

Seminar “Reading Levy’s *Neuroethics*”  
Session 2 (13:30-15:30, October 19, 2007)  
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In this session, we read from the beginning of Chapter 1 to the section “Peering into the mind” (pp. 1-29). The sections that we read are as follows: “What is neuroethics?” “Neuroethics: Some case studies,” “The mind and the brain,” and “Peering into the mind.”

Let us look at each section. In the first section “What is neuroethics?” Levy writes that the origin of the term “neuroethics” is usually ascribed to William Safire’s article in *The New York Times* (2002), although the term was used before the Safire article. According to Levy, neuroethics is a field that deals with new ethical problems caused by the recent development of the sciences of the mind. As we saw in the last session, by “neuroethics” we can mean at least two things. One is the ethics of neuroscience, and the other is the neuroscience of ethics. According to Levy, unlike bioethics or business ethics, “neuroethics reacts back upon itself” (p. 2). This is also what I mentioned in my report of session 1. Thus I need not explain it here.

Now, in the section “Neuroethics: Some case studies,” Levy takes up two examples to illustrate how neuroethics is not only important, but also interesting. The first example is Body Integrity Identity Disorder (BIID). BIID is a kind of mental disease whose patient wants to remove some part of his/her body, in particular, his/her limb. According to Levy, BIID is a problem of neuroethics in that BIID raises a question of whether removing some part of the patient’s body is permissible to treat his/her disorder. To think about such a question, we need to understand the disorder neuroscientifically, psychiatrically, and psychologically. In thinking about BIID, Levy draws on neuroscientific work on phantom limbs. The phantom limb experience suggests that “the experience of our bodies is mediated by a neural representation of a body schema” (p. 4). In the case of the phantom limb, pain is so strong that any treatment is often not helpful. If BIID is similar to the phantom limb, then surgery could be permitted. If not, then surgery is not permissible. That is, to decide whether surgery is permissible, we need to know whether BIID can be treated with the help of psychological means. In this sense, BIID is a question both for ethics and for neurosciences.

The second example is automatism. As an example of automatism, Levy refers to the case of Ken Parks who killed his mother-in-law and hurt his father-in-law, but claimed that at the time he was sleepwalking. In Levy’s opinion, we need to think about the case philosophically and neuroscientifically. First of all, we must philosophically analyze the notions of “responsibility” and “voluntariness.” We tend to think that the role of conscious intentions is crucial. Yet we do not necessarily have a conscious intention when we act. Hence a conscious intention is not helpful to distinguish between responsible actions and non-responsible ones. In the Parks case, we might want to appeal to the fact that Parks drove their home when he stabbed his parents-in-law, i.e. that he was sufficiently aware of his environment. But we know that Parks was a gentle man and had no problem with his parents-in-law. This suggests that the Parks case is not a case of an ordinary action. Here the neurosciences help us “to understand when and why normal agents are responsible for their actions” (p. 6). According to the neurosciences, our conscious explanation of our action is not always reliable, and we have little conscious control over the majority of our actions. They are intelligent and rational responses that reflect our own values, however. That is, not being conscious cannot distinguish between responsible actions and non-responsible ones in that it cannot differentiate between the voluntary and the non-voluntary. Yet, according to Levy, neuroscientific study suggests that some automatic actions do not reflect our own values. “Some brain-damaged subjects can no longer inhibit their automatic responses to stimuli” (p. 7). Or even very normal subjects cannot entirely follow their own values in some cases. Here is a problem of explaining under which condition our actions fail to reflect our own values. Levy says that this is a problem for neuroethics. In our discussion, the following question was raised: do these cases sufficiently explain the need for neuroethics?

In the section “The mind and the brain,” Levy discusses one of the very old problems in the

philosophy of mind: dualism, in particular, substance dualism. In substance dualism, the world consists of two basic substances, namely, matter and mind. Substance dualism has a very long history, but we usually refer to it as Cartesian dualism. Although substance dualism had some currency in modern philosophy, the reason for this was the recognition that matter cannot think nor be rational and intelligent, however matter is arranged to make complex objects. But evolutionary biology and the cognitive sciences undermine substance dualism. According to Descartes, there is a line between human beings and other animals. Although human beings can think because of mind, other animals cannot because they are mere matter. But evolutionary biology suggests that human beings and other animals have a common ancestor. If so, then when could human beings have mind? It is unlikely that mind came upon human beings like a thunderbolt. Furthermore, according to the cognitive sciences, “mind degrades when matter is damaged” (p. 13). Levy argues that “the fact that rationality degrades and consciousness fades or disappears when the underlying neural structures are damaged suggests that, contra the dualist, it is these neural structures that support and help to realize thought and consciousness, not immaterial mind.” (Ibid.). Hence Levy concludes that mind might not be a physical object that is in space, but it is based on things, in particular, neurons and their connections.

In the section “Peering into the mind,” Levy tries to show “how strange and apparently paradoxical the mind can be” and “to what extent, contra what the dualist would have us expect, unconscious process guide intelligent behaviour: to a very large extent, we owe our abilities and our achievements to subpersonal mechanisms” (p. 17). To do so, he takes up double dissociations as examples. A double dissociation is that “damage to one part of the brain produces a characteristic dysfunction, and that damage to another produces a complimentary problem” (p. 18). For instance, think about prosopagnosia and Capgras delusion. Prosopagnosics cannot identify familiar faces, but they have normal autonomic responses (in particular, the skin conductance response) to them. By contrast, Capgras patients do not have normal responses to familiar faces, but they can recognize them. Yet here is a problem: Capgras patients recognize their family members as replicas, aliens, or something like that. That is, they recognize their family members without feelings of familiarity. Capgras arises when the autonomic system does not work properly. Conversely, although prosopagnosics have normal autonomic responses, their face recognition systems are dysfunctional. Here we can discern a double dissociation between the autonomic system and the face recognition system. According to Levy, the autonomic system belongs to the subpersonal level, and the face recognition system is at the personal level. Another example is a double dissociation between a dorsal system and a ventral system. A dorsal system guides our actions, and a ventral system deals with an internal representation of the world. These systems are functionally and anatomically different. For instance, some patients cannot grasp objects properly, but they can describe them properly. By contrast, other patients cannot identify simple geometric shapes, but they can grasp them properly. Here these two systems work unconsciously. There is a difference between them, however. In the Titchener illusion, the ventral system is fooled by the illusion, but the dorsal system is not. In the ventral system, “its judgments are guided by stored knowledge about the world: knowledge about the effects of distance on perceived size, of the constancy of space and so on” (p. 22). That is, they are conscious. But the dorsal system has no access to such stored knowledge. Thus its judgments are not conscious. That is why the ventral system is fooled by the illusion. Now, some might wonder what we mean by the “unconscious.” According to Levy, the unconscious is not simply what Freud said, namely, “the seething mass of repressed and primitive drives.” Rather, “it is also the innumerable mechanisms, each devoted to a small number of tasks, which work together to produce the great mass of our everyday behavior” (p. 22). Most of our actions are based on such unconscious mechanisms.