

Adding wisdom to computation: The task of philosophy today

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Abstract

From climate change to potentially disruptive technologies to the COVID-19 pandemic, our era is characterised by unprecedented complexity and uncertainty. Philosophy has always been a promising tool for facing puzzling scenarios. Yet, contemporary philosophy may not be able to successfully face our era's unprecedented complexity and uncertainty. On the one hand, contemporary philosophy results from a kind of hypertrophisation of logos restricting the forms of rationality legitimately usable. On the other hand, our era's unprecedented complexity and uncertainty seem to require not only restricted forms of rationality, such as logic and computation, but also other forms of rationality underdeveloped in our philosophical tradition, such as wisdom. This paper proposes reasons why increasing our focus on wisdom may help us face our unprecedentedly complex and uncertain era in four respects as philosophers: when educating our students; when publishing our work; when talking to civil society; and when acting in our technological era.

KEYWORDS

algorithmic technologies, complexity, computation, forms of rationality, task of philosophy, uncertainty, wisdom

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1 | INTRODUCTION

In several respects, from climate change to potentially disruptive technologies to the COVID-19 pandemic, our era is characterised by unprecedented complexity and uncertainty. Philosophy has always been a promising tool to face puzzling scenarios, from answering metaphysical questions to having a vision of the future. Yet, contemporary philosophy may not be able to successfully face the unprecedented complexity and uncertainty characterising our era. On the one hand, contemporary philosophy results from a kind of hypertrophisation of logos restricting the forms of rationality that are legitimately usable. But, on the other hand, the unprecedented complexity and uncertainty characterising our era seem to require not only restricted forms of rationality, such as logic and computation, but also other forms of rationality underdeveloped in our philosophical tradition, such as wisdom.

In what follows, I try to propose the reasons why increasing our focus on wisdom may help us face our unprecedentedly complex and uncertain era in at least four respects as philosophers:

1. when we, as faculty, educate our students;
2. when we, as researchers, publish our work addressed to our scientific community;
3. when we, as experts, talk to civil society;
4. when we, as citizens, act in our technological era.

The length of a journal article necessarily limits what can be argued. Yet, in order to try to follow the horizontality of wisdom more than the verticality of logos (as I attempt to argue), I try to consider quite an extended scenario, on the details of which I do not provide analytic reflection in a vertical way, as it were. Alternatively, as wisdom itself would recommend, I try to provide a vision of the general trajectory in a horizontal way, as it were: that is, the reasons why wisdom may be promising if we consider the general framework of our unprecedentedly complex and uncertain era.

2 | HYPERTROPHISATION OF LOGOS

The history of Western culture can be read as the history of a progressive restriction of the forms of rationality worthy of being used.¹ The ancient challenge between logos, meaning “computation, reckoning,” and *metis*, meaning “wisdom, skill, craft,” has been progressively won by the former over the latter.² More precisely, in the history of Western culture, we have been increasingly entrusting our understanding of what is and our prediction of what will be to logos. First, by increasingly restricting logos to computation (even by introducing the notion of quantified self).³ And, second, by increasingly externalising computation from our minds (considered less powerful) to machines (considered more powerful), specifically algorithmic machines (considered the most powerful). Thus, surprisingly enough, our technological era may be read as our most radical externalisation of the mental capacity we have been developing the most: logos, which we are more and more externalising from our minds to algorithmic machines.⁴

¹There are several readings. See, e.g., Schafer 2018.

²For logos, see the Liddell-Scott-Jones *Greek-English Lexicon* (LSJ), available at <http://perseus.uchicago.edu/cgi-bin/philologic/getobject.pl?c.43:9:139.LSJ>. For *metis*, see LSJ, available at <http://perseus.uchicago.edu/cgi-bin/philologic/getobject.pl?c.46:8:115.LSJ>.

³See <https://quantifiedself.com/>, where you can read that speaking of quantified self means speaking of “self-knowledge through numbers.” See, e.g., Lupton 2016 (for now, several critical analyses of the notion of quantified self are provided by sociologists).

⁴I have extensively worked on this issue, especially in Chiodo 2020a and 2020b.

Even more surprisingly, as we are more and more externalising logos, we are not developing alternative mental capacities, starting from metis as its historical challenger.

On the one hand, the legacy we have at our disposal has to do with countless philosophical works, from ancient philosophy to modern and contemporary philosophy, that stress the primacy of rationality as logos, specifically the relationship between logos and certainty (as several quotes show in footnote 5).⁵

On the other hand, the legacy we do not equally have at our disposal may be precisely what the unprecedented complexity and uncertainty characterising our era require the most: forms of rationality that may help us make decisions when, for instance, statistics are not available at all. For instance, should we be vaccinated as soon as the new vaccine against the new virus is at our disposal? If we use logos as “computation, reckoning,” then we may fall into the endless (and socially disruptive) dispute between pro-vax and no-vax, the former asserting that we already have the data we need to be safe and the latter asserting that we do not already have the data we need to be safe. If we use metis, specifically “wisdom,” as I hope to show, then we may answer the question through an attitude that may be practically reasonable even if it is theoretically uncertain.

3 | (SCRAPS OF) WISDOM IN WESTERN PHILOSOPHY

In order to propose the reasons why increasing our focus on wisdom may help us face our unprecedentedly complex and uncertain era as philosophers, I need first to provide at least a brief sketch of wisdom’s historical cornerstones.

Plato’s (1966) Socrates (see Plat. *Apol.* 20e–23c) finds wisdom in the following attitude: “What I do not know I do not think I know either” (21d), “for I was conscious that I knew practically nothing” (22d). Thus, being wise means “recogniz[ing] that he is in truth of no account in respect to wisdom” (23b). Plato’s idea of wisdom has to do with self-awareness of lack of knowledge. Knowledge also characterises Aristotle’s (1934) idea of wisdom. Yet, Aristotle’s stress is on the presence of knowledge, even if specific: being wise means not only knowing from a theoretical perspective but also knowing from a practical perspective. More precisely, wisdom is the capacity for distinguishing right from wrong when it comes to deciding for the best and acting accordingly: “Men like Anaxagoras and Thales ... while admitting them to possess a knowledge that is rare, marvellous, difficult and even superhuman, they yet declare this knowledge to be useless, because these sages do not seek to know the things that are good for human beings” (Arist. *Nic. Eth.* 1141b). Alternatively, being wise means moving from knowledge to its use, that is, making the best decisions to act. The Stoics also develop wisdom in a practical direction. According to Seneca (1928), wisdom means the capacity for being resilient to any kind of challenging obstacle: “As certain cliffs, projecting into the deep, break the force of the sea, and, though lashed for countless ages, show no traces of its wrath, just so the spirit of the wise man is impregnable, and has gathered such a measure of strength as to be no less safe from injury” (Sen. *Const.* III 5).

⁵See, e.g., Plat. *Thaet.* 206c–209a, esp. “The most perfect knowledge arises from the addition of rational explanation [*logos*] to true opinion” (Plato 1921); Arist. *Nic. Eth.* I, 12, 1097b–1098a, esp. “We declare that the function of man is a certain form of life, and define that form of life as the exercise of the soul’s faculties and activities in association with rational principle”; Gal. *Dialog.* I, esp. “Taking man’s understanding intensively, in so far as this term denotes understanding some proposition perfectly, I say that the human intellect does understand some of them perfectly. ... Of such are the mathematical sciences alone” (Galilei 1967); Descartes 1637, IV, esp. “I observed that this truth, I think, therefore I am (*cogito ergo sum*), was so certain and of such evidence that no ground of doubt, however extravagant, could be alleged by the sceptics capable of shaking it”; Kant 1781, B 12–13, esp. “A necessary law, which is yet what reason seeks and requires. Reason ... must approach nature with its principles in one hand, according to which alone the agreement among appearances can count as laws”; and Wittgenstein 1921, 3–3.032, esp. “A logical picture of facts is a thought.”

A reflection upon wisdom also characterises modern philosophy. In particular, Descartes correlates wisdom to a kind of practice-oriented use of knowledge: “The word ‘philosophy’ means the study of wisdom, and by ‘wisdom’ is meant not only prudence in our everyday affairs but also a perfect knowledge of all things that mankind is capable of knowing, both for the conduct of life and for the preservation of health and the discovery of all manner of skills” (1647, AT IXB 2). More precisely, wisdom can help one understand “what decision it [the will] ought to make in each of life’s contingencies” (1684, AT X 361), and can ultimately lead to something analogous to the Stoic wisdom’s result: “The chief use of wisdom lies in its teaching us to be masters of our passions and to control them with such skill that the evils which they cause are quite bearable, and even become a source of joy” (1649, AT XI 488). Thus, wisdom is the kind of practice-oriented use of knowledge that makes us understand “what decision” we should “make in each of life’s contingencies” by “master[ing]” both internal and external “evils,” and even by making a virtue of necessity.

Contemporary philosophy, after Fichte’s further focus on the relationship between wisdom and practice (see Fichte 1794–95), also correlates wisdom to a kind of practice-oriented use of knowledge by stressing its extension (against the restriction characterising logos). Nozick’s words are particularly effective:

What a wise person needs to know and understand constitutes a varied list: the most important goals and values of life—the ultimate goal, if there is one; what means will reach these goals without too great a cost; what kinds of dangers threaten the achieving of these goals; how to recognize and avoid or minimize these dangers; what different types of human beings are like in their actions and motives (as this presents dangers or opportunities); what is not possible or feasible to achieve (or avoid); how to tell what is appropriate when; knowing when certain goals are sufficiently achieved; what limitations are unavoidable and how to accept them; how to improve oneself and one’s relationships with others or society; knowing what the true and unapparent value of various things is; when to take a long-term view; knowing the variety and obduracy of facts, institutions, and human nature; understanding what one’s real motives are; how to cope and deal with the major tragedies and dilemmas of life, and with the major good things too. (1989, 269)

Again, wisdom has to do with a specific kind of knowledge, that is, how to live well not from a theoretical perspective but from a practical perspective, starting from knowing to where we should lead our lives (in terms of what “goals” to have) and how to lead our lives there (in terms of what “values” to have). More precisely, three points are stressed. First, wisdom implies learning how to handle “dangers” even more than how to handle “opportunities” (we should recognise “what kind of dangers threaten” our “goals” and, thus, “how to recognize and avoid or minimize” them and “how to cope and deal with the major tragedies and dilemmas of life”). Second, wisdom implies learning how to adapt to reality (by changing ourselves) even more than how to change reality (we should recognise the “obduracy of facts, institutions, and human nature” and, thus, “what limitations are unavoidable and how to accept them,” both in terms of knowing “what is not possible or feasible” at all and in terms of knowing “what is appropriate when”). And, third, wisdom implies learning how to be forward looking (by seeing something as a whole, we may argue) even more than how to analyse details (by seeing something as a series of individual details, we may argue), that is, how to understand what really matters (we should recognise, through “a long-term view,” “what the true and unapparent value of various things is” and “what one’s real motives are”). Other contemporary philosophers advocate the correlation between wisdom and a kind of practice-oriented use of knowledge (see, e.g., Kekes 1983 and 2020; Maxwell

1984; Lehrer et al. 1996; Zagzebski 1996; Ryan 1999 and 2012; Tiberius 2008; and Whitcomb 2010). In particular, as Kekes puts it, “To understand wisdom, we have to understand its connection with knowledge, action, and judgement” (1983, 277), since, “in reliable, sound, reasonable, in a word, good judgement ..., a person brings his knowledge to bear on his actions” (1983, 277). And defining a “good judgement” as “reliable, sound, reasonable” ultimately means defining wisdom as something that is quite the opposite to a restricted form of logos as computation, being “the evaluative attitude ... [that] is personal, not theoretical; anthropocentric, not metaphysical; context-dependent, not universal; and humanistic, not scientific” (Kekes 2020).⁶

I cannot give more details in a journal article that is not meant to analyse the (discontinuous) history of wisdom. Yet, I may summarise the brief sketch of wisdom’s historical cornerstones by saying that what wisdom has been mostly meaning over the centuries in Western philosophy has to do with the following three points as its primary cornerstones:

1. wisdom seems to be founded on a specific attitude: *awareness of limits*; more precisely, limits are both internal (starting from lack of knowledge) and external (starting from obduracy of reality);
2. thus, wisdom seems to require a specific ethical attitude: *resilience*; more precisely, resilience means not only “the ability to be happy, successful, etc. again after something difficult or bad has happened” but also the capacity for making a virtue of necessity;⁷
3. thus, wisdom also seems to require a specific form of rationality: *practice-oriented knowledge*; more precisely, practice-oriented knowledge means moving from what can be computed (within the ideal scenario of an equally ideal model) to what cannot be computed (within the real scenario of an equally real life).

4 | MEANING OF WISDOM

If I think of the three primary cornerstones I have summarised, that is, awareness of limits, resilience, and practice-oriented knowledge, then I also think of the following words, which are quite poignant. The logical empiricist Reichenbach imagines Hamlet as follows:

To be or not to be—that is not a question but a tautology. I am not interested in empty statements. I want to know the truth of a synthetic statement: I want to know whether I shall be. Which means whether I shall have the courage to avenge my father? ... I have good evidence. The ghost was very conclusive in his arguments. But he is only a ghost. Does he exist? ... But that’s it: nothing but indirect evidence. Am I allowed to believe what is only probable? Here is the point where I lack the courage. ... I am afraid of doing something on the basis of a mere probability. ... [W]hat if I should start thinking after the deed and find out I should not have done it? ... [T]he logician ... tells me that if something is probable I am allowed to make a posit and act as though it were true. In doing so I shall be right in the greater number of cases. But shall I be right in *this* case? (1959, 250–51).

Reichenbach’s Hamlet answers as follows: “There is no certainty. The probability will be increased and my posit will have a higher rating. I can count on a greater percentage of correct

⁶Words officially describing the essential thesis of the monograph.

⁷As defined by the *Cambridge Dictionary*: <https://dictionary.cambridge.org/it/dizionario/inglese/resilience>.

results. That is all I can reach. I can't get away from making a posit. I want certainty, but all the logician has for me is the advice to make posits. There I am, the eternal Hamlet. His advice confirms my doubt rather than giving me the courage I need for my action" (1959, 251). The reason I think that Reichenbach's Hamlet is quite poignant is that his words may be ours, as we are facing an unprecedentedly complex and uncertain era, which is made even more complex and uncertain by the COVID-19 pandemic. Reichenbach's Hamlet must act audaciously, but the form of rationality that founds his action, that is, the logician's form of rationality, can give him nothing but "a mere probability": "If something is probable I am allowed to make a posit and act as though it were true. In doing so I shall be right in the greater number of cases." Yet, Reichenbach's Hamlet's question is the following: "But shall I be right in *this* case?" And his poignant answer is that, if he must act audaciously even when "there is no certainty," then the logician's form of rationality "confirms my doubt rather than giving me the courage I need for my action." Thus, the question we may ask ourselves is the following: On what can we found our (audacious) actions when the logician's form of rationality cannot be effective?

Awareness of limits, resilience and practice-oriented knowledge, that is, wisdom, seem quite promising. In the case of Hamlet, who is deciding whether or not to avenge his father on the basis of the revelation of a ghost, we may say that:

1. awareness of limits may recommend not relying on the revelation of a ghost, both for internal limits (Hamlet's mind may be shocked by his father's death) and for external limits (ghosts' existences and revelations may be quite questionable);
2. resilience may recommend making a virtue of necessity in terms of exercising a series of both intellectual and ethical virtues, such as carefulness against carelessness and patience against impatience;
3. practice-oriented knowledge may recommend imagining the real consequences of the action, that is, avenging his father by murdering his alleged murderer, on the real lives of the real individuals directly and indirectly involved and acting accordingly (which may mean, again, not to avenge his father by murdering his alleged murderer, since the real consequences on the real lives of the real individuals directly and indirectly involved may be tragic, as Shakespeare masterfully taught us).

Thus, we may ultimately argue that the wisest thing Hamlet can do is not to avenge his father on the basis of the revelation of a ghost.

Also in the case of the unprecedentedly complex and uncertain era we are facing (starting from the COVID-19 pandemic), awareness of limits, resilience, and practice-oriented knowledge, that is, wisdom, seem quite promising. If we are deciding, for instance, whether or not to be vaccinated as soon as the new vaccine against the new virus is at our disposal, we may say that:

1. awareness of limits may recommend not relying on what is more unknown (the effects of the vaccine in the long term) against what is less unknown (the tragic effects of the virus both in terms of health and in terms of social consequences);
2. resilience may recommend making a virtue of necessity in terms of exercising a series of both intellectual and ethical virtues, starting from politicians and scientists, such as farsightedness against shortsightedness and humility (in terms of renouncing personal media exposure if it is confusing) against narcissism (in terms of not renouncing personal media exposure even if it is confusing);
3. practice-oriented knowledge may recommend imagining the real consequences of the action, that is, being vaccinated as soon as the new vaccine against the new virus is at our disposal, on the real lives of the real individuals directly and indirectly involved and acting accordingly (which may mean, again, to be vaccinated not only as the right to protect ourselves but also

as the duty to protect others, since the real consequences on the real lives of the real individuals directly and indirectly involved may be tragic, as 2020 and 2021 harshly taught us).

Thus, we may ultimately argue that the wisest thing we can do is to be vaccinated as soon as the new vaccine against the new virus is at our disposal.

In both cases, there is no certainty at all: both Hamlet and we may be wrong. But wisdom may be precisely our best tool when there is no certainty at all, since it can give us what the logician's form of rationality cannot give us at all: "the courage I need for my action," which is far greater than the "mere probability," meaning "that if something is probable I am allowed to make a posit and act as though it were true. In doing so I shall be right in the greater number of cases"—only wisdom can give us "the courage I need for my action," since only wisdom can make us act for *reasons that can be good even if they end up not being "true."*

What I am trying to argue is that reasons resulting from a restricted form of logos as computation cannot be actually good if they end up not being "true" (at least statistically "true"). Alternatively, reasons resulting from wisdom can be actually good even if they end up not being "true" (at least statistically "true"), since wisdom works precisely when we cannot even distinguish what is "true" from what is false (for instance, when data will be available only in the long term)—wisdom works precisely when "the courage I need for my action" must be founded on good reasons even if there are no "true" reasons at all.

Our examples can also show us a possible specification of the definition of wisdom. On the one hand, in the case of practice-oriented knowledge, we have explicitly exercised imagination ("to imagine the real consequences of the action") and, on the other hand, in the cases of awareness of limits and resilience, imagination has implicitly worked (in the former case, to try to imagine both internal and external limits of which we are not totally aware and, in the latter case, to try to imagine how to make a virtue of necessity even in the most tragic circumstances, which surely requires great imagination).

Thus, we may argue that wisdom can be defined not only as awareness of limits, resilience, and practice-oriented knowledge but also as the capacity for imagining what kind of limits, what kind of resilience, and what kind of practice-oriented knowledge we should consider—we may argue that wisdom can be defined as *the capacity for imagining what cannot be known and acting accordingly*.

If my argument makes sense, then we may go further by stressing the difference between wisdom and a restricted form of logos as computation. Metaphorically, we may say that the former walks on quicksand but can walk everywhere, specifically where the latter cannot walk. Out of metaphors, we may say that wisdom works on the unlimited domain of uncertainty, which is harsh but exceedingly more extended than the limited domain of certainty on which a restricted form of logos as computation works. We may also say that wisdom is *horizontal*, whereas logos is vertical: logos can make us know an object in a strikingly detailed way, but wisdom can make us imagine the strikingly extended horizon of other objects, circumstances, and humans with which the object has had, has now, and will have relationships. Thus, we may also say that wisdom is *farsighted* (metaphorically, presbyopic), whereas logos is *shortsighted* (metaphorically, myopic): logos can make us realise what is in the present (see, for example, the logical empiricists, especially Carnap [1928]) and, at least in some cases, what will be in the future (for instance, what percentage of vaccinated individuals will guarantee herd immunity), but wisdom can make us always see what will be in the future (for instance, what consequences will impact the infinite complexity of society if herd immunity is not guaranteed). Ultimately, we may also say that the extension of wisdom can result in an *unselfish* attitude, as it were, whereas the restriction of logos can result in a selfish attitude, as it were: logos can allow us to consider a detail in an analytic way (telling us, for instance, what a given thing is), but wisdom can allow us to consider a whole in a synthetic way (telling us, for instance, how we should use a given thing and for what

general reasons, which may be exceedingly more promising for humans: we may happen not to know the chemical composition of a vaccine but know that we can live safely if we have a vision of how we should use the vaccine and for what general reasons).

Yet, Western culture gives analytic vision priority over synthetic vision, starting from the ancient Greek myth of Prometheus as it is told by Plato, according to whom humans obtained even divine qualities (“Hephaestus’ fiery art and all Athena’s,” stolen by Prometheus for humans [Plat. *Prot.* 321e]), except for one divine quality: “Civic wisdom he [man] had not, since this was in the possession of Zeus” (321d)—according to the cradle of Western culture, humans have no “civic wisdom,” also translated as “political wisdom.”⁸ Plato’s words are “τὴν δὲ πολιτικὴν” (*ten de politiken*), meaningfully referring to the complex notion of πόλις (*polis*), which means not only city as aggregation of individuals but also model of government characterised by the capacity for considering what is plural and common, giving it priority over what is singular and individual.

Thus, Western humans seem even constitutively incapable of wisdom as a form of imagination that is horizontal, farsighted, and unselfish, not only in order to work on the unlimited domain of uncertainty but also in order to consider what is plural and common with a synthetic vision, which is essentially ethical in that it makes us capable of paying attention to what exceeds our individual identities—yet, wisdom as *awareness of limits, resilience, practice-oriented knowledge, and a form of imagination that is horizontal, farsighted, and unselfish* may be precisely a most promising tool to face our unlimitedly complex and uncertain era.

5 | PUTTING WISDOM INTO PRACTICE: PHILOSOPHERS AS FACULTY

I do not think of wisdom as a replacement of logos at all. Alternatively, I think of wisdom as logos’s most promising ally, since it can strikingly enhance its results by making them move from theory to practice. I try to give examples in what follows.

Interestingly enough, according to the employment website The Muse, engineers are more and more required to have the following “soft skills”: communication (including active listening, public speaking and presentation, writing skills, verbal and nonverbal communication, negotiation, persuasion, leadership, teamwork, empathy, patience, and diplomacy), intellectual curiosity (including problem-solving, creativity, critical thinking, innovation, troubleshooting, brainstorming, and research), and openness to feedbacks (including adaptability, collaboration, self-awareness, resilience, co-operation, respectfulness, flexibility, managing one’s emotions, and humility) (Jackson-Wright 2021). The reasons the author of the article advocates the listed “soft skills” in educating engineers are the following (summarised after having interviewed several hiring managers). First, technologies impact increasingly complex social scenarios, especially in the era of globalisation (“Long gone are the days of zoning out the rest of the world as you perfect your code. ... [A]s a software engineer you’re never working in a vacuum—whatever you’re doing is always part of a larger system” (Jackson-Wright 2021). And, second, technologies are changing faster and faster—which ultimately means that the most important thing to learn as an engineer has to do not with contents (which are likely to change in the next future) but with capacities (which are likely to be crucial in the next future): more precisely, the capacity for moving from content to content again and again, which means successfully facing our unprecedentedly complex and uncertain era.

⁸For “civic wisdom,” see the translation by W. R. M. Lamb (Plato 1967) and for “political wisdom,” see the translation by B. Jowett revised by M. Ostwald (Plato 1956).

As a philosopher working at a leading European university of science and technology, I know from experience that it is no coincidence that several “soft skills” in the list reported by The Muse are closer to wisdom than to logos. Paradoxically enough, the engineer, whose profession is even defined in terms of “computation, reckoning,” is required to have capacities on which I have founded the definition of wisdom both directly (self-awareness and resilience) and indirectly (first, active listening, negotiation, persuasion, diplomacy, adaptability, and flexibility when it comes to practice-oriented knowledge; second, creativity, critical thinking, and innovation when it comes to a form of imagination that is horizontal and farsighted; and, third, empathy, patience, respectfulness, managing one’s emotions, and humility when it comes to a form of imagination that is unselfish).

More precisely, I know from experience that the request for what I may define as wisdom comes from engineering students themselves. Together with three colleagues (two philosophers and a certified coach with a strong background in engineering education and research), I designed a Ph.D. course entitled “Empowering Imagination,” which was offered in 2018 to students from the IDEA League universities and in 2019 to students from the Polytechnic University of Milan, to whom it was offered again in 2021 as a result of its success.⁹ I would say that the reasons for the course have precisely to do with the need for educating engineering students in what I would define as one of the cornerstones of wisdom: “Despite its impact, imagination has often been neglected in technical education, missing thus the opportunity of stretching this mental capacity for a better performance in the engineering practice and, what is more important, underestimating a holistic approach to address the complex challenges of our time, as human beings (with moral values) and engineers” (Arcangeli et al. 2020, 1225). Our students were asked to learn what imagination is not only from a philosophical perspective (through traditional teaching) but also from a practical perspective (through experiential learning), by putting it into practice in individual and group exercises focusing on five issues: awareness, understanding, self, others, and action. The ultimate results, also documented by our students’ work and course assessments, were quite impressive: first, the methodology we used (several exercises with intense group working, gestures, drawings, music, and so forth) made our students move from their comfort zones to novel challenges requiring imagination to be managed; second, our students started to learn to use imagination in order to change their usual perspectives, both when designing technologies (without being locked in their usual ways of working) and when managing human relationships with colleagues, professors, and clients (without being locked in their usual bias); third, our students started to learn to use what, according to Plato’s Socrates, is the cornerstone of wisdom: self-awareness, which “is the first step towards avoiding the bias that can deprive a researcher and/or a professional of the ability to find new, and better, solutions to problems” (Arcangeli et al. 2020, 1229).

We may think of several alternatives to the experience I have reported, but I think that at least one thing has no alternatives at all: our students need tools that can make them wiser, I would argue, that is, more capable of facing complexity and uncertainty. And, if Harari is right when he says that the coders are the crucial professionals of the future, since they design algorithmic technologies that increasingly shape us, then especially our engineering students need us to teach them wisdom as awareness of limits, resilience, practice-oriented knowledge, and a form of imagination that is horizontal, farsighted, and unselfish—our engineering students in particular need us to teach them the capacity for imagining what cannot be known

⁹The IDEA League universities are five leading European universities of science and technology: Chalmers University of Technology, Delft University of Technology, ETH Zürich, Polytechnic University of Milan, and RWTH Aachen University. See <https://idealeague.org/>. Also attending the course were students from the ASPIRE League universities, which are five leading Asian universities of science and technology (see <http://www.aspireleague.org/>).

(for instance, what consequences will impact the infinite complexity of society if algorithms are used to predict our life expectancies) and acting accordingly.

6 | PUTTING WISDOM INTO PRACTICE: PHILOSOPHERS AS RESEARCHERS

The stress on a restricted form of *logos* as computation affects not only our engineering students' curricula but also our research as philosophers, from how we rank our universities and publications to how we do research itself.

The weaknesses of computational rankings are already quite clear, but we keep using them on a massive scale. As for ranking our universities, O'Neil, among several others, warns about the weaknesses of computing: it is a matter of trying "to figure out what they [rankings] could measure. ... In this case, it was just people wondering what matters most in education, then figuring out which of those variables they could count, and finally deciding how much weight to give each of them in the formula" (2016, 51–52). Yet, "they couldn't measure learning, happiness, confidence. ... Instead they ... looked at SAT scores, student-teacher ratios, and acceptance rates" (52), and so forth. But, "as the ranking grew into a national standard, a vicious feedback loop materialized. The trouble was that the rankings were self-reinforcing. If a college fared badly ..., its reputation would suffer, and conditions would deteriorate. Top students would avoid it, as would top professors. ... The ranking, in short, was destiny" (53). Moreover, "the vast reputational ecosystem of colleges and universities was overshadowed by a single column of numbers" (53). But reputation is hard to compute, as O'Neil points out.

As for ranking our publications, the San Francisco Declaration on Research Assessment (DORA), signed by thousands of researchers, warns about the weaknesses of journal-based metrics: "Do not use journal-based metrics, such as Journal Impact Factors, as a surrogate measure of the quality of individual research articles, to assess an individual scientist's contributions, or in hiring, promotion, or funding decisions."¹⁰ In any case, I think that we know, as researchers in general and as philosophers in particular, that the quality of our publications is hard to compute. As philosophers, we may focus not only on the weaknesses of computing citations (which is an issue extensively analysed, especially in terms of manipulating the metrics; see, for example, Singh Chawla 2019). We may focus too on more philosophical issues, as it were, such as the following questions, which make us move from rankings to how we do research itself.

1. If authentically original research is not likely to be published in a top-ranked journal because the research is far from being standard, that is, it does not meet the requirements dominating our top-ranked journals, would we invest our energies in it?¹¹ (For instance, consider Wittgenstein's *Tractatus Logico-Philosophicus*, which is exceedingly nonstandard and equally crucial.)
2. If authentically farsighted research (which means not only conceptual analysis but also conceptual vision) is not likely to fit within the stipulated number of words of a journal article because it is far from being short, would we invest our energies in it? More precisely, would we be fine with not publishing anything but a monograph every several years, especially if we do not have a tenure track position? Or would we be tempted to

¹⁰Quote from <https://sfdora.org/read/>.

¹¹The requirements dominating our top-ranked journals usually follow analytic philosophy, which risks their becoming impervious to even promising alternative philosophical traditions.

indefinitely postpone the monograph in order to write journal articles that, even if they can be nothing but shortsighted pieces of authentically farsighted research, pay off with less effort and sooner? And what would we advise our academically younger colleagues to do?

3. If conceptual vision, which is a step ahead of conceptual analysis (and which I believe to be authentically philosophical research), is not likely to make do with an edited volume (with us as editors), which, again, pays off with less effort and sooner than a monograph (with us as sole authors), then would we invest our energies in it? And what would we advise our academically younger colleagues to do?

The reason these questions are hard to answer (especially as we are responsible for advising early career academics) is quite precise: our research assessment system is founded on the tools provided by a restricted form of *logos* as computation, which is constitutively shortsighted, as it were (the more the better, the sooner the better, and so forth).

Yet, we also have tools constitutively farsighted, as it were: the tools provided by wisdom, which may be used, again, not as a replacement of *logos* but as its most promising ally. Rankings have both strengths and weaknesses. As for the strengths, they can potentially enhance meritocracy (the motto “publish or perish” can at least distinguish researchers who publish from researchers who do not publish at all). As for the weaknesses, they can potentially mislead, as we have seen, when it comes to enhancing

1. authentically original research (against risking producing almost exclusively standard research);
2. authentically farsighted research (against risking producing almost exclusively shortsighted pieces);
3. conceptual vision (against risking producing almost exclusively conceptual analysis), especially in the case of philosophers.

More precisely, wisdom may be a kind of compass when it comes to trying to partly reform our research assessment system affecting how we do research itself, by paying attention to what follows, for instance:

1. Awareness of limits may help us consider that sometimes the more and the sooner do not mean the better. Thus, we should try to imagine how not to totally discourage exceptions.
2. Resilience may help us consider that sometimes overexposure (by giving publishing priority over silently pursuing more far-reaching research) does not pay off more than underexposure (by giving silently pursuing more far-reaching research priority over publishing). Thus, we should try to imagine how not to totally discourage the latter, starting from enhancing basic research (against more and more giving applied research priority over basic research).
3. Practice-oriented knowledge may help us consider that sometimes impacts on civil society are more important than impacts on academia (as the COVID-19 pandemic has dramatically shown us: we should be wiser both in terms of renouncing personal media exposure if it is confusing and in terms of investing our energies in learning how to communicate to civil society, even if it takes time away from publishing). Thus, we should try to imagine how not to totally discourage the former, starting with paying more attention to outreach activities in our assessment systems in general, from hiring to promoting.
4. A form of imagination that is horizontal, farsighted, and unselfish may help us consider that sometimes a bird in the hand is not worth two in the bush, as it were. Thinking that a bird in the hand is (always) worth two in the bush typically characterises our era. Metaphorically, we may say that our era is for sprinters, not for marathoners. Out of

metaphors, we may say both that our society is dominated by politicians who are hardly statesmen and that our academia is dominated by researchers who are hardly visionaries. Politicians and researchers focus on the present, that is, short-term results, which usually mean advantages for themselves (from politicians' votes and popularity in the upcoming election to researchers' publications and popularity in the upcoming year). Alternatively, statesmen and visionaries focus on the future, that is, long-term results, which usually mean advantages for others (from the benefit of society in the long term, even by sacrificing immediate votes and popularity, to the benefit of academia in the long term, even by sacrificing immediate publications and popularity). Thus, we should try to imagine how not to totally discourage a more horizontal, farsighted, and unselfish form of imagination, starting from focusing not only on what currently pays off but also on what can potentially pay off in the future from an unselfish perspective.

7 | PUTTING WISDOM INTO PRACTICE: PHILOSOPHERS AS EXPERTS

As we have partly seen, wisdom as awareness of limits, resilience, practice-oriented knowledge, and a form of imagination that is horizontal, farsighted, and unselfish may be a most promising tool when we, as experts (as researchers in general and as philosophers in particular), talk to civil society.

The COVID-19 pandemic is a most complex and uncertain phenomenon, for which the tools of logos are insufficient. For instance, we could not predict its subsequent waves, specifically its extent. Yet, scientists, together with their predictions, happen not to renounce personal media exposure even if it is confusing. Too frequently they haunt social media to say with certainty what turns out not to be certain at all (as they turn out, at least sometimes, not to be expert at all; for instance, when they said both that the virus was less serious than flu and, between the first and the second wave, that the virus was clinically dead).¹² And scientists' confusion means, first, politicians' confusion (starting from health policies incapable of facing the emergency) and, second, civil society's confusion (starting from pandemic denial that also means dangerous antimask protests).

But the most important question to us as philosophers is the following: Why can we hardly remember philosophers intervening to say something authentically wise? For instance:

1. that, if we do not know the virus because it is new, then we, as researchers in general, should make it clear that we do not know the new virus well enough to provide certainties and should renounce personal media exposure if it is confusing (awareness of limits);
2. that, as scientists are getting to know the new virus better, we, as citizens, should try to stay calm, since knowing the new virus well enough takes time (resilience);
3. that, as scientists are getting to know the new virus better, we, as citizens, should try to be as careful as possible (through social distancing, handwashing, wearing masks, ventilating rooms, and cleaning surfaces), since carefulness has practical advantages anyway (practice-oriented knowledge);
4. that we, as philosophers in particular, should help move the focus of attention from (irrelevant) issues concerning the present, such as political wrangling using the emergency as a pretext for discrediting opponents, to (relevant) issues concerning the future, such as designing the post-COVID-19 era, also by making a virtue of necessity (a form of imagination that is horizontal, farsighted, and unselfish).

¹²Examples are several. To focus just on the Italian debate, see <https://www.wired.it/attualita/politica/2020/12/22/peggiori-spara-te-scientziati-politici-coronavirus/>.

The answer to the question why can we hardly remember philosophers intervening to say something authentically wise may be that philosophy also plays the game of logos much more than the game of wisdom. We happen to find philosophers saying on TV what ideology they support, from pandemic denial to surveillance system, more than philosophers saying on TV that, as scientists are getting to know the new virus better, it is wise to try to be as careful as possible without falling into opposite forms of extremism.

8 | PUTTING WISDOM INTO PRACTICE: PHILOSOPHERS AS CITIZENS

Things are not necessarily better when it comes to considering philosophers as citizens acting in our technological era. If it is true that complexity and uncertainty may be thought of as inescapably characterising our *technological* era in particular, since exceedingly complex (and powerful) technologies mean exceedingly uncertain (and powerful) uses, then it is also true that we should add wisdom to logos as its most promising ally when it comes to facing our technological era in particular (in which a virus is showing us to be perfectly capable of using our sophisticated technologies, such as our transport systems, as its most powerful tool to quickly spread to all corners of the planet and get to each and every one of us).

Yet, philosophy keeps being experienced as something on which we may build a career more than a life. Moreover, even if technology inescapably means not only complexity and uncertainty but also a way to face complexity and uncertainty (the virus is able not only to quickly spread to all corners of the planet through our transport systems but also to be quickly neutralised through our vaccines), philosophers focus on technology less than wise humans would.¹³

The cradle of Western culture, specifically the ancient Greek myth of Prometheus, also taught us that humans are essentially technological: technology, symbolised by “Hephaestus’ fiery art and all Athena’s”—that is, the capacity for mastering fire—is precisely what distinguishes humans from other creatures. Moreover, our technological era is making us more essentially technological than ever, from the use of information technologies (which we cannot do without, as the COVID-19 pandemic has proved) to the use of bioengineering technologies (which promise to redesign our bodily identity, starting with our health). Yet, philosophers mostly ignore technology as a privileged way to read our complex and uncertain era, together with our equally complex and uncertain identity as humans. And, when they do not ignore technology (or do not oversimplify its catastrophist reading), they sometimes use too much logos and too little wisdom—and using too much logos and too little wisdom means knowing details whose meaning we do not know, and do not even ask ourselves, in the general trajectory of humankind.

Thus, we may summarise the reason why philosophers should put more wisdom into practice by saying that it is worthless knowing how we can make human life everlasting if we stop asking ourselves the most philosophical and wisest question, considering it an ancient riddle (that is, a contemporary taboo): What makes human life worth living?¹⁴ Wisdom can help us not only answer this question but also find a promising attitude as we are trying to answer the question—the attitude that can make us live day by day in our unprecedentedly complex and uncertain era by making us act for reasons that can be good and practically reasonable even if

¹³For instance, as co-editor of a volume entitled *Italian Philosophers of Technology*, I could scarcely find about twenty Italian philosophers systematically working on technology for more than a decade (see Chiodo and Schiaffonati 2021).

¹⁴On making life everlasting, see for instance, <https://www.sens.org/>: “SENS Research Foundation works to develop, promote, and ensure widespread access to therapies that cure and prevent the diseases and disabilities of aging by comprehensively repairing the damage that builds up in our bodies over time. We are redefining the way the world researches and treats age-related ill health, while inspiring the next generation of biomedical scientists.”

they end up not being true and theoretically certain (and even if they end up not being measurable in terms of truth and certainty at all).

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