./Schlingloff, H./Schneider, J. (eds) (2011), *Informatik 2011. Informatik schafft Communities*, Bonn.
- Orwat, C./Raabe, O./Buchmann, N. et al. (2010), »Software als Institution und ihre Gestaltbarkeit«, in: *Informatik-Spektrum* 33 (2010), 626–633.
- Radin, M. J. (2004), »Regulation by Contract, Regulation by Machine«, in: *Journal of Institutional and Theoretical Economics* 160 (2004), 142–156.
- Simmel, G. (1890), *Über sociale Differenzierung*, Leipzig. www.deutschestextarchiv.de/book/show/simmel_differenzierung_1890, 16.1.2019
- van den Hoven, J./Vermaas, P./van de Poel, I. (eds) (2015), *Handbook of Ethics, Values, and Technological Design*, Dordrecht, 67–86.
- WBGU – Wissenschaftlicher Beirat Globale Umweltveränderungen (2019), *Our common digital future. Flagship Report*, <https://www.wbgu.de/en/publications/publication/towards-our-common-digital-future>