

## ***Portraits of Plausibility*** **Federica Lucivero**

Anticipatory ethical technology assessment is based on the expectations about emergent technologies. Nordmann and Rip 2009 claim that to avoid dangerous speculations, the ethicists should check the reality of the expectations and assess their plausibility. **What does it assessing the plausibility of expectations on emergent technologies mean?**

On one hand, it means to take critically the information about possible new technologies. This prevents the ethicists from pointing out ethical issues raised by highly futuristic technologies and fostering fears and hopes on technologies that realistically will never be there.

On the other hand, inquiring into plausibility of expectations about a new technology means to understand how the technology will work and perform. What kind of information, performance, and functions will these devices provide? How will they work? What are the technical and medical challenges? What are their limits and constraints? This understanding is important for the ethicist to explore plausible future interactions between technology and society and evaluate their desirability.

### **Plausibility versus feasibility**

It is often suggested that the role of ethics of emergent technologies is to assess whether what is technically feasible is also ethically desirable. This mandate for ethics hides the critical assumption that technical feasibility can be assessed independently from value-judgements. Along with the constructivist trend, I refuse this dichotomy of facts and values. Technical feasibility has to be contextualised with respect to the values that provide the assessing criteria. The concept of plausibility, better than the concept of feasibility, captures this contextual element. In fact, something technically feasible might not be plausible when embedded in a certain context. When assessing the plausibility of expectations we are assessing the "technical" information based on some interest, value and idea of desirability. This means that the plausibility of expectations cannot be analysed in absolute terms only looking at the technology.

When assessing expectations on emergent technologies, desirability and plausibility are tightly linked concepts. On one hand, the analysis of the ethical issues raised by emerging technologies has to be preceded by an analysis of expectations plausibility to avoid speculation. On the other hand, an analysis of expectations' plausibility must take into account some idea of desirability.

This raises a procedural problem. **How can the ethicist ensure that these two analyses proceed in parallel?** When analysing the technical feasibility of a device, we need to look at the way that device will perform a certain task in a particular context. Technical problems and non-technical consequences cannot be analysed as isolated from the broader context of application.

Thus, the "plausibility of the expected device in the context" is the focus of my analysis. A plausible expectation that the device will perform certain tasks means that we expect that we have enough scientific and technical tools and know-how to produce a device that will have a certain function, i.e. will do something in a certain context of application. If the task of the device is to work in a medical context, the expectations about its development is related with the device performance in that context, for the goal that it has been designed for (expectations of doing something that work for a certain use/purpose/function). This means that some achievements in the lab context might not be considered as achievements in the context of use. Sometimes what a scientist is satisfied with does not match what a doctor is satisfied with or even with what the patient finds satisfactory.

This reflection is the starting point for designing a tool for the ethicist to assess emergent technologies. It opens up some methodological questions: How should the

social scientist and the ethicist assess the quality of promises into practice? How may this help in building realist techno-moral scenarios and anticipating real ethical concerns?

**Further insights and open questions:**

**Expectations as predictions of future reality?**

**Plausibility versus reality**

Rip and Nordmann write about "Reality check". This suggests that we can assess expectations' reality. However, we need to be cautious in talking about realism in the knowledge context. I prefer to talk about **plausibility** rather than reality of expectations. Plausibility infers that we do not analyse expectations in an absolute way, evaluating them in terms of absolute truth-value with respect to an external reality.

**Plausible expectations and scientific knowledge**

Expectations are the product of researchers' scientific understanding, hopes, curiosity, imagination, understanding of social needs. In order to assess the plausibility of expectations, it is important to unpack this set of diverse epistemic conditions that concur in producing expectations.

**Plausible versus predictable**

Expectations are not prediction on the future, they do not mirror what will happen in a realistic way, but they suggest what might happen. There is not only one plausible future, but several plausible futures can coexist.