

In all of these examples, artifacts are active: they help to shape human actions, interpretations, and decisions, which would have been different without the artifact. To be sure, artifacts do not have intentions like human beings do, because they cannot *deliberately* do something. But their lack of consciousness does not take away the fact that artifacts can have intentions in the literal sense of the Latin word ‘intendere’, which means ‘to direct’, ‘to direct one’s course’, ‘to direct one’s mind’. The intentionality of artifacts is to be found in their directing role in the actions and experiences of human beings. Technological mediation, therefore, can be seen as a specific, material form of intentionality.

With regard to the second aspect of intentionality, the ‘originality’ of intentions, a similar argumentation can be given. For even though artifacts evidently cannot form intentions entirely on their own, again because of their lack of consciousness, their mediating roles cannot be entirely reduced to the intentions of their designers and users either. Otherwise, the intentionalities of artifacts would be a variant of what Searle denoted ‘derived intentionality’ (Searle, 1983), entirely reducible to human intentionalities. Quite often, technologies mediate human actions and experiences without human beings having told them to do so. Some technologies, for instance, are used in different ways from those their designers envisaged. The first cars, which only made 15 km/h, were used primarily for sport, and for medical purposes; driving at a speed of 15 km/h was considered to create an environment of ‘thin air’, which was supposed to be healthy for people with lung diseases. Only after cars were interpreted as a means for providing long distance transport did the car get to play its current role in the division between labor and leisure (Baudet, 1986). In this case, unexpected mediations come about in specific use contexts. But unforeseen mediations can also emerge when technologies are used as intended. The very fact that the introduction of mobile phones has led to changes in youth culture – such as that young people appear to make ever less appointments with each other, since everyone can call and be called at any time and place – was not intended by the designers of the cell phone, even though it is used here in precisely the context the designers had envisaged.

It seems plausible, then, to attribute a specific form of intentionality to artifacts. This ‘material’ form of intentionality is quite different from human intentionality, in that it cannot exist without human intentionalities supporting it. Only within the relations between human beings and reality can artifacts play their ‘intending’ mediating roles. When mediating the relations between humans and reality, artifacts help to constitute both the objects in reality that are experienced or acted upon and the subjects that are experiencing and acting. This implies that the subjects who act or make decisions about actions are never purely human, but rather a complex blend of humanity and technology. When making a decision about abortion on the basis of technologically mediated knowledge about the chances that the child will suffer from a serious disease, this decision is not ‘purely’ human, but neither is it entirely induced by technology. The very situation of having to make this decision and the very ways in which the decision is made, are co-shaped by technological artifacts. Without these technologies, either there would not be a situation of choice, or the decision would be made on the basis of a different relation to the situation. At the same time, the

technologies involved do not *determine* human decisions here. Moral decision-making is a joint effort of human beings and technological artifacts.

Strictly speaking, then, there is no such thing as ‘technological intentionality’; intentionality is always a hybrid affair, involving both human and nonhuman intentions, or, better, ‘composite intentions’ with intentionality distributed over the human and the nonhuman elements in human-technology-world relationships. Rather than being ‘derived’ from human agents, this intentionality comes about in associations between humans and nonhumans. For that reason, it could be called ‘hybrid intentionality’, or ‘distributed intentionality’.

## 2.2 *Technology and Freedom*

What about the second requirement for moral agency we discerned at the beginning of this chapter: freedom, or even autonomy? Now that we have concluded that artifacts may have some form of intentionality, can we also say that they have *freedom*? Obviously not. Again, freedom requires the possession of a mind, which artifacts do not have. Technologies, therefore, cannot be free agents like human beings are. Nevertheless there are good arguments not to exclude artifacts entirely from the realm of freedom that is required for moral agency. In order to show this, I will first elaborate that human freedom in moral decision-making is never absolute, but always bound to the specific situations in which decisions are to be made, including their material infrastructure. Second, I will argue that in the human-technology associations that embody hybrid intentionality, freedom should also be seen as distributed over the human and nonhuman elements in the associations.

Even though freedom is obviously needed to be accountable for one’s actions, the thoroughly technologically mediated character of our daily lives makes it difficult to take freedom as an absolute criterion for moral agency. After all, as became clear above, technologies play an important role in virtually every moral decision we make. The decision how fast to drive and therefore how much risk to run of harming other people is always mediated by the lay-out of the road, the power of the engine of the car, the presence or absence of speed bumps and speed camera’s, et cetera. The decision to have surgery or not is most often mediated by all kinds of imaging technologies, blood tests et cetera, which help us to constitute the body in specific ways, thus organizing specific situations of choice.

To be sure, moral agency does not necessarily require complete autonomy. Some degree of freedom can be enough to be held morally accountable for an action. And not all freedom is taken away by technological mediations, as the examples of abortion and driving speed make clear. In these examples, human behavior is not determined by technology, but rather co-shaped by it, with humans still being able to reflect on their behavior and make decisions about it. This does not take away the fact, however, that most mediations, like those provided by speed bumps and by the presence of ultrasound scanners as a common option in medical practice, occur in a pre-reflexive manner, and can in no way be escaped in moral decision-making. The moral dilemmas