# Com/passion as the bodily extension: a theological critique of the interpretations of plasticity by Andy Clark and Catherine Malabou

II Joon Park\*

## Abstract

Andy Clark's theory of the extended mind seems to subvert the Cartesian dualism of mind and body. This extension-ability of the brain derives from the concept of neuroplasticity, which is based upon Paul Bach-y-Rita's study on sensory substitution. However, Harari points out that the extended mind of Homo Deus or superhumans may end up with upgrading inequality. It is no wonder that plasticity has been interpreted as elasticity, flexibility, and adaptability, which are the attitude part-time workers, immigrant laborers, deliveries and so on should have for their job ethics. Thus, it may be on the verge of

http://dx.doi.org/10.26590/madang..33.202006.3

<sup>\*</sup> Lecturer, School of Theology, Yonsei University, Seoul, Korea. Ph.D.

being appropriated into our contemporary semiocapitalistic social structure, in which plasticity turns into elasticity and flexibility. Thus, Catherine Malabou pays her attention to its unnoticed aspect of destructive plasticity. Plasticity may be a name for changing difference. It is not to recover the old form of life but to constitute a new form of life. Nonetheless, one needs to know that it is only workers with citizenship who can say 'no' to unfair structure under the protection of human rights. In this sense, Malabou's notion of destructive plasticity needs something more. This paper suggests com/passion, which refers not to the mind's extendibility but to the embodiment of the mind or the spirit or the Word. The divine love is not to save people's souls from the evil materialistic world but to be with people in the flesh on the earth. Thus, com/passion extends courageous passion to be with the suffering of 'those who are not' (*ta me onta*, 1Cor. 1: 28).

#### • Keywords

Andy Clark, Catherine Malabou, Compassion, the extended mind, destructive plasticity

#### 1. Introduction

The pandemic by Covid-19 virus has extended its period and magnified its impact upon our civilized life. There have been many conferences and workshops that have dealt with the irreversible changes after the pandemic. Among them, there is the actualization of an untact society, which has been possible due to the global construction of digital networks. As a matter of fact, Andy Clark suggested the idea of humans as natural-born cyborgs in this all-connected society. As natural-born cyborgs, humans have sensory connectivity to extend their bodily boundary over artificial devices and digital networks. This idea is based upon his co-work with David Chalmers of "the extended mind" (1998). The bodily connectivity is translated as the extended mind. This paper examines this idea of the extended mind: 1) from Catherine Malabou's criticism of the existing ideological usages of neuroplasticity and 2) from my theological focus on incarnation as embodied love, love with flesh and blood.

The idea of the extended mind has its theological and ideological implications. Clark's illustration of the extended mind lacks any emotional sensitivity to others. Rather, it seems to be the expansion of the subjective mind into the world. Most of all, it hides that what is extended is not the mind but the bodily interface with senses through body. The contemporary 'brilliant technologies' such as genetics, artificial intelligence, cybernetics, digital networks, robotics, and so on have reignited some ideas of techno-gnosticism, in which the essence of being-human has been considered as the immortality of the mind by downloading it from the biological brain and by uploading it into the mechanized body. However, as Clark mentions, our thinking works with its material conditions. Mind and body cannot be separated. Embodiment is not the outer actualization of the inner mind, but it rather emerges with its bodily constitution. Although Clark already acknowledges the importance of bodily interaction between mind and bodily materials, his term, the extended mind, seems to exaggerate the uniqueness of the mind over the body and to support the resurgence of techno-gnosticism in contemporary transhumanism.

Catherine Malabou captures the ideological voices in contemporary scientific literature of neuroplasticity that gives justification to the semiocapitalism, in which monetary value is created through the exchanges of digital signs. Given that plasticity has been understood as elasticity, flexibility, and creativity that are the requirement for workers in labor markets, plasticity has its ideological implications with the current semiocapitalist society. With the introduction of her term, destructive plasticity, Malabou converts the existing interpretation of plasticity as docility into one as resistance. However, resistance comes from our embodied emotional capacity for anger and aggression to protect ourselves from the threats, which our body senses as dangerous situations. Her project for neuronal liberation lacks any capacity for com/passion as bodily extension to feel the pain and suffering of the others as if they are mine.

Theologically, embodiment has been interpreted as one of the manifestations of love, in that incarnation is to actualize divine love with human flesh and blood. The divine embodiment was driven by the divine love for humans as the divine others. Specifically, this Christian love is our sympathetic capacity to sense the pain and suffering of the others, as if their agonies are ours. In this sense, the extended mind distorts the extendibility of the embodied mind as cognitive extension and body-based sympathy as instrumental interface by displacing com/passion with the supersizing of the mind. Feeling sympathy with the pain and suffering of the others is our bodily constitution, to which the word, compassion, refers. In this sense, Malabou's destructive plasticity forgets that the will to resist comes from human bodily emotion. In order for the extended mind not to get trapped in the instrumental functions of the mind, the extendibility can be interpreted not as merely sensory substation with network but as com/passion, passion to be with other's pain and suffering.

## 2. The re/interpretation of being-human as natural-born cyborgs

human being is plastic in that her/his mind and body can be extended over the world through artificial tools and devices, becoming a hybrid being of the human and machines. Philosopher Andy Clark shows that this plasticity is manifest as the ability of the human mind to extend itself over external props outside the human body. To explain the extended mind, he and David Chalmers tell a story about a fictional Alzheimer patient, Otto, who lost his long-term memory capacity due to his illness.<sup>1</sup> His short-term memory is still working, but he long-term memory capacity is severely damaged so that he cannot remember things to do until tomorrow. He knew this so that he finds a way to overcome his damaged memory capacity. Now, he writes on his notes things to do and posts them upon a place where he can easily

Andy Clark & David Chalmers, "Appendix: The Extended Mind," in *Supersizing the Mind: Embodiment, Action, and Cognitive Extension* by Andy Clark (Oxford, UK: Oxford University Press, 2011), 226-230.

see, for example, on the refrigerator. Next morning when he will wake up, he will read the memos and do what his written instructions say. In this way, Otto finds a way to live with his disability. Note that his written notes here function as his external memory device. Thus, his internal process of the brain and his notes "constitute a single cognitive system"<sup>2</sup> to complement the damaged memory capacity of his biological brain. The mind here is extended over Otto's notebook, with which the mind forms a functional couple for his memory.

The core arguments of the theory of the extended mind are: 1) "mind itself leaches into body and world,"3 2) "when parts of the environments are coupled to the brain in the right way, they become parts of the mind,"<sup>4</sup> 3) brain, body and world form an extended cognitive circuit, which supersizes the mind. Here, the mind is not the same as the brain, but it can rather extend itself over body and world. This mind's ability to extend over is the product of evolution. For example, using fingers for calculation is like using parts of the body as the extension of the mind. In this train of thought, using a digital calculator is also extending the mind over nonbiological equipment, as seen in Otto's using memos for complementing his damaged memory in the sense that the extended mind, body and world function as "participant machinery—that is, to form part of the very machinery by means of which mind and cognition are physically realized and hence to form part of the local material supervenience base for various mental states and processes."<sup>5</sup> Another example of the extended mind would be the

<sup>2</sup> Ibid., 230.

<sup>3</sup> Andy Clark, Supersizing the Mind: Embodiment, Action, and Cognitive Extension (Oxford, UK: Oxford University Press, 2011), 29.

<sup>4</sup> Ibid., x.

<sup>5</sup> Ibid., 207.

correlation of writing and thinking. The Nobel Prize winner physicist, Richard Feynman once said that his writing on papers is not a mere representation of his inner thinking but rather his thinking itself in process. Writing something on paper, he is thinking along with his pen or keyboard. His thinking and writing by medium of paper or computer form a functional cognitive circuitry, and his thinking in this case becomes an "outward loop as a functional part of an extended cognitive machine,"<sup>6</sup> extending the mind over the computer through the keyboard. The thinking mind can form a cognitive coupling with external devices and extend itself over the outer world.

In this sense, humans are "natural-born cyborgs."<sup>7</sup> The point Clark argues with his new definition of being-human is that the human mind's ability to extend itself over the world through external devices and material is not merely a recent development but rather one of its natural-born capacities. For people wearing eyeglasses, the eyeglasses are not just an external prop but part of their bodies in that they enable them to fulfill their lives by enhancing the weakening bodily function to see. When one stores phone numbers in his or her smartphone, the smartphone functions as one's external memory device, adding extra memory function to the capacities of one's biological brain. In this way, mind and machine can interlock each other and form a functional coupling. Further from this train of thought, human nature is not biologically fixed but rather can be adaptably changed. In this sense humans are in actuality "human-machine hybrids."<sup>8</sup> Human's biologically inborn neuroplasticity allows human minds to make use of such tech-

<sup>6</sup> Ibid., xxvi.

<sup>7</sup> Andy Clark, *Natural-Born Cyborgs: Minds, Technologies, and the Future of Human Intelligence* (New York: Oxford University Press, 2004).

<sup>8</sup> Ibid., 3.

nological artificial prostheses, and this hybridization of mind and machine contributes to our understanding of human nature in a new way to transgress the customary divide between nature and culture. In this sense, human nature is already and always post-human in that it already and always goes beyond its existing conceptual boundary of being-human.

Clark's theory of the extended mind derives from the concept of neuroplasticity that has been introduced by neuroscientist Paul Bachy-Rita. Bach-y-Rita's concept of neuroplasticity is based upon his real experience of his father's illness. His father fell due to his stroke that caused the paralysis of the half of his body.9 Later, his father miraculously recovered his health so that people around him believed his brain was also recovered. What it turned out to be the case is that the father's damaged part of the brain stem was not actually recovered at all. According to Dr. Mary Jane Aguilar who performed the autopsy after father, Pedro, died, his damaged part of the brain was never repaired after the stroke, while Pedro as a matter of fact recovered from his physical paralysis through his intensive and persistent daily physical exercise several hours.<sup>10</sup> Then, they found that the remaining part of his brain reorganized its neuronal connections in a way to take over the control of the paralyzed part of the body, in charge of which the damaged part of the brain was initially. Only with half of his brain, Pedro, the father, was able to be fully recovered by the brain reorganizing its neuronal connections. This is termed as neuroplasticity. The

<sup>9</sup> Norman Doidge, *The Brain That Changes Itself: Stories of Personal Triumph from the Frontiers of Brain Science* (『기적을 부르는 뇌: 뇌가소성 혁명이 일구어낸 인간 승리의 기록들』), trans. Mi-Sun Kim (Goyang, Kyunggi: Chiho Publishing House, 2007), 40-42.

<sup>10</sup> Ibid., 43.

neuronal connections of human brain are not fixed but plastic. That is, the brain can alter the connections of its neurons according to its environmental changes.

The early idea of neuroplasticity comes from Bach-y-Rita's experiment in 1968 to cure the blind with digital camera and vibrating device on a chair, the result of which was published in Nature but almost none of neuroscientist paid serious attention to it because it violated their scientific assumption about human brain then. In his experiment, the blind sat on the chair who was holding the digital camera that was connected to a computer, which in turn would send signals to the grid pad of vibration on the back side of the chair. When the blind turns the camera in any direction, the camera captures objects and send information to the computer, which processed the information into vibration signal on the grid pad. The blind felt the vibrations on his back. Some minutes after the blind was using the camera, she said that she could see the objects. After a while, she was even able to read some texts with the device. Based on this experiment, Bach-y-Rita proposed a theory of "sensory substitution."<sup>11</sup> The vision of the blind was substituted with the tactile sensibility on her back through the grid pad of vibration on the back of the chair. However, it does not mean that vision was replaced with tactile sense but rather that the blind could 'see' objects and the world through the tactile sensibility of her back. The visual function of the brain was not damaged, but the neuronal connections between the eyes and the brain had some problems in most cased of the blind. So, the brain utilizes the tactile device 'to see the world.'

Bach-y-Rita's concept of neuroplasticity was the product of the de-

<sup>11</sup> Ibid., 32.

velopment of his theory of sensory substitution. The experiment in 1968 had improved in a way that the back-mounted grid is replaced by "a tongue-mounted coin-sized"<sup>12</sup> grid with the simpler and smaller grid pad connected to smaller digital devices and eyeglasses installed with small camera. With these improved and minimalized devices, the blind got his or her mobility. In this context, he explains anew that the blind using a stick to feel objects and world as a matter of fact is 'seeing' the world with his or her stick. With the sensory substitution, the blind recovers her or his lost vision, even in the case of some inborn blinds. According to Clark, when a blind person uses a stick to figure out the surrounding environment, s/he is in fact "touching the world at the end of the stick, not ... touching the stick with [his or her] hand."<sup>13</sup> The stick is not a mere tool or instrument to complement the blind's lost vision but, as Clark argues, an extension of the blind's vision and thus of the mind. The stick is augmenting the blind's lost vision, and, in this stick-augmenting perception, the blind perceiver and the perceived world form an "whole new agent-world circuits," in which the stick becomes part of "an extended or enhanced agent confronting the (wider) world."14

From this perspective, mind seems to be "deeply plastic, openended systems—systems fully capable of including nonbiological props and aids as quite literally parts of themselves,"<sup>15</sup> and, with this plastic system of the mind, humans have "natural proclivity for toolbased extension, and profound and repeated self-transformation."<sup>16</sup>

<sup>12</sup> Clark, Supersizing the Mind, 36.

<sup>13</sup> Ibid., 31.

<sup>14</sup> Ibid.

<sup>15</sup> Clark, Natural-Born Cyborgs, 10.

This is like a niche construction in higher organisms. Organisms do not simply adapt themselves to the surrounding environment. Rather, they can construct their own environment, changing their fitness landscape. The main tool for this niche construction for higher animal organisms is the brain. Yet, note that the brain is not itself the mind. The mind emerges based on brain's capacity to learn. In this sense, mind is "not wired in at birth but acquired by rich developmental immersion."<sup>17</sup> In other words, our mind is deeply "developmentally plastic."<sup>18</sup> Clark explains the plasticity of the extended mind with its hybridity:

**Plastic** human brains may ... learn to factor the operation and information bearing role of such external props and artifacts deep into their own problem-solving routines, creating **hybrid** cognitive circuits that are themselves the physical mechanisms underlying specific problem-solving performances.<sup>19</sup>

As "hybrid systems displaying novel cognitive profiles that supervene on more than the biological components alone,"<sup>20</sup> the plastic brain enables humans to "use the world as a form of 'extended memory'"<sup>21</sup> Thus, the mind's extendibility is not confined to external tools and devices but rather to the world. In this sense, Clark even talks of the supersizing of the mind. It means that Clark seems to interpret the neuroplasticity as the mind's ability, especially when he said that the

18 Ibid.

<sup>16</sup> Ibid.

<sup>17</sup> Clark, Supersizing the Mind, 68.

<sup>19</sup> Ibid.; my own emphases.

<sup>20</sup> Ibid., 99.

<sup>21</sup> Ibid., 104.

coupling of mind and environment "become parts of the mind."<sup>22</sup> Ironically, this interpretation seems to be his double bind to the Cartesian dualism of mind and body, which his theory seems to try to overcome, and, in this way, he is trapped in a danger of techno-Gnosticism.

## 3. The techno-gnostic implication of the theory of the extended mind

one can recognize the fact that the word 'extension' comes from the Cartesian distinction of mind and body. Philosopher René Descartes argued that the substance of reality consists of thought and extension, both of which are entirely different from each other. This is the Cartesian dualism. Initially, Clark's extended mind subverts this Cartesian dualism, arguing that the mind can extend itself over other things and the world. Without extension, the mind cannot fulfill what it wants in the world. That is, mind and extension are not separate and independent substances, and both form a co-life in action. This is the subversion of what Descartes speculated with his dualism. The extended circuit of brain, body and world can be part of the functions of the mind. Thus, Clark's theory of the extended mind seems to emphasize the embodiment of the mind. Here a question arises: Does Clark really subvert the Cartesian dualism or expand it in a Hegelian way by subjecting the extension and its interaction to the expansion of the mind? The problem lies in his argument that the coupling of the brain and the environment 'become parts of the mind.' What kind of the mind does Clark have in mind? Does he think that every actuality is the realization of the Hegelian *Geist*?

<sup>22</sup> Ibid., x.

Indeed, Clark leads the concept of extension to that of 'supersizing the mind,' and now this move can be suspected as a kind of Cartesian repetition, that is, the superiority of mind over body. What is extended and supersized is the mind. Then, what is the mind in Clark's theory? It is not the brain itself. It can extend itself beyond the biological brain. It seems to be transcendental in that it can exist regardless of any material, although it always interacts with the latter. Clark's concept of the extended mind twists and subverts the results of studies on embodiment and cognition. The concept of the embodied cognition is to intend to subvert the Cartesian understanding of the mind-body dualism, but Clark's theory of the extended mind seems to reduce the embodied interaction of mind and extension to the parts of the mind, making the mind supersize over brain, body and world. In this sense, his theory of the extended mind may be suspected as a form of Gnosticism in an age of 'brilliant technologies,' that is, as 'techno-Gnosticism' in disguise. For his concept of mind seems to be a salvific exit of the soul from the finite technologies of the world. Most strikingly, the extended mind does now show any emotional sensitivity to others, which is one of human-faced mammalian function of the body. Thus, he is not sensitive to what pain and suffering the brilliant technologies would cause for the commons and / or the undercommons.

In the so-called age of *Homo Deus*, which is the title of a book written by Yuval N. Harari, some people dream of becoming superhumans, which will replace their biological bodies with some form of mechanic bodies, by downloading their minds in a form of information and in turn by installing it to new mechanic body, as seen in Hollywood SF movies and Japanese SF animations. It nourishes an imagination that body is replaceable, while mind can be eternal. This may be a dream for eternity, which Socrates had in mind when he drank a poised wine for his death penalty. Is this not the repetition of Gnosticism in an age of the posthumans which is based upon the mind-body dualism and regarded the soul as good and material, including body, as evil. As Gnosticism believed that salvation comes from liberating one from the prison of the body, rich superhumans seem to actualize this gnostic dream with the help of technological developments like genetics, nanotechnology, robotics and so on. This is the fantasy of "techno-Gnosticism,"<sup>23</sup> and this is also a capitalistic fantasy, in which anyone possessing enough money can do everything s/he wants. In this sense, this mind-upgrading is cynically expressed as "upgrading inequality."<sup>24</sup>

Although Clark's theory of the extended mind does not intend to nourish such a techno-gnostic fantasy, any capitalistic appropriation of the theory can unleash such a desire to become like gods. In this context, Harari warns us of such a future as the age of *Homo Deus*. What makes such appropriation and misuse of the notion of plasticity possible?

## 4. The semio-capitalistic implication of the notion of neuroplasticity

Catherine Malabou warns us of a capitalistic appropriation of plasticity. Many usages of plasticity in scientific literature drive people to

<sup>23</sup> Jeffrey C. Pugh, "The Disappearing Human: Gnostic Dreams in a Transhumanist World," *Religions* 81, no.8 (2017): 2.

<sup>24</sup> Yuval N. Harari, *Homo Deus: A Brief History of Tomorrow* (London: Harvill Secker, 2015), 346.

be docile and not to resist its structural injustice. She says, "[t]he human is plastic."25 By the term 'plasticity,' she means the vitality of the human not as "a determinate capacity" but as "its self-transformation."<sup>26</sup> If the human has inner nature at all, it is not something innately given but something to learn "through habit,"27 that is, the historic movement of the self's giving and receiving form(s). In other words, when she said that the human is plastic, it means that the human "gives itself its own form, that it is able to transform itself, to invent and produce itself, and that it is nothing but this very process of self-formation."28 For C. Malabou, the brain is neither a genetically fixed structure nor something like the command center in the central processor of the computer, but it is rather "a work."29 The work the brain does is none other than "plasticity."<sup>30</sup> Plasticity etymologically means both "the capacity to receive form ... and the capacity to give *form*" with its "suppleness, a faculty for adaptation, the ability to evolve."31 In the context of neuroscience, it also designates "an alteration in structure or function brought about by development, experience, or injury."<sup>32</sup> However, in order for the structural alteration of the brain function to take place, plasticity implicates another capacity, that is, a "capacity to annihilate the very form it is able to receive or cre-

- 31 Ibid., 5; 5.
- 32 Ibid.

<sup>25</sup> Christopher Watkin, French Philosophy Today: New Figures of the Human in Badiou, Meillassoux, Malabou, Serres and Latour (Edinburgh, UK: Edinburgh University Press, 2016), 77.

<sup>26</sup> Ibid., 78.

<sup>27</sup> Ibid., 85.

<sup>28</sup> Ibid.

<sup>29</sup> Catherine Malabou, What Should We Do with Our Brain? Trans. Sebastian Rand (New York: Fordham University Press, 2008), 1.

<sup>30</sup> Ibid., 4.

ate."33 In fact, the word, plastic, can refer to "an explosive substance made by nitroglycerine and nitrocellulose, capable of causing violent explosions."<sup>34</sup> Thus, plasticity has its double meanings: "on the one side the sensible image of taking form (sculpture or plastic objects), and on the other hand that of the annihilation of all form (explosion)."35 First of all, our neural connections are formed by "our individual experience, skills, and life habits, by the power of impression of existence," and the plasticity of our brain thus is fashioned "by memory, to the capacity to shape a history."<sup>36</sup> As we know that individual development with "the ability to learn, to acquire new skills and new memories" is unique for each, our plastic "capacity of each to receive and to create his or her own form"37 does not derive from any genetically predetermined blueprint but rather from our developmental capacity to learn something, to acquire skills and to store them into our memories. However, this plasticity can also mean a capacity to "progressively" erase "the original model or standard."<sup>38</sup> This destructive plasticity to erase its original form does not simply mean a mere destruction or elimination but rather "a much more effective transformative ability," "a possibility of displacing or transforming the mark or imprint, of changing determination in some way."39 Indeed, our neural connections, "because of plasticity, are always capable of changing difference, receiving or losing an imprint, or

- 33 Ibid.
- 34 Ibid.
- 35 Ibid.
- 36 Ibid., 6.
- 37 Ibid.
- 38 Ibid.
- 39 Ibid., 16.

transforming their program."<sup>40</sup> In this context, plasticity is not a what of something but the how or the way it actualizes itself. To actualize itself, plasticity has its aspect of 'destruction.' Note that this destructive plasticity is not de/construction in that plasticity transforms itself to a point, where there is no way of returning, and thus changes difference itself and in that the Derridean de/construction is not deconstructible.<sup>41</sup>

Along with these two aspects of plasticity, Malabou warns us that our contemporary understanding of plasticity tends to appropriate its neuroscientific understandings into flexibility and elasticity, both of which are required for the contemporary capitalistic living. With this appropriation, plasticity has been misused for "an alibi for submitting to the new world order being dreamed up by capitalism."42 This testifies that our new understanding of the brain with the concept of plasticity "co-occurs with a radical modification of the economic and social environment."43 The contemporary capitalistic conditions for living is reflected in almost all kinds of thinking, writing, and images. That is, the contemporary features of "organization of labor-part-time jobs, temporary contracts, the demand for absolute mobility and adaptability, the demand for creativity"44 are also reflected in our understanding of the brain. As a result, the contemporary understanding of plasticity as the extension of the mind has become nothing but the capitalistic appropriation of a scientific term into the market economy and job markets.

<sup>40</sup> Ibid., 24; the original emphases.

<sup>41</sup> Watkin, French Philosophy Today, 91-92.

<sup>42</sup> Malabou, What Should We Do with Our Brain?, xiv.

<sup>43</sup> Ibid., xii.

<sup>44</sup> Ibid., 10.

In this capitalistic appropriation and misuse, Malabou argues, the meaning of plasticity is extended over that of flexibility, which means our ability "to be docile, to not explode,"45 in a way that "neuronal functioning and social functioning interdetermine each other and mutually give each other form (here again the power of plasticity), to the point where it is no longer possible to distinguish them"<sup>46</sup> It means again that our neuronal functioning anchors at our political and social structures as well as natural environments. Thus, our "connectionist world,"<sup>47</sup> structured by the semiocapitalism, has been able to abusively utilize our brain's plastic capacities, and Malabou calls it "a naturalizing effect"<sup>48</sup> that refers to the ways in which scientific terms describing nature are utilized to justify our social structure. Indeed, the demands of our semiocapitalistic organizations—"part-time jobs, temporary contracts, the demand for absolute mobility and adaptability, the demand for creativity"49—take their metaphoric expressions from the contemporary scientific researches like evolutionary biology, cognitive science, neuroscience and so on. In a reticular structure of the semiocapitalism, "to survive today means to be connected to a network, to be capable of modulating one's efficacy,"50 and, if one does not have flexible, adaptable, elastic plasticity with creativity and mobility, one is simply and naturally rejected. And this rejection is just justified by our ideological interpretation of natural selection as infinite competition and the survival for the fittest. Only the winner deserves to take

- 48 Ibid.
- 49 Ibid.
- 50 Ibid.

<sup>45</sup> Ibid., 12.

<sup>46</sup> Ibid., 9.

<sup>47</sup> Ibid., 10.

all. Here lies a need for our critique of "*neuronal ideology*," which "implicitly govern the entire neuroscientific field and, by a mirror effect, the entire field of politics"<sup>51</sup> and for which philosophy feels a sense of incompetence. We are all chained in the reticular web of semiocapitalism, in which cognitive workers are demanded to be plastic, flexible, elastic, and adaptable with creativity and mobility. The ideological trick of the semiocapitalism is to utilize the meaning of plasticity with flexibility, elasticity and creativity, concealing the subversive destructive aspect of plasticity. The word, flexibility, only captures one aspect of plasticity to receive form. What is missing in this capitalistically misused scientific term, flexibility, is the aspect of plasticity to give form, "the power to create, to invent or even to erase an impression, the power to style."<sup>52</sup> In other words, it is the destructive plasticity.

For Catherine Malabou, the real mistake of scientific literature does not lie in their reductionistic proclivity to explain things but in their "thinking that neuronal man is simply a neuronal given and not also a political and ideological construction (including of the 'neuronal' itself)."<sup>53</sup> Especially when plasticity is mistakenly understood as flexibility, elasticity, and creativity in the semiocapitalistic social structure of our contemporary living, it can implicate "no resistance whatsoever to change"<sup>54</sup> where the neoliberal market and finance capitalism has driven all forms of changes "from expansion to downsizing, from efficiency to efficiency"<sup>55</sup> for the interest of the haves, appropriating the neuroscientific term of plasticity with 'efficacy, adaptability, elasticity

<sup>51</sup> Ibid., 11.

<sup>52</sup> Ibid., 12.

<sup>53</sup> Ibid., 13.

<sup>54</sup> Watkin, French Philosophy Today, 98.

<sup>55</sup> Ibid.

and flexibility.' By appropriating plasticity with them, the capitalism preemptively blocks any possibility of resistance against changes the plasticity can make, any imagination of revolution to transform the structure itself.

5. The destructive plasticity as a form of resistance against the semiocapitalistic structure of posthumanism

As mentioned above, plasticity can be explosive in that it can blow off and destroy the existing structure of giving and receiving form up to a point where there is no way of returning. Indeed, the case of a fictional patient Otto is not only an example of the elastic, flexible, adaptable plasticity with creativity but also that of a non-elastic, non-flexible, non-adaptable destructive plasticity in that Otto found a way out of the past style of life by making notes on what to do in order to substitute with them his lost memory capacity due to his Alzheimer disease. There was no turning back for him to his past life before the Alzheimer. Thus, he flexibly and creatively constructs his own life without trying to return to the so-called normal life. His new life is already and always normal, given that the plasticity is the inborn capacity of Homo Faber (the humans as the tool makers).

Then, Malabou's question, "what should we do with our brain?," becomes the question of our identity, and it does mean that the brain is not a ready-made but that it depends upon what we should do with it, that is, it depends upon our learning and development. The key point what Malabou argues here is that plasticity is to be interpreted for "the hour of neuronal liberation" that "humans make their own brain."<sup>56</sup> In this context, Malabou poses a question:

Does brain plasticity, taken as a model, allow us to think a multiplicity of interactions in which the participants exercise transformative effects on one another through the demands of recognition, of non-domination, and of liberty? Or must we claim, on the contrary, that, between determinism and polyvalence, brain plasticity constitutes the biological justification of a type of economic, political, and social organization in which all that matters is the result of action as such: efficacy, adaptability—unfailing flexibility?<sup>57</sup>

The problem does not lie in the fact that "any vision of the brain is necessarily political" but rather in the fact of "the unconsciousness of this identity"<sup>58</sup> of cerebral organization with socioeconomic organization. That is, the real problem is that the neuronal man does not know "how to speak of himself."<sup>59</sup> So, Malabou seeks for a way "to place scientific discovery at the service of an emancipatory political understanding"<sup>60</sup> by speaking of this 'unconsciousness of the identity' and making us conscious of it.

Although neurobiology has researched various forms of plasticity such as developmental plasticity, modulational plasticity, and reparative plasticity, it has not yet reached a concept of "a fourth type of plasticity, never as yet envisaged by neuroscientists."<sup>61</sup> That is "explosive

- 60 Ibid
- 61 Ibid., 69.

<sup>56</sup> Malabou, What Should We Do with Our Brain?, 8.

<sup>57</sup> Ibid., 31.

<sup>58</sup> Ibid., 52.

<sup>59</sup> Ibid., 53.

plasticity" or "destructive plasticity."62 This destructive plasticity does not contradict the types of plasticity neurobiology has studied but rather their "condition."<sup>63</sup> For the adaptable plasticity (developmental, modulational and reparative plasticities) to work, a certain clearing is necessary, although it may mean the annihilation of the existing balance "between the giving and receiving of form"<sup>64</sup> of the brain. For example, in the case of the fictional Alzheimer patient, Otto, the existing form of life style must be 'destructed' in order to create a new form of life fit for his current situation, because there is no way to return to his past normal life. Thus, plasticity is "situated" between "the taking on of form" and "the annihilation of form."65 Plasticity is indeed the between, the "entre-deux,"66 being between the adaptable one and the destructive one. This double movement of plasticity, that of "the emergence and disappearance of form," lies "at the core of the constant circulation between the neuronal, the economic, the social, and the political that characterizes Western culture today."67 Through the destructive plasticity, the self undergoes a metamorphosis without any possibility of returning. The result is "the formation of a new individual" through the "explosion of form that frees up a way out and allows the resurgence of an alterity that the pursuer cannot assimilate."68 This is metamorphosis that is "existence itself, untying identity instead of

- 63 Ibid., 5.
- 64 Ibid.
- 65 Malabou, What Should We Do with Our Brain?, 70.
- 66 Ibid., 82.
- 67 Ibid., 70.
- 68 Malabou, Ontology of Accident, 12.

<sup>62</sup> Catherine Malabou, Ontology of Accident: An Essay on Destructive Plasticity, trans. Carolyn Shread (Cambridge, UK: Polity Press, 2012), 3.

reassembling it."<sup>69</sup> It can be said as "the fabrication of a new person, a novel form of life, without anything in common with a preceding form."<sup>70</sup> Otto's notebook is indeed the mark of his annihilation of the previous form of life and an indication of his metamorphosis into a new form of life. In this way, Otto's extended plastic mind through his notes has the moment of the neuronal liberation in that he creates his posthuman style of life that overcomes his damaged neuronal condition.

Thus, Malabou argues that, with our brain, we should "refuse to be flexible individuals who combine a permanent control of the self with a capacity to self-modify at the whim of fluxes, transfers, and exchanges, for fear of explosion."<sup>71</sup> It is a refusal to be tamed by " a certain culture of docility, of amenity, of the effacement of all conflict even as we live in a state of permanent war"<sup>72</sup> and at the same time to say "no to an afflicting economic, political, and mediatic culture that celebrates only the triumph of flexibility, blessing obedient individuals who have no greater merit than that of knowing how to bow their heads with a smile."<sup>73</sup> In this way, one can seek for a liberation from the semiocapitalistic culture, in which the connectivity and interaction-ability of cognitive works ironically suppresses any possibility of the solidarity of cognitive workers to recomposite our socio-political structure. Thus, for Malabou, plasticity, "far from producing a mirror image of the world, is the form of another possible world."<sup>74</sup>

- 73 Ibid.
- 74 Ibid., 80.

<sup>69</sup> Ibid., 15.

<sup>70</sup> Ibid., 18.

<sup>71</sup> Malabou, What Should We Do with Our Brain?, 78.

<sup>72</sup> Ibid., 79.

#### 6. Com/passion as the extended love through the flesh

Then, how do we theologians or religious philosophers deal with plasticity in an age of neuroscience and artificial intelligence? Is there any theologically alternative interpretation of neuroplasticity, especially with regards to the concepts of the extended mind and plasticity? To overcome Gnosticism and the Cartesian dualism, theology has introduced the terms like incarnation and compassion. These two theological notions emphasize living in this world with flesh and staying with pain and suffering rather than avoiding them. With these two notions, theology can find an alternative reading of plasticity to change the structure of difference in this semiocapitalistic society.

A theological concept of com/passion sheds light on our understanding of the body. In its Latin etymological origin, compassion means 'being suffered with the other,' and this is none other than one of the examples of the emotionally extended mind. Just as the extension-ability of the mind may refer to the mind's hybridization with the physical beings and things through the body as an interface, so the human mind extends itself over other beings through its emotional projection of empathy or sympathy. However, the extension of the mind through compassion is something more than the functional coupling of the extended mind. In compassion, the other's experience, especially of pain, is actualized as 'my' own experience. It is well testified in Jesus' parable of a good Samaritan, who felt a pain of *splangxjomai*  $(\sigma \pi \lambda \alpha \gamma \chi \nu i \zeta \rho \mu \alpha i)$ , when he saw a person fell to the ground and bleeding. This pain the Samaritan felt is like his intestine being cut, although it belongs to the victim, not to him. The victim's pain is extended over the Samaritan's through his emotional feeling of the flesh, through which the victim and the Samaritan are experientially coupled. In this experience of com/passion, there is no dominant role of the mind over the extension. Both the victim and the Samaritan exist on the same plane of immanence, the plain of the flesh. The pain of the victim is not only his own experience but also the Samaritan who felt the pain of the victim as if his intestine was cut. Although their respective experiences of the pain were different, they were conjoined in the suffering, and this is the Samaritan's compassionate solidarity with the victim. The Samaritan story was introduced to explain what the kingdom of God would be like, and the story tells us it is like living in solidarity with the pain and suffering of the world. The theological notion of incarnation expresses the divine solidarity with the painful experience of 'those who are not' (ta me onta [1 Cor. 1:28]). The almighty God loves human beings so much that God becomes a human being like us, instead of saving people from their pain and suffering by raising them above this painful world. The incarnate God experienced the pain and suffering of the human flesh and died on the cross. This is the crucial difference between Gnosticism and Christianity. Gnosticism sought for a spiritual salvation from the human flesh and the world. It regarded the body and the world as evil, from which they wanted to be saved. However, the almighty God in Christianity does not save people from the world. Instead, God decided to become a human being to be with them in pain. This is the solidarity of the flesh, not of the minds or the souls.

When Clark considers the mind's ability to extend, he was just considering the modern dualism of body and mind, of the artificial and the natural. His point is that the boundary between them is very thin, porous and ambiguous. So, his theory of the extended mind is against the modern Cartesian division of mind and body. The modern definition of human being as an individual, which is the basic unit of human rights, is significantly based upon the Cartesian dualism more than one can imagine. The uniqueness of being-human in the modern concepts lies in the consciousness and subjective will of individual, whose mind orders and controls the body with his/her will. Mind is like a 'ghost in the machine' in Gilbert Ryle's expression. Mind and extension occur together, but they are separate substances. Then, Clark argues that mind can interact with the artificial, even with the digital beings, and that it can even further hybridize with them, generating a new form of being like a 'natural-born cyborgs' who are none other than human beings themselves. In this context, Clark says that the extension is the mind rather than saying that the mind is the extension, and, in this sense, Clark is the subversion of Descartes.

However, Harari shows that this mind-upgrade can easily be appropriated into the upgrading of inequality in an age of Homo Deus, in which only super-riches can upgrade their bodies into superhumans. The plasticity of the extended mind does not share the pain and suffering of the other with it. Rather, it may just enhance the bodies of the super riches, cursing the bodies of the have-nots. They want to be saved from the finiteness of human body and death. This is why it is called techno-gnosticism, which seek for saving people from the evil bodily limitation and death through advanced technologies. It is the exact opposite of 1 Corinthian 1:28: "God chose ... things that are not," to reduce to nothing things that are." "Things that are not," that is, the non-existent does not really refer to something that do not exist but some being that are treated as if they do not exist at all here in this world. These are 'the lowly and despised in the world.' Clark's extended mind may be a slippery slope toward the techno-gnosticism in that it has a danger to still emphasize the superiority of the mind over the extension. Clark keeps calling it 'the extended *mind*.' This emphasis upon the mind can easily ignore the oppressive structure of our semiocapitalistic society, in which connected minds are exploited for economic interests when cognitive laborers work by directly connecting their neural connections to the virtual networks. Here lies the importance of theological critique of techno-gnosticism in the extended mind.

Malabou's liberative interpretation of plasticity as destructive may also be trapped in the modern understanding of being-human in that its resistance against the semiocapitalistic structure is based upon one's saying 'no' to it. It may be a privilege of being with human rights. Those who do not hold such rights for themselves cannot speak themselves. Then, how do we say 'no' to this harsh reticular abusive network of the current semiocapitalism, in which many of workers are illegal immigrant workers, refugees, emigrants and so on who do not have any right to speak for themselves. Under this semiocapitalistic structure, cognitive workers are forced to work flexible, adaptable, creative under the condition of infinite competition. In this sense, Malabou's liberative interpretation of neuroplasticity with her concept of destructive plasticity is still for the Modern Man who has human rights with his citizenship. The point I want to make here is that Malabou's neuronal liberation needs something more than destructive plasticity.

Can theology find an alternative to this existing structure of power? It is love, the love of the flesh on the plane of immanence, on which we belong to and inter-act each other. Love is our 'no' to the semio-

capitalistic exploitation and at the same time our alternative to change the world. God loves humans and the world so that S/He became flesh. The divine love is flesh, that is, erotic. Humans with their flesh is the foundation or the scaffold of the mind to extend itself over the other, and this is the divine "liberating com/passion."<sup>75</sup> To be with the suffering of the victims requires our love, without which our compassion easily turns into a cheap feeling of pity. Love is indeed erotic as well as agapic in that it needs a contact of fleshes, like when I am hugged by my last one, who is a 7-year-old boy. This aspect of the extended mind should not be obliterated in our mode of being-human, no matter what future would come. Although Malabou expresses 'destructive plasticity' as a "transformative ability," "a possibility of displacing or transforming the mark or imprint, of changing determination in some way,"<sup>76</sup> in order for plasticity as being "always capable of *changing difference*"<sup>77</sup> to work, there will be need something more than human will to say 'no' to the existing structure. It would be the sensitivity to the others. This bodily capacity for compassion is the foundation of love. Through this bodily sensitivity to others, the extension, 'things that are not,' again 'the lowly and despised in the world, may have its own voice to say 'no' to the world. Thus, our embodiment may be a virtual potential to create a difference by changing difference itself. Indeed, theology presents incarnation, the divine embodiment, as the divine love for human beings who are the others of God.

77 Ibid.

<sup>75</sup> Catherine Keller, On the Mystery: Discerning Divinity in Process (Minneapolis: Fortress Press, 2008), 111.

<sup>76</sup> Malabou, What Should We Do with Our Brain?, 16.

#### BIBLIOGRAPHY

- Clark, Andy. Supersizing the Mind: Embodiment, Action, and Cognitive Extension. Oxford, UK: Oxford University Press, 2011.
  - \_\_\_\_\_. Natural-Born Cyborgs: Minds, Technologies, and the Future of Human Intelligence. New York: Oxford University Press, 2004.
- Clark, Andy and David Chalmers. "Appendix: The Extended Mind," in Andy Clark. *Supersizing the Mind: Embodiment, Action, and Cognitive Extension*. Oxford, UK: Oxford University Press, 2011.
- Doidge, Norman. *The Brain That Changes Itself: Stories of Personal Triumph from the Frontiers of Brain Science.*(기적을 부르는 뇌: 뇌가 소성 혁명이 일구어낸 인간 승리의 기록들). trans. Mi-Sun Kim. Goyang, Kyunggi: Chiho Publishing House, 2007.
- Harari, Yuval N. *Homo Deus: A Brief History of Tomorrow*. London: Harvill Secker, 2015.
- Keller, Catherine. *On the Mystery: Discernment Divinity in Process*. Minneapolis: Fortress Press, 2008.
- LeDoux, Jesoph. Synaptic Self: How Our Brains Become Who We Are. New York: Viking, 2002.
- Malabou, Catherine. Ontology of the Accident: An Essay on Destructive Plasticity. Trans. Carolyn Shread. Cambridge, UK: Polity Press, 2012.

. What Should We Do with Our Brain? trans. Sebastian Rand. New York: Fordham University Press, 2008.

Pugh, Jeffrey C. 2017. "The Disappearing Human: Gnostic Dreams in a Transhumanist World." *Religions* 81, no.8 (2017): 1-10. Watkin, Christopher. French Philosophy Today: New Figures of the Human in Badiou, Meillassoux, Malabou, Serres and Latour. Edinburgh, UK: Edinburgh University Press, 2016.

Received 2020.05.25. Revised 2020.06.21. Accepted 2020.06.26.