The Politics of Uncertainty

Luciano Floridi

What is uncertainty? There are of course several possible definitions, offered by different fields, from epistemology to statistics, but, in the background, one usually finds some kind of relation with the lack of information, in the following sense. Suppose we define semantic or factual information as the combination of a question plus the relevant, correct answer. If one has both the question and the correct answer, one is informed: "was Berlin the capital of Germany in 2010? Yes". If one has the question but the incorrect answer, one is insipient. If one has neither, one is ignorant. And if one has only the question but not the answer, then one is uncertain. Uncertainty is what a correct answer to a relevant question erases. This is why, in information theory, the value of information is often discussed in terms of the amount of uncertainty that it decreases. And this is also why there are many things in life that we value, but uncertainty is not usually one of them. At first sight, this may seem to be unproblematic, indeed obvious. What we actually value is information, understandable now as the appropriate combination of relevant questions and correct answers, the Qs and the As. We value information because it is power: power to understand what happened, forecast what will happen and, hence, choose now among the things that could happen between the past and the future. Marx and the past two centuries thought that power, understood as the sociopolitical ability to control or influence people's behaviour, was exercised through the creation or control of (the means of production of) things, i.e. goods and services. But it is equally clear that power is also exercised through the creation or control of (the means of production of) *information* about things, e.g. laws, statistics, news or technoscience. To use a trivial example, if you wish to buy a secondhand car, you value information about its past (was it involved in any accident? yes), its future (is it expensive to run? yes) and its present (should I haggle over the price? yes). The more information you have, the better you may shape your environment and control its development and the more advantage you may enjoy against competitors who lack such a resource.

This applies even to stand-alone contexts: Robinson Crusoe wishes to have information about the island, even if there is nobody else. But it applies even more strongly to socio-political contexts: once Robinson Crusoe is joined by Friday, the native

L. Floridi (🖂)

Oxford Internet Institute, University of Oxford, 1 St Giles, Oxford OX1 3JS, UK e-mail: luciano.floridi@oii.ox.ac.uk

cannibals, the shipwrecked Spaniards and the English mutineers, the asymmetric nature of his informational state (he has answers to questions that they lack) is enormously advantageous, to the point of being life-saving.

On the contrary, being uncertain means that none of this immediately holds true, because one has only the relevant questions without the correct answers, only the Qs without the As. Just remove the three yesses from the previous questions about the second-hand car and you immediately appreciate why nobody likes to be in such a state of informational deficit.

Because each of us finds information valuable and uncertainty uncomfortable, one may be tempted to generalise and declare uncertainty a disvalue in absolute terms: having only relevant questions is always bad, adding the correct answers is always good. We value information precisely because it reduces uncertainty. If you like one you dislike the other, it seems a zero-sum game. Yet adopting this simplistic view would be a mistake. A liberal, tolerant and fair society is one in which any question is allowed, but not all questions are supposed to be answered. A healthy degree of uncertainty is both welcomed and fostered. Let me explain.

First, one must recall that uncertainty is preferable to ignorance and insipience, because lacking answers is not as bad as lacking the questions in the first place, or having the wrong answers. Imagine you did not think about asking whether the second-hand car you bought required a very expensive insurance, or indeed you just assumed it did not. Often "you should have known better" only means "you should have asked". It is not uncertainty but rather ignorance and insipience that are an absolute disvalue. For only if you have no questions or you think you already have the answers you may never get correct answers. Fundamentalists of all kind know this well. This is why any society that forbids or discourages free questioning and spreads misinformation is illiberal and in need of reform.

Second, uncertainty has value insofar as it makes the relationship between questions and answers a bit more problematic, and rightly so. Sceptics love doubts that untie the As from the Qs. We should be grateful to them. The value of sceptical doubts and of the uncertainty they generate lie in the extremely demanding standards that they set up to test the correctness of our answers. It is a bit like driving your second-hand car under the most extreme weather conditions. Scepticism is the ultimate benchmark of knowledge. So people who understand scepticism use it judiciously. Descartes, in questioning the ultimate foundation of all knowledge-a task that could not have been more crucial—chose the ultimate challenger: a malicious demon that is constantly deceiving us, even about the clearest answers to the most basic questions about simple mathematical truths. He offered the ultimate answer: I think therefore I am, this much is absolutely certain. Of course, when buying a second-hand car, you do not need to entertain such extreme possibility. And yet, a pinch of sceptical uncertainty may still be healthy, for you may not be fooled by a demon, but you might be conned by a salesman. In short, some induced uncertainty and the ability to entertain alternative answers to the same question has an epistemological value that we should not underestimate, in science as well as in everyday life. Dogmatic societies that assume there is only one correct answer to fundamental questions—being these about abortion, same-sex marriage, dress codes, alcohol and recreational drugs, assisted suicide or other similar divisive issues-tend to be intolerant and could definitely do with a healthy dose of uncertainty.

Finally and most importantly, uncertainty can be harnessed in order to restrain the power that comes with information, or constrain it to make it perform better. The first point is simpler. Information-as-power can easily be abused, and it is sometimes better not to empower people in the first place, rather than trust them to use their power fairly and wisely, not least because the "nice" people of today may be replaced by nastier ones tomorrow. Think about political preferences, for example: your vote should be and remain secret, no matter how free I am to ask questions about it. The same holds true about private choices, tastes, inclinations or behaviours: your business, my uncertainty. The second point, that some degree of uncertainty may actually be good for the overall informational state of the system, is less intuitive. To put it simply, information-aspower, if unlimited, may actually perform less well, socially, than when there are some limits. This is known, in game and network theory, as Braess' paradox. It can be proved that, sometimes, blocking roads can actually speed up traffic. This is counterintuitive, so allow me to trivialise it. Think of the case in which each passenger gets out of a bus slightly less quickly but much more ordinately, so that the whole group actually moves faster. This paradoxical conclusion applies to information traffic as well. If we add some friction to the flow of information, if some questions remain unanswerable in principle (blocked, using the network traffic analogy), this may actually improve the performance of the overall system. If everybody remains slightly uncertain about some carefully chosen topics, the whole society ends up enjoying a better flow of information about other, perhaps more pressing issues.

Each of us would like to be omniscient, at least in the sense of having access to the correct answer to any question but, socially, this would be a disaster, for boundless information leads to boundless power (omnipotence), which rationally and selfishly used breeds irreconcilable conflicts and ultimately a gridlock. John Rawls' famous "veil of ignorance" is actually a "veil of uncertainty", which exploits precisely the value of a lack of answers, in order to develop an impartial approach to justice in terms of fairness: we should determine the value of an action or institution or custom as if we did not have an answer to the question how it would affect us, that is, which position we would hold in the issuing society that would approve of it.

In medicine, we have learnt that, at normal levels in the blood, cholesterol is an essential substance for the normal functioning of the body. Just because high cholesterol is a problem, which therefore needs to be kept under control, this does not mean that excessively low cholesterol is not unhealthy as well. In economics, we have learnt a similar lesson about inflation. For a long time, we treated it as an absolute disvalue and tried to eradicate it completely, but it seems clear now that a low (as opposed to zero or negative) and steady rate of inflation is actually preferable, because it can reduce the severity of economic recessions and favour more stability. In philosophy, it is time we learn the value of a low and stable degree of uncertainty. It is unhealthy to eradicate it completely, for a small dose of unanswered questions in the social system leads to increased degrees of liberalism, toleration and fairness, as well as more efficient flows of information. It seems that the value of information also lies in what it can teach us about its own equilibria.

A final point may be worth mentioning. The twentieth century saw the emergence of an informational turn in sociopolitical power. As George Orwell famously wrote in 1984: "Those who control the present, control the past and those who control the past control the future." What he had in mind was informational control. Today, we are probably witnessing an equally deep shift. For in liberal societies, awash with cheap goods and free information, power is exercised about which questions can be asked and what answers can be received: transparency, privacy, right to be forgotten, freedom of speech, ownership rights... the morphology of the flows of information is the morphology of uncertainty. Today, those who control the questions shape the answers and those who shape the answers control the world. Clearly, it is time to investigate the politics of uncertainty.