participation in discussions will remain at the most a formality to obtain consent. As evident from this discussion, the situation is instead one of "cultural friction." In other words, due to the differences between the systems of relevance of experts and non-experts, the matters that are considered problematic by non-experts are not viewed as problems by experts. Therefore, what is needed in the first place is "literacy" on the side of engineer's: literacy in the sense of a competency in understanding and responding to the questions raised by laypersons. This could be termed as the engineer's "responsiveness" to the public.

In order to further clarify this, I use the metaphor of a narrative or novel written by many authors, in this case, engineers, managers, laypersons, etc. In this sense, the current master narrative would be that of the engineers. What is required is a rewriting of the narrative of design through mutual recognition between experts and non-experts. This implies that both of them recognize each other in the dialogue as co-authors of the narrative, i.e., as agents with the rights and obligations to ask and answer (responsibility). Trust, identity (on both the sides), and solidarity are founded on the basis of such mutual recognition. Consequently, this shall act as a foundation for the improvement of technical culture in general, or what can be called design culture.

7 Conclusion

We can concretely elucidate "culture within technology" and discern technology as a social and cultural activity by focusing on "acceptability". In general, the history of technology is not only a history of creations or choices but a history of the acceptances of the former and the oblivescence of the latter. Various decisions, interpretations, and valuations are embedded in the history of technology; they are sedimented and taken for granted. In a sense, technology is a narrative given by many people including laypersons. Thus, technological activities are conducted on this historical basis. For example, the reliability of a technology is determined by the reliability of the technological decisions and eventually the existence of a reliable technological culture. Therefore, particularly in organizations, this depends on the cultural and social relations; the same can be said about risk.

We shall undertake a detailed discussion on this issue in the future; however, with regard to the ethics of risks, we can state that the moral of the individual engineer and the moral rules of the engineering profession are not the only central, although not incidental, problems. When designing some artifacts, engineers expect numerous effects, side effects, and possible influences. In this context, in order to recognize engineers as qualified personnel, it is imperative that they are competent in appropriately understanding and responding to the questions of laypersons. Responsibility, in this sense, is the basis for ethics. Based on this approach, we can move beyond the dichotomy of scientifically quantified risk, the bias of non-experts, and the cultural relativism of risks. Thus far, we have emphasized "culture in technology" and "technology in culture"; however, this does not imply that we

should not continue to observe from a descriptive point of view. It is at every step. Design through mutual recognition between experts and non-experts engaged in dialogues is one such way. Technology and its risks are central to our discussion of human well-being.

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