

Seminar “Reading Levy’s *Neuroethics*”
Session 8 (13:30-15:30, December 14, 2007)
Presented by Sutetsu Boku
Reported by Kei Yoshida

In this session, we read the chapter 5 “The neuroethics of memory” (pp. 157-96). In this chapter, Levy examines the problem of whether we can change our memories with the help of neuroscientific technologies. This problem is important in that our memories constitute our identities. If we can change our memories, then that seriously affects our identities. Here are problems. Is it really possible to alter our memories? If it is, how?

Levy first scrutinizes the problem of whether we can insert false memories into minds. Levy points out that there are two obstacles to implanting false memories: technical and conceptual. The technical obstacle is this. To insert false memories, we need to know how memories are stored and retrieved, and to develop a way to mimic the memories. In Levy’s opinion, we have a good understanding of how memories are stored; however, we know less about memory retrieval. According to Levy, when we recall the same event, our recollections of it will be different each time. There are two reasons for this. First, “the retrieval cue will be different in each case (since the context of retrieval is necessarily different each time), and therefore the combination of stored memory and retrieval cue will be unique.” Second, “the stored memory itself, the so-called engram, will have changed by the very fact of having being recalled” (p. 161). For these reasons, we have serious difficulty inserting false memories. To insert false memories, we need to change the connections between neurons and to develop an indexing system that can track the changes of engrams.

Furthermore, Levy argues that there is a conceptual obstacle to insert false memories. By a conceptual obstacle, Levy means “the holism of mental content.” In Levy’s view, our beliefs constitute a whole, and thus an inserted false belief must be consistent with other beliefs. Some might argue that our beliefs are not completely consistent. Some beliefs might be contradictory to others. That is certainly the case. But if our beliefs are not consistent at all, then we might be regarded as non-rational agents. To be (regarded as) rational agents, we need to have some consistency of our beliefs. Because of that, inserting false memories faces a serious problem. True, we can sometimes implant false memories when they are relatively isolated from other beliefs. Levy does not deny that; however, the holism of mental content is very important limitation—although it does not make inserting false memories impossible. Then Levy goes on to examine actual cases of inserting false memories using low-tech ways such as suggestion and prompting. Referring to Elizabeth Loftus’s and others’ studies and the famous Paul Ingram case, Levy argues as follows: “Though the power that neuroscience might offer to distort memories raises serious moral and political qualms, no less serious are the problems that currently beset us. Induced memory distortions, deliberate or accidental, already impose high costs” (p. 170). That is, we have no special reason to worry about neuroscientific technologies of inserting false memories because we have not yet gotten such technologies, and because instead of them we need to worry about existing technologies. This argumentation strategy has been repeated several times. This reminds me of a child’s excuse when he/she is scolded: “But others did the same thing (or something worse)!” Here Levy draws on the parity thesis; however, it seems to me that Levy makes use of it to reduce the “threat” of neuroscience—if there is any. I am wondering why Levy adopts such an argumentation strategy. Do people in the English-speaking world see neuroscience as a serious threat to society? I do not know.

Anyhow, let us return to the text. After scrutinizing the problem of implanting false memories, Levy examines the problem of erasing memories. In particular, he discusses whether erasing one’s memories is harmful to oneself and others. As mentioned above, our memories are constitutive of our identities. Hence erasing our memories could be harmful to us. In Levy’s view, some of our memories are not that important, and thus erasing them would not be a problem. But there are other important memories that guide our actions and lives and constitute our

self-knowledge. We need such memories to learn from our experiences. Thus these memories should not be deleted. I do not find such a claim problematic. What is really interesting is Levy's examination of whether erasing one's memories harms others. Here Levy draws on the idea of recognition, which was introduced by G. W. F. Hegel and recently discussed by political philosophers such as Charles Taylor. I cannot explain the idea of recognition in detail, but explaining Levy's main point should suffice. That is this. We as social beings need recognition of others. We construct our identities through dialogues with them. Furthermore, if we delete our memories of others, then this could affect *them* in that having dialogues with us might constitute their identities. In this sense, our memories do not solely belong to us, and erasing them could be harmful to others. Then is it impermissible for us to erase our memories? Levy claims that that is not necessarily the case. He appeals to J. S. Mill's harm principle. "The harm principle simply states that each of us has the right to act as we like, so long as our conduct does not result in harm to (non-consenting) others" (pp. 177-8). Thus, we may want to erase our memories if that does not harm others or we have others' consent. The harm principle is important to protect the autonomy of individuals. If we value the autonomy of individuals, then the harm principle should not be abandoned. Then Levy goes on to examine how the extended mind thesis is related to this problem. According to the extended mind thesis, "since the mind extends into the world, altering one's own mind might entail altering the mind of others" (p. 180). Levy argues that this is not a problem, however. In his view, we have sovereignty over our own brains, if not our minds, and there is an asymmetry between the brain and the extended brain. Thus, unless changing my brain is seriously harmful to others, I may want to change my brain.

We have thus far looked at Levy's examination of changing memories. Levy scrutinizes another problem that is related to memories: traumatic memory manipulation. There are many studies of how to treat patients with post-traumatic stress disorder (PTSD). PTSD is a serious disorder, and scholars work on the prevention of PTSD. According to Levy, "[t]rauma stimulates the release of endogenous epinephrine, which facilitates memory consolidation (via the effect of the stress hormone on the amygdala)" (p. 182). But if we block the effect of the stress hormone using a beta-adrenergic antagonist (a beta-blocker), then we can prevent trauma and its resulting PTSD. Pitman and his colleagues show that propranolol, a beta-blocker, can prevent the occurrence of PTSD. So far, so good. Yet the President's Council on Bioethics that was chaired by Leon Kass raised serious concerns about the use of drugs such as propranolol in that these drugs can be abused. Levy argues against such concerns and contends that they are not peculiar to the use of propranolol. The use of alcohol is one example. Hence Levy argues that "the mere fact that a drug can be abused in pursuit of immoral ends is just one factor we must take into account when considering the advisability of making it available. If propranolol, or successor drugs, proves effective at combating PTSD, then its benefits probably outweigh its costs" (p. 186).

Finally, Levy examines the effects of propranolol on decision-making and moral cognition. According to Antonio Damasio's somatic marker hypothesis, emotion and the body are closely related to our "rational" judgment and decision-making. If drugs such as propranolol affect our emotions, then this might influence our decision-making. In Levy's view, recent research on the effect of propranolol on decision-making suggests that "even a single dose of the drug can influence decision-making" (p. 193). Thus if the effects of propranolol on our decision-making and moral cognition are significant, we would need to use it with great care.