

Paper title: Identity through change - Why the soul has not died yet
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Paper Abstract:

Neurobiology and empirical psychology provide evidence that seems to question our common sense assumption of personal identity. Cases of severe brain damage, schizophrenia, amnesia and multiple personality disorder are just a few examples which seem to suggest that the assumption of a person remaining the same during his/her whole life is highly implausible.

Doubting the acceptance of personal identity, however, is a challenge not only for our common understanding of ourselves in the here and now but also for the belief in immortality. As held in many religious traditions, immortality presupposes diachronic identity between the person in this life and in his/her purported life after death.

In the current debate, questions concerning personal identity are framed within the concept of ‘self’. Unfortunately, however, ‘self’ is used in an equivocal way: From empirical data from studies in developmental psychology and psychiatry, a distinction can be made between a biological and a conceptual self. Well known authors like the philosopher, D. Dennett, and the neuro-philosopher, G. Roth, argue that there is an incompatibility between these various notions of the self. According to them, only the biological self is real, whereas the conceptual self has to be understood as an illusion produced by a self-representing organism to enhance its chances of survival.

Evidence provided by neurobiologists and developmental psychologists, such as A. Damasio, J. LeDoux and G. Butterworth, indicates, however, that the different notions of the self are not incompatible with one another but mutually interdependent. At this point we argue that the notion of the soul should be introduced for explanatory purposes: It provides the integrative function which is missing in the concept of ‘self’.

The notion of the soul is able to capture both biological and cognitive capacities of the same person and their interdependence. This conception of the soul is derived from the Aristotelian account of psyche which distinguishes vegetative, sensitive and rational capacities of a living being and respectively bases the latter ones upon the former ones. Thus, it is a useful concept for conceiving human beings as a psycho-physical unity. The explanatory gain of this approach becomes obvious in cases of dramatic personality changes: Even if a person suffers from multiple personality disorder or schizophrenia, it can still be claimed that this person is identical with him/herself because he/she still has the same soul. Hence, the challenge can be met that while there are situations which dissolve the conscious appraisal of one’s personal identity into a loose sequence of psychological states, this does not preclude us from accepting the diachronic identity of persons themselves. If the ‘soul’ can be used to account for dramatic changes in our life, why should we not hold the same for the most dramatic change in our life, namely death?

According to Thomas Aquinas the soul guarantees personal identity and continuity between this life and afterlife. At the same time, however, for Aquinas the soul is not sufficient to

speak of the existence of the whole person, because this requires a material body as well. Thus, Christian belief in life after death included the ‘resurrection of the flesh’. The soul allowed for the assumption of identity beyond death, while at the same time acknowledging a profound change to the detriment of personal integrity of the deceased person, as long as the soul had no pertaining body.

In our view, it is the notion of the soul and not the notion of the self which is robust enough to account for these issues: Its central purpose lies in its ability to assist in the communication between the perspectives associated with different academic disciplines, such as biology, psychology, philosophy of mind and theology. At the same time it acknowledges that each of these disciplines contributes important aspects to the understanding of the whole person that the notion of soul alone cannot sufficiently explain.

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Gasser received his MA of Systematic Theology in 2004 and his MA in Philosophy in 2003 from the University of Innsbruck. As a winner of the Notre Dame- Innsbruck-exchange program he studied for one term at the University of Notre Dame du Lac, Indiana and as recipient of the Erasmus exchange program he lived and studied in London for one year. Gasser is active member of the Catholic Society of Innsbruck and engaged in educational programs in India. Since April 2005, he is secretary of the LSI-group Innsbruck.

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Josef **Wang** studied medicine at Innsbruck. During his studies, he became increasingly interested in ethical problems of the medical praxis and in philosophy in general. Right now he is pursuing his doctoral studies in philosophy. Since 2004 he is collaborator of the Austrian Centre for Ontological Research. He is especially interested in metaphysics, logic and medical ethics.

Nikolaus **Wandinger** received his doctorate in Systematic Theology from the University of Innsbruck in 2002. Apart from Innsbruck he conducted his studies at the University of San Francisco and the Graduate Theological Union in Berkeley, California. He was first collaborator in the Department of Christian Philosophy in Innsbruck and, after 1999, assistant professor in the Department of Systematic Theology in Innsbruck. Since 2004 he has served on the board of editors of the *Bulletin of the Colloquium on Violence & Religion* (COV&R). His main fields of research are theological anthropology, the concept of sin in the Christian tradition

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1. Mental Disorders Affecting Personal Identity: Clinical case studies

When looking into the “Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision”¹ (DSM-IV TR), the handbook for standard classification of mental disorders, we can find many different illnesses affecting the so-called personal identity. Patients suffering from these diseases show either symptoms suggesting that there are more than one personality within a human body, or their personal integrity seems to be lost. These patients pose a great challenge not only for physicians and psychiatrists in regard of their daily treatment, but also for philosophical and theological conceptions of personal identity: Putting into question the acceptance of personal identity through time presents a challenge not only for our common understanding of ourselves in the here and now but also for the belief in immortality. As held in many religious traditions immortality presupposes diachronic identity between the person in this life and in his/her purported life after death. How shall a concept of diachronic identity be upheld if specific diseases query it seriously?

In the first section we want to present diagnostic criteria for these diseases and illustrate difficulties physicians encounter in their treatment of these patients.

Let us consider mental diseases affecting personal identity according to DSM-IV. These are i) amnesia, ii) schizophrenia, and iii) dissociative identity disorder (DID). In all these cases the self or personality² of the patient has changed so much, that observers will have doubts whether the patient is still the same person before and after the beginning of her mental illness.

1.1. Amnesia

The first kind of mental disorder we want to discuss is amnesia, or “amnesic disorder”, as it is named by DSM-IV. It can affect short-term or long-term memory. Furthermore, we can distinguish between retrograde and anterograde amnesic disorders. Patients suffering from retrograde amnesic disorders cannot recall information which is stored in the memories before the illness began; on contrast anterograde amnesic disorders do not allow patients to learn new facts after the illness has set up.

According to DSM-IV two different kinds of amnesia can be distinguished: “transient amnesic disorder” and “chronic amnesic disorder”.³ Transient memory loss lasts less than one month, chronic memory loss more than one. There are significant differences in treatment between these two kinds. Physicians treating transient amnesia aim at the total recovery of the patient. Most cases of amnesia present merely slight losses of memory; patients can recover,

¹ American Psychiatric Association (2000).

² The notions “personal identity”, “personality”, and “self” are taken from the ordinary language of folk-psychology.

³ Cf. American Psychiatric Association (2000).

sometimes even regain their lost memories quickly and without remaining damage.⁴ Chronic amnesic disorder instead needs another kind of treatment. If the cause of memory loss can be dispelled (e.g. a tumor), physicians will try to remove the cause and hope that the patient will regain his memories. But if there are no ways to remove the cause (e.g. a severe destruction of the amygdala, as reported in the case ‘David’ by Damasio⁵), physicians must try other strategies. What has happened to David? Damasio reports of a male patient suffering amnesia because of an encephalitis destroying selected regions in the left and the right temporal lobes, when David was 46-year-old.⁶ Probably due to destruction of his temporal lobes David was neither able to learn new facts, nor to recall major semantic knowledge.⁷ While he still knows the most important facts about his life (e.g. his name, the names of his wife and children), he cannot remember new faces, or recall what month it is.⁸ Thus, he suffers from both retrograde and antrograde amnesic disorders. What about the self, or the personal identity of David?

1.2. Schizophrenia

The next kind of mental disorder we want to present is the schizophrenia. According to DSM-IV schizophrenia is a mental disorder with the following possible symptoms: delusions, hallucinations, disorganized speech (e.g., frequent derailment or incoherence), disorganized or catatonic behavior, and negative symptoms, i.e., affective flattening, alogia, or avolition.⁹ It must be made sure that these symptoms are not caused by substance abuses and last for more than one month.¹⁰ It is not entirely clear what the causes of schizophrenia are; genetic disposition, dopamine-activities in the brain, and psychological traumata are widely accepted as possible causes for this mental disease. Beside the etiological considerations, various approaches to schizophrenia are developed according to different basic concepts of schizophrenia.¹¹

Let us first review the case of Gwen Davis¹² as an example. When she was in the 9th grade, she first met her imaginary friend called Shalom. At first, Shalom was less suspicious. He told her that she was chosen to be a member in a secret organization because she was a great girl. Then the speech of Shalom changed. Shalom told Gwen that everybody around her hates her and that someone will die a terrible death. When Gwen started to cut herself with sharp objects, “in order to make [herself] to feel that [she] was good enough to be redeemed”¹³, it was apparent for other people that she was ill and suffered from schizophrenia. By applying pharmaceuticals to Gwen Shalom disappeared.

⁴ In light cases of cerebral concussion most patients suffer from transient retrograde amnesia. Shortly after the concussion they are not able to remember what has caused the concussion. When they recover they will be able to regain the lost memory, perhaps not completely, but they will be at least aware of more details.

⁵ Cf. Damasio (1999), 43-47.

⁶ Cf. Damasio (1999), 115. About theories concerning the connection between the temporal lobe and the ability to remember, cf. Steinworth / Levine / Corkin (2005).

⁷ Though David cannot learn new facts, he can, as Damasio reported, still read watches (cf. p. 114) and talk, as a normal adult person would do, though. So at least major *pragmatic* knowledge are still in tact, while *semantic* knowledge went lost.

⁸ In a very weak sense David is still able to recall the feeling he had when he meets a person he has met before.

⁹ Cf. American Psychiatric Association (2000).

¹⁰ In comparison the ICD-10 criteria for schizophrenia embrace more mental illnesses than DSM-IV. Interestingly the lighter schizophrenic forms (e.g. simple schizophrenia and borderline schizophrenia) are counted as “personality disorder”, but not as “schizophrenia”. Cf. American Psychiatric Association (2000); World Health Organization (2003); Hinterhuber / Fleischhacker (1997), 63.

¹¹ Beside An der Heiden (2006) and Breakspear (2006) for non-linear approach and Mishara (2005) for the body schema and body image theory there is also a psychoanalytical approach to schizophrenia, cf. e.g. Minauf (2005).

¹² Davis (2005). In this article Ms. Davis herself describes her own experience of schizophrenia.

¹³ Davis (2005).

Here we want to present two completely different concepts for understanding schizophrenia: the non-linear dynamical approach and the theory of loss of unity of body image. In both theories schizophrenia is seen as mental illness affecting the self.

In the non-linear model schizophrenia is considered as a phenomenon resulting from a dynamical process of the neurological functions in the brain. Though this model is still in development and more empirical evidence is still required, the direction of argument can already be drawn. While An der Heiden¹⁴ stresses the non-linear interaction of dopamine- and GABA-sensitive neurons as possible cause for schizophrenia, Breakspear¹⁵ points out that in the disconnection hypothesis¹⁶ schizophrenia is considered as a result of spatial and temporal disorganization of brain parts. When patients suffering from schizophrenia show positive symptoms (e.g. hallucinations and delusions)¹⁷, these symptoms are considered as byproducts of non-integrated parts of a neuronal network. So, in this theory schizophrenia is thought as a mismatched neuronal network, which ought to function as one whole but falls into different parts. We cannot give a full scope analysis of these theories about schizophrenia, but even in this rather material and non-psychological theory the assumption is still made, that only one patient (or one brain) is affected.

In the theory of the loss of the unity of body image¹⁸ schizophrenia is seen as a coping strategy. When patients lose the unity of their body image, “they employ an incomplete and transient proxy body schema (which becomes a vortex point of ‘self-centrality’ [...] in passivity symptoms, delusions of reference, and may underlie some neurocognitive deficits).”¹⁹ According to this theory the human body is represented in two different ways in the brain. The ‘body schema’ is the representation of the body through neuronal connections. The ‘body image’, on the contrary, is the representation of the body through an outer perspective. According to this theory though normally body representations correspond to each other correctly, sometimes they diverge. To compensate this deficit symptoms of schizophrenia, as delusions and hallucinations, are developed.

1.3. Dissociative identity disorder (DID)

While the notion of “multiple personality disorder” is used in DSM-III, DSM-IV classified these diseases to the notion of “dissociative identity disorder (DID)”.²⁰ The latest guideline for treatment of this kind of mental disorder is published in the *Journal of Trauma and Dissociation*²¹. By studying these guidelines problem caused by the DID for both patients and physicians become obvious. These are the criteria for diagnosing DID in DSM-IV-TR:

The presence of two or more distinct identities or personality states (each with its own relatively enduring pattern of perceiving, relating to, and thinking about the environment and self).

¹⁴ Cf. An der Heiden (2006).

¹⁵ Cf. Breakspear (2006).

¹⁶ Cf. Peled (1999).

¹⁷ Psychiatrists speak of “negative symptoms” when the patient is not as active as usual, e.g. depression. The positive symptoms, e.g. hallucinations, are ‘products’ of the patient, and therefore called ‘positive’.

¹⁸ Cf. Mishara (2005). [Lit-Liste: Mishara, Aaron L.: Body self and its narrative representation in schizophrenia. Does the body schema concept help establish a core deficit? In: De Preester, Helena / Knockaert, Veroniek (Eds.) (2005): *Body Image and Body Schema. Interdisciplinary perspectives on the body*. Amsterdam – Philadelphia: John Benjamins Publishing Company.

¹⁹ Mishara (2005), 147.

²⁰ The ICD-10 has not abandoned the notion of “multiple personality disorder” completely; under the section F.44.8 this disease can still be coded. In the ICD-9 the notion of “multiple personality disorder” cannot be found.

²¹ Chu (2005). There are separate guidelines for the treatment of children and adolescents.

At least two of these identities or personality states recurrently take control of the person's behavior. Inability to recall important personal information that is too extensive to be explained by ordinary forgetfulness.

The disturbance is not due to the direct physiological effects of a substance (e.g., blackouts or chaotic behavior during Alcohol Intoxication) or a general medical condition (e.g., complex partial seizures). Note: In children, the symptoms are not attributable to imaginary playmates or other fantasy play.²²

It must be noted that criteria and classification of DID are still under debate. There is no general agreement that this mental disorder even exists. However, many cases of DID are reported in medical journals.²³ Most physicians agree with the theory that childhood psychological traumata, especially sexual abuses, are associated with the phenomenon of DID. But just like schizophrenia both existence and etiology of DID are still unclear.

Let us review a case of DID as reported in Everest (1999). The psychiatrist reports of a session with a patient called Chris. After few minutes of delay Chris arrived, dressed in a way she hated, according to her own content. According to the report Chris was upset, probably due to a forthcoming two-week-vacation of her psychiatrist. After an episode of headache an alter²⁴ 'takes over'. Her voice changed, Chris now called herself Christine. After a brief psychotic episode in which Christine showed herself as abused by her 'daddy' Christine suddenly recognized her psychiatrist and realized that she is in a psychological session. This is what Everest reports:

"We sat together on the floor and Christine draw a cat and then asked me to draw a house. I did so and Christine asked for herself to be put at one window, and Ruth, Anne, Sharon, Rachel, Roger, Bill, Jane, Theresa, Rita and Emma, 'my friend', at the others. These are the names of Chris's part personalities, all of whom have spoken to me at one time or another, with the exception of Bill who I am told will not speak to me because I am 'a sloppy woman'. Christine asked me to draw Chris in the garden but rejected my suggestion that Chris should come into the house, although she has insisted upon this on other occasions" (Everest (1999)).

How to treat these patients? Different strategies are provided here. According to the guidelines²⁵ psychotherapies of various kinds are commonly used, e.g. cognitive behavioral therapy, dialectical behavioral therapy, hypnosis etc. A Pharmacotherapy is possible, but not the primary means to treat DID. Usually it is used to control the co-morbid disorders like anxiety or depression.

The philosophical question is who is the patient suffering from DID, and what are the goals of treatments? It is widely accepted that a "DID patient is but one single person who experiences himself/herself as having separate self-states or alternate identities"²⁶. It must be noted that this usage of the notion 'person' and 'self-state' is not without philosophical consequences. Similar to the fact that our sensitive functions can fail to correspond to the outer world, it can

²² Cf. American Psychiatry Association (2000), Chu (2005).

²³ Cf. Everest (1999), Beer / Beer / Beer (1994), Okugawa et al. (2005). A questionable case for DID, where a woman claimed to have 45 different personalities, is presented in Stübner / Völkl / Soyka (1998).

²⁴ In the psychological terminology, the main personality within a DID patient is called 'host', while other personalities are called 'alters'.

²⁵ Chu (2005).

²⁶ Chu (2005).

be said that the experience of alternate identities can fail to correspond to reality. So the experience, or the feeling, of separate self-states is not a sufficient reason to believe that there are more than one person.²⁷ When it is agreed with the thesis that there is only one person to treat, the goal of treatment can be formulated.

As stated in the guidelines, it “is the consensus of expert opinion that wherever possible, treatment should move the patient toward better integrated functioning”²⁸. The patient is not solely the host, but the integral of all subpersonalities; and therefore the treatment should aim at the integration of these subpersonalities. Though there might be situations in which the best strategy to treat DID patients is to address different identities separately, therapists should keep in mind that there is only one person requesting their help. How to treat a patient depends clearly on the philosophical background of psychiatrists. If all personalities are seen as distinct persons with but just one body, communication and cooperation between the different identities is the main goal. The other option is to see the DID patient as just one person. In this way the integration of different patients is the main aim of the therapy.

Let us briefly summarize the problems of personal identity, which clinical cases pose to us. There are dramatic changes in the psychological constitution within a patient. Cases of amnesia, schizophrenia, DID and traumatic brain injuries show that commonsense assumptions of personal identity are threatened. The psychological notion of ‘personal identity’ consisting in a continuity of psychological traits alone cannot help us to determine whether a patient is still the same or not. On the contrary, a psychological understanding of ‘personal identity’ suggests that these patients are not the same persons anymore. Rather they are to be understood as “successors” of the person before her disease. Physicians, however, do not seem to share these assumptions. At least in their treatment they are guided by the implicit assumption that the patient before them is still the same person as before her disease. Otherwise goals of treatment like re-integrating subpersonalities into one self again, as it is done with DID patients, would hardly make sense. And even if the obtaining of old memories is impossible, as it is reported from certain patients suffering amnesia, the conclusion that such patients are other persons is not compelling because of empirical data. Rather such a conclusion depends on a special understanding of personal identity as will be shown in the next section. What should be recorded so far is that a mere psychological concept of personal identity seems to be problematic.

2. Conscious Self and bodily Self

2.1. A short overview of the historical background: John Locke

Without doubt it was Locke who made the notion of ‘self’ a prominent term in modern philosophy. Rejecting the elder notion of soul as unclear and inaccessible to human experience he deemed the concept of self to be sufficient for guaranteeing personal identity throughout life. X is then and only then the same person through time, if X possesses the same consciousness through time. Possessing the same consciousness means the ability to remember previous states of that consciousness. Locke distinguishes the concept of ‘self’ from the concept of ‘man’: Self is a psychological term denoting human persons. ‘Man’ is a biological term denoting the human organism and his bodily existence.

An important question arising from this concept of self is how consciousness comes into being and how the concept of ‘self’ and the concept of ‘man’ are related to each other. Locke

²⁷ It is possible for DID patients to *observe* themselves changing their personalities, cf. Redfearn (1999). Some DID patients are said to be able to switch personalities *on will*, cf. Tsai et al. (1999).

²⁸ Chu (2005).

thought that a developmental model of consciousness met these challenges best. Persons evolve, so to say, from their natural biological development via four stages:

Because of the basic physiological experiences of lust and pain the human organism develops a basic notion of self understood as the subject of these physiological experiences.

This experience gives reason to worry about the qualities of one's various experiences since pain shall be avoided and lust aimed at. These concerns about one's own self mark the starting point where the human organism develops a concept of an instantaneous self.

This instantaneous self comprehends itself as extended over short periods of time.

Because of the capacity to remember and the ability to ascribe to oneself experiences a self-consciousness develops which understands itself as extended over long(er) periods of time.

Locke's developmental model of self makes clear that the concept of self and personal identity is an end-product of human development: The thing we call a self is based on consecutive acts of consciousness bound together because of our ability to remember.²⁹

Human persons are, thus, constituted solely due to their ability to recall into consciousness what they attribute to themselves because of having experienced it personally. Locke's identity criteria for human persons is thus the following:

“For since consciousness always accompanies thinking, and 'tis that, that makes every one to be, what he calls self; and thereby distinguishes himself from all other thinking things, in this alone consists personal identity; i.e. the sameness of rational Being. And as far as this consciousness can be extended backwards to any past Action or Thought, so far reaches the Identity of that Person.”³⁰

The identity conditions for persons are to be conceived as relations between different mental states. As far we can remember, as far relations between mental states can be established by the subject and thus a self maintained. We do count to our self only these mental states that are connected to our consciousness. The human organism is of no further importance for Locke's conditions of personal identity. Consciousness alone suffices.

The conclusions following from this account are already shown through Locke's famous example of the body switch between the prince and the cobbler: One body can realize more than one person and one person can be realized in more than one body.

2.2. Locke's heritage and the modern discussion: Daniel Dennett

In modern philosophical discussion the Lockean notion of self is still predominant. Many philosophers are naturalists or sympathize with naturalism. They deny that the 'human self' refers to something other than a consecutive chain of inner events. Only our ability to self-represent ourselves can be scientifically proved. This ability, however, does not presuppose a robust notion of the self. It is sufficient to talk about a biological system controlling and representing itself. According to this position the self is nothing else than a fiction created by a self-representing organism. Physical (and thus scientifically observable) correlates of self-

²⁹ A more detailed presentation of Locke's model of the self and the specific context of his proposal can be found in R. Martin and J. Barresi (2000), 14ff.

³⁰ Locke, *Essay II*, xxvii.9, 335.

representation are neuronal activities taking place in the brain of the self-representing biological system.

One of the most prominent thinkers who work on this topic in the realm of the philosophy of mind is D. Dennett. For Dennett there are only two possibilities to reconcile the phenomenon of the human self with the continuous flux of events characteristic of our body: Either someone becomes a dualist and interprets the self as the manifestation of a spiritual, non-physical reality or someone is willing to pay the price for a less obscure and more scientific view of the matter and unmask the self as fiction. Only if someone is willing to accept the self as a fiction of self-representing biological systems then the assumption of a soul or “soul-pearls” (as Dennett puts it) becomes superfluous: “[...] selves are not independently existing soul pearls, but artifacts of social processes that create us, and, like other such artifacts, subject to sudden shifts in status.”³¹

Dennett’s line of argument is a paradigm example for how scholars in philosophy of mind and the cognitive sciences work exclusively with concepts of an event ontology in order to understand and interpret our body and its processes. If this ontological framework alone is taken as starting point, non-event-like phenomena in the realm of the mental, e.g. dispositional mental states, contents of beliefs and the self are hardly to integrate.

Our thesis is that the real reason for Dennett’s view of the self as a fiction is not essentially based on concerns arising out of a certain Weltanschauung (as e.g. a religiously motivated dualism between body and soul). Rather it is grounded in the inability to reconcile the phenomenon of the self with an understanding of the human body from an event-ontological perspective alone.

On various parts of his popular book “Consciousness Explained” Dennett talks about a biological self. The biological self is given to all organisms that are able to distinguish (implicitly) between themselves and their environment (a capacity which Dennett ascribes also to protozoa). For Dennett the biological self is an ontological reality because it is anchored in the biological structure of organisms. Its limits coincide with the limits of the body of the organism.

The decisive point is that according to Dennett the conscious self of (adult) human beings is incongruent with the biological self. Whilst the biological self is a physical reality, the psychological self of adult human beings is only a conceptual construct. Contrary to other organisms the limits of a human self are not confined through the biological structure of the human organism. The “self of protozoa”, for instance, is defined through the membrane of the cell. The reason of the inhomogeneity between biological and psychological self is the following: The biological self is based upon a dynamic system of self-representing organic processes of an organism. The physical correlate of the psychological self, instead, consists in parallel distributed neurological processes in a highly plastic brain.³² This plasticity is the physical fundament for the fact that a psychological self can detach itself completely from the biological self.³³

³¹ Dennett (1991), 423.

³² Dennett (1991), 187.

³³ A similar vein as Dennett takes the prominent German neurobiologist and philosopher G. Roth. In his book “Feeling, Thinking, Acting” (Fühlen, Denken, Handeln) Roth considers the indexical dimension of the first person perspective to be an illusion. The assumption of an “I” as reference point of perceptions and starting point of actions is an illusion because the brain does not know such a central perspective. Similar to Dennett Roth refers to decentralized working processes of the human brain in order to support his illusion-thesis of the human self.

At this point it becomes clear why Dennett sees only two alternatives to understand the human self- either fictionally or dualistically. The biological self is real insofar as it is anchored in fundamental self-regulatory processes of an organism coinciding with the limits of its body. In contrast to the biological self, the physical reality corresponding to the psychological self is not a working organism within the limits of its body but parallel distributed neuronal processes within the brain: In the brain, however, is nothing corresponding to the unity and centeredness of the psychological self as it is experienced in everyday life. Facing empirical evidence that there is no central state in our brain the only remaining solution for Dennett to adhere to a robust concept of self is to assume the existence of an immaterial self. Such an assumption, however, is highly implausible from Dennett's point of view. Clinging to such an understanding of the proper self is to be rejected because it leads to dualism,³⁴ which is not reconcilable with a scientific outlook of the world.

For Dennett generating a self serves to improve the chance of survival of organisms. The capacity of self-representation is thus a complex tool for guaranteeing the distinction of one's own body and its environment.

It is remarkable that for Dennett the biological self is not the ontological basis of the psychological self which is constituted through various forms of self-representation. Far from it: Dennett rejects such an interpretation categorically. Forms of self-representation do not have to be referred to a biological self but through self-representation a self is constituted in the first place. Our self-representations are structured in such a manner that a self can be ascribed to them only retrospectively. For this reason Dennett calls the self a center of narrative gravity: The self is no real entity but an explanatory fiction or a useful theoretical construct. Our self-representations circle around it and are structured by it.

In contrast to the biological self the psychological self does not coincide with the boundary of the body (that is the skin). Rather it has a life of its own. Under normal circumstances the slogan "one self per body" is correct but in contrast to the biological self a clear correlation between psychological self and body is not possible. Normally a human being has just one self, where current and past experiences of the organism are accommodated into a coherent whole. There are, however, cases as reported in the first section, where a non-ambiguous correlation between biological and psychological self is not accomplished. For Dennett cases of DID are a clear sign that the idea of a psychological self is just fictional. According to his interpretation it is sometimes rather disadvantageous for a cognitive system to attribute all experiences to one self alone. For the "psychological survival" of such persons the production of other selves provides an advantage. The ontological status of these additional selves is the same as the one of the "original self": a helpful fiction for the system to fulfill specific tasks of (self-) representation.

Recalling the discussion of DID in the first section it can be agreed with Dennett, that developing subpersonalities might be a strategy to cope with traumatic experiences. To conclude from this clinical diagnosis that the concept of personality as such is fictional, however, is not a compelling inference. On the one hand, several kinds and causes of DID have to be distinguished. Few kinds of these diseases have proved to be advantageous for the patients. Most of them, however, present great psychological strain for the patients. On the other hand the main goal of treatment shows that physicians and psychiatrists do still consider these patients as the same persons: The crucial point is that physicians try to re-integrate the

³⁴ Dennett (1991), 423.

various developed subpersonalities again into one self. If they would take Dennett's interpretation seriously it would be harder to understand why physicians treat patients as they in fact do. Why should they aim at the integration of subpersonalities into one adequate self-understanding and not just aiming at neutralizing eventual psychological strains of DID patients in order to create an improved starting position for the integration of all subpersonalities into society? If every concept of self is an illusion, then DID patients would not have to be considered of being mentally ill. It is only because of their past experiences that they do not develop just one but more selves. Clinical praxis however points in another direction: Generally the slogan "one body one self" is considered to be the standard, whereas "one body more selves" is interpreted as an aberration, which has to be treated. Physicians are thus, at least in clinical praxis, not following the hypothesis that the concept of self can be considered to be illusionary.

2.3. The contributions of developmental psychology

Dennett's proposal to consider the biological and the psychological self as inhomogeneous does not seem to be backed up by results from developmental psychology. G. Butterworth explored extensively the origins of self-perception in infancy. In agreement with Dennett Butterworth shows that a biological self (understood as an implicit knowledge about the limits and functions of one's own body) can already be noticed in an unborn fetus (Butterworth conducted this study with rat fetuses). Butterworth emphasizes, however, that there are no reasons to distinguish sharply between the biological self as basis of all proprio-receptive perceptions and goal oriented behavior on the one hand and higher forms of self-conception on the other hand. These different kinds of a self are not incompatible with each other. Rather higher forms of self-conception presuppose the more basic ones. He talks of a continuum beginning with primitive ways of bodily self-perception and terminating with a mature concept of an autobiographical self in adult human beings:

"The point is that movement synergies reveal properties of the material self as an organized totality; species typical developmental processes will determine the extent to which such aspects of the categorical self become elaborated within higher order cognitive processes."³⁵

According to this view the biological self is nothing else but an early form or the biological grounding of the psychological self.

2.4. Damasio's work: Neurological mappings of bodily functions

Further evidence, which does not seem to support Dennett's conclusions, can be found in the work of the well-known neurobiologist A. R. Damasio. He argues against the thesis that physical correlates of higher forms of (self-) consciousness are to be found exclusively in the cerebral cortex. He shows that (self-) consciousness also depends on structures that belong to older phylogenic areas of the brain which are closely interconnected with biological functions. Damage of parts of the diencephalon, of the brainstem or the upper part of the formatio reticularis lead to various forms of consciousness loss. These structures are responsible for the regulation of basic living functions of the organism – the so-called "inner milieu". The stripline between the parts of the formatio reticularis whose damage leads to a change or loss of consciousness and those parts whose damage does not entail such consequences is quite clear. From the fact that these brain areas are essentially involved in control and representation of bodily processes, Damasio draws the conclusion that there is a direct connection between subjective experience, neuronal representation and the control of bodily processes. According to him, core-consciousness is immediately connected with permanent

³⁵ Butterworth (1992), 108.

representations of fundamental organic functions. It is the so-called “proto-self” that makes this constant representation possible. Since these basic regulatory mechanisms are relatively stable, they provide an optimal foundation for referring to an identical subject, as it is presupposed in self-consciousness. A central condition for the development of human subjectivity and self-consciousness is thus the representation of a dynamic equilibrium (homeostasis) of the various organic states through the proto-self. Self-consciousness arises, if an object, the organism, and the relation among the two are represented. Neurobiological basis of this proto-self is the representation of the causal relation between (interior and exterior) objects and the organism. Emotions play a central role in the transmission of these processes by mental pictures. Emotions accompany bodily changes and the reactions that are excited by outer or inner objects. Emotions serve as markers that make these interplays of bodily reactions, objects and self accessible for an extended consciousness at a later point in time (memory).

Damasio explicitly turns against a relativization of the self in terms of a mere fiction. His understanding of the self is not so much the consequence of a different understanding of mental phenomena. Rather Damasio (and Butterworth in his research) interprets bodily phenomena – as correlates of mental phenomena – in a different way from Dennett’s. The reality underlying the self is not limited to specific cortical processes. This does not mean that event-like brain processes do not play a decisive role in the constitution of consciousness. They are crucial for the representation and cognitive processing of those fundamental bodily functions which keep an organism alive. The organizational and functional structure of the human organism and its multilevel mapping in the brain are fundamental for the formation of a self.

“No component remains the same for very long, and most of the cells and tissues that constitute our bodies today are not the same we owned when we entered college. What remains the same, in good parts, is the constitution plan for our organism structure and the set points for the operation of its parts. Call it the spirit of the form and the spirit of the function.”³⁶

Even if we change permanently throughout life, the structure and functional principle of our organism remains largely unchanged. Bodily processes are grounded in a unifying principle, which persists soundly from the beginning to the end of our life. Self-representation generates the impression of identity and unchangeability of a stable self because this invariant organizational principle of our organism is constantly represented as well:

“The reason why representations of the body are well suited to signify stability comes from the remarkable invariance of the structures and operations of the body. Throughout development, adulthood, and even senescence, the design of the body remains largely unchanged. To be sure, bodies grow in size during development, but the fundamental systems and organs are the same throughout the life span and the operations that most components perform change little or not at all.”³⁷

This organizational principle is no fiction but a reality of our organism that controls fundamental bodily functions. According to Damasio, without this principle neither consciousness nor self-consciousness could arise because there would be nothing that maps what remains essentially the same throughout time.

³⁶ Damasio (1999), 144.

³⁷ Damasio (1999), 141.

“Moment by moment, the brain has available a dynamic representation of an entity with a limited range of possible states-the body.”³⁸

Thus, there would be no basis on which our capacity to refer to ourselves could be grounded. This organizational principle that represents the constitution plan for our bodily structure constitutes on a fundamental level, what we call personal identity. Damasio himself, however, does not take this line of argument but remains within the Lockean conception of the self.

By pointing at functions and conservational processes in an organism which remain largely the same throughout life span, the physical-bodily realm does not appear completely incommensurable with those mental phenomena which are not perceivable as events. Taking about bodily systems, functions or organizational structures is hard to integrate into a framework of event ontology alone. References to enduring entities in time seem indispensable.³⁹

According to Dennett’s understanding of the body-self-relationship physical phenomena are conceived of fundamentally different from mental phenomena: While we talk about processes and events in regard of the body, people refer to identity, self and subjectivity in the mental realm. A disembodied conception of the mind stands vis-à-vis a pure event-and process-like conception of the body.

At this point it becomes clear that dualistic and physicalistic notions of the body-self-relationship have the same roots. They consist in an event- and process-like conception of the body and in a dichotomy between the bodily and the mental. Some mental events, such as emotions, upshots of thoughts etc., can be reduced to physical events; but there are a whole set of mental phenomena that cannot be reconstructed as physical events, like subjectivity, mental dispositions or our notion of an “I”. Once this route of distinguishing between bodily and mental phenomena is taken, it is hard not to arrive at a result like Dennett’s laid down alternatives.

The work of Damasio and other experts of neurology indicates, however, that an adequate understanding of the mental is only possible in conjunction with the representation of bodily processes. Moreover the traditional body and soul problem is not reducible to a mind-brain problem, as naturalistic philosophers suggested in the last decades. New neuro-philosophical approaches tend to soften the strict dichotomy between the realm of the mental and the realm of the physical. The realm of the mental is broadened toward states that embrace bodily aspects as well. For instance, many recent contributions treat the role that emotions play within cognitive and rational processes. These accounts come along with a more fully developed conception of the physical: The physical correlates of states of consciousness are not assumed to be single neuronal events but complex neuronal activity patterns. Increasingly scientists become aware of the relevance of structures of basic living processes and their neurobiological mapping for generating consciousness.⁴⁰

In the ongoing discussion of cognitive sciences more and more complex organic unities and their interconnected functions serve as correlates of states of consciousness. This implies that the correlated mental phenomena do not appear to be as strange and different as in those times

³⁸ Damasio (1999), 142.

³⁹ Interesting attempts to understand the human body from two perspectives which (at first moment) seem to be incompatible with each other are made by B. Smith, P. Grenon et al. (2004). They argue that an adequate understanding of the structure of the human body and its functions needs both- continuants and occurrents.

⁴⁰ See e.g. the interdisciplinary anthology of De Preester et al. (2005).

when physical correlates of the mental were sought in single physical processes on a very low level of complexity. Fundamental bodily systems are more similar to mental phenomena, like self-consciousness, subjectivity and qualia, than are linear chains of events and processes considered in an isolated manner from the whole system of the organism. Bodily functions remain the same even when they are not actualized. They are dispositional in character and thus, not adequately understandable within a framework of mere event-ontology.

3. The topicality of the Aristotelian - Thomistic notion of the soul

At this point it is worth the effort to recur to the Aristotelian notion of the soul. Aristotle was facing a similar problem, as is posed to us by modern research on consciousness. On the one hand he was acquainted with Platonic/dualistic conceptions of the soul, on the other hand prominent natural philosophers were arguing that a soul is a fiction – that all there is can be described in a physicalistic language with the basic principles of pushing and pulling.

In his discussion Aristotle invokes the least common denominator of different conceptions of the notion of “soul”: “Soul” is the principle of living beings.⁴¹

If “soul” refers to the essential constituent of a living being, the only possible category is the category of substances: That which is essential to a living being cannot be accidental.

What does it mean that “soul” is a substance? Aristotle distinguishes three different meanings of substance: ‘Substance’ as “matter”: The notion refers to the basic substrate of entities.

‘Substance’ as “form”: The notion refers to essential properties of an entity.

‘Substance’ as a concrete entity.

In regard of the line of argument presented so far it is obvious that ‘soul’ refers to ‘substance’ in the sense of a formal principle. This means: The soul is neither the living body as a whole nor the (material) body as such but as substantial principle of actuality in virtue of which a body is a living body. The soul is the form of the human organism as a whole, and, as such makes it to be the kind of living substance it is.⁴²

It is interesting to note in this context that scholars of Aristotle analyze the concept of soul in terms that are very similar to those Damasio uses in explaining the development of consciousness from constant neurological mappings of basic life functions. For instance, Nussbaum writes: “The lion may change its shape, get thin or fat, without ceasing to be the same lion; its form is not its shape, but its soul, the set of vital capacities, the functional organization, in virtue of which it lives and acts.”⁴³

If the soul is understood as the essential form of an organism, determinate consequences for the realm of the mental and the physical follow. Defining the soul as essential form of a living being and thus as principle of life excludes explicitly two conceptions of ‘soul’: By rejecting the identification of the soul with an indeterminate mental substrate, the Aristotelian notion of soul is incompatible with an understanding of the mental in terms of pure event ontology. On the other hand, those dualistic conceptions of soul which conceive of it as an immaterial substance that stands in a mysterious relation to the body are rebutted as well.

Aristotle argues against a strict separation of the mental from the biological. Aristotle’s tripartite distinction of the soul in vegetative, sensible and rational soul shows clearly that the

⁴¹ De Anima 402a6f.

⁴² De Anima 412a7ff.

⁴³ Nussbaum (1978), 71.

basic capacities of nutrition, growth or sense-perception are necessary pre-requisites for the well-functioning of the rational part. For Aristotle there is just one subject – the animate organism – which in virtue of its nature is able to do all the things that a living being of a specific kind typically does. Frede stresses this point in regard to the human intellect: “On Aristotle’s considered view human intellectual intuitions importantly differ from the other so-called affections of the soul, but they do not differ from them in such a way as to justify our postulation of an intellect or a soul as the proper subject of these intuitions or thoughts.”⁴⁴

In the Aristotelian-Thomistic tradition the soul plays an essential role for the explanation of mental phenomena. But its explanatory scope does not end here. Biological phenomena belong to the explanandum of the soul as well. Hence, hylomorphic accounts avoid problems coming along with dualism and physical reductionism: Dualism tends to deny our embodiedness and animality, whereas physicalism can hardly account for the value of the self representing itself. As last consequence there only remains, as Dennett’s approach shows, the expatriation of the self into the realm of the illusionary. One might, of course, be tempted to ask how it is that this concept of soul is miraculously applicable to biological as well as mental problems. This objection can be met by reflecting more thoroughly on the function of that concept. In itself, ‘soul’ is neither a biological nor a psychological or mental concept but an ontological one. Moreover it has to be counted among those ontological concepts that can be called formal, and as formal concept it has an heuristic and an integrative function. It is above all this integrative function of ‘soul’ that allows it to link – or to integrate – biological and mental phenomena with each other.

What are formal concepts? Formal concepts differ from ordinary concepts in that they “reflect not things independent of language, but certain ways in which words meet the world”⁴⁵, while ordinary concepts “serve as principles of classification of things”⁴⁶. Formal concepts like “object”, “thing”, or “event” alert us to the fact that when we talk about reality, we view reality from different viewpoints, we distinguish between different aspects of reality, are able to concentrate on some aspects and abstract from others. The view of different sciences on the reality that we call a human person is a perfect example for that: There is a biological aspect to these entities and biology examines it; there also are mental and psychological aspects to them, and psychology and cognitive science attend to those. For the philosophical position espoused in this paper, it has to be retained that each of these sciences – and of others dealing with questions about the human person – only deals with an aspect of the whole. A philosophical position trying to reduce one aspect to the other – of which physicalism is an example – commits that error and falls prey to the mistaken assumption that all aspects can be reduced to merely one. It thereby unduly reduces the complexity of the reality to be studied. On the other hand, a dualism that seeks to understand bodily and mental phenomena as strictly coming from different entities overlooks the fact that the different sciences look at different aspects of the same entity, rather than at different entities.

The Aristotelian notion of ‘soul’ has to be seen as such a formal concept. It does not refer to an object besides (inside or outside) the person whose soul it is, but it directs our attention to certain aspects of that person, or rather to certain aspects of living organisms; the above mentioned tri-partite distinction breaks that down further for different types of living organisms. Since we are concerned with the human person, we will disregard here the cases of animals’ and plants’ souls and concentrate on the aspects of the human soul indicated in Aristotle’s use of the term. According to the Canadian philosopher, theologian and economist

⁴⁴ Frede (1992), 106.

⁴⁵ Hamlyn, D. W. (1984), 55.

⁴⁶ Ibid.

Bernard Lonergan, formal concepts also are heuristic concepts because they inform us about the paths of inquiry that should be followed with a particular object in question.⁴⁷ The Aristotelian concept of soul, for example, makes it very clear that we have to make biological, as well as mental and psychological inquiries to find out more about a human person. In other words: “Heuristic concepts ... indicate where we should look, and what [that which] we are looking for might be like, but they do not themselves give us that for which we are seeking.”⁴⁸ In order to get that, we have to use the methods that are appropriate for the particular science in question. O. Muck then proposes “that the key notions of ... ontology ... have such a heuristic function. For instance, we can speak of the nature or the essence of something, without knowing the nature or essence completely.”⁴⁹ Since ‘soul’ in Aristotelian ontology is the form of a living being and since ‘form’ is a key notion of ontology, ‘soul’ has such a heuristic function.

But, one might ask, what after we have found the answer to the question? Do we then still need the formal, heuristic concept? Can we not simply substitute the result of the inquiry for it, for example the biological build-up of a human person? This argument overlooks that the heuristic concept already indicated that we have to search not only in biology but also in other sciences. Here the integrative function of the concept gains its weight. In emphasizing that none of the aspects of the entity in question can be reduced to the other aspects, it precludes us from closing the question after only completing one path of inquiry. Moreover, even if we had completed all the necessary paths, thus making the heuristic function of the concept superfluous, its integrative function would still be important: it upholds the prescription that we can only examine the entity in question adequately – in our case the human person –, if we integrate the results gained by following different paths of inquiry with one another. Once we reduce these paths to merely one, we reduce the complex reality we are dealing with to merely one of its aspects.

Thus another advantage of a hylomorphic account over dualistic and reductionist views of the human self is that it seems to correspond more than other approaches to modern scientific findings: If research of current developmental psychologists and neurobiologists is correct (at least in its basic outlook), we have good reason to assume that i) the biological and mental spheres of human beings are tied together essentially and that ii) both phenomena have to be taken seriously.

Dualism denies the first premise: It treats body and soul as two separate substances or, at the very least, as two integral parts of an entity whose unity is only accidentally. Physicalism, on the contrary, denies the second premise: Being unable to integrate the sphere of the mental (at least a robust notion of the mental) into its explanatory framework, physicalism tends to extinguish the reality of the mental by reducing it to an illusion produced by our neurological apparatus.

At this point a second advantage of a hylomorphic account of organism becomes visible: The Aristotelian understanding of living beings can account more easily than physicalistic or dualistic approaches for our common sense understanding of reality. Dualism can account for our everyday intuitions by saying that subjectivity, first person perspective, the experience of personal identity etc. are powers of the immaterial soul. Then, however, it cannot tie them together with scientific findings since the soul conceived as immaterial substance is per definition out of range of any scientific understanding.

⁴⁷ Cf.: Lonergan (1957), 36f.

⁴⁸ Muck, O. (1994), 46. See also Muck, O. (1999), 225-231 and (2001), 1-19.

⁴⁹ *Ibid.*, 47.

Physicalism can account for those phenomena that determine and regulate our ordinary life as well, but it has to acknowledge that an integration into a scientific framework is only to be had at the cost of reducing them to illusions. They can still be scientifically explained, for instance, as by-products of an evolutionary progression. Science, however, has to admit that the status of these phenomena is fundamentally different from that which we would accord them from our commonsensical perspective.

It is important to keep in mind that Aristotle treated the forms of living beings at length, precisely because living beings exhibit the most impressive type of unity known to us in nature. It is through the powers, capacities and operations of organisms that we come to grasp this unity and the soul which underlies it as a principle of life – notwithstanding of whether we can form a clear image of the soul as this principle.

If it is true that the Aristotelian conception of the soul is coherent with modern scientific research (at least in a broad outline) and if consequently “soul” is not used in a dualistic sense (as most physicalists do deprecatingly), then ahylomorphic account seems to provide a middle way between the Skylla of dualism and the Charybdis of physicalism.

When applied to our problems of personal identity, the concept of the soul is able to maintain a notion of personal identity, even if people’s mental capacities are temporarily or irreversibly out of function. The identity conditions of human beings are not dependent exclusively on a person’s mind. As we have indicated in chapter one, mental diseases affecting the autobiographical self (like amnesia and schizophrenia) cannot corrupt the personal identity. We have to maintain the identity of the patients even throughout times in which their autobiographical selves have suffered much. Since ‘soul’ aims at giving an account for the connection that exists between biological and cognitive functions and processes, mental capacities are to be understood only against the background of the entire organization underlying the organism. Mental capacities are a necessary precondition for referring to ourselves as entities enduring in time, but this does not mean that our endurance in time is constituted through that reflection. Being identical through time is prior to our reflection of this identity. It is not, as Dennett would describe it, by narrating a story of ourselves that we constitute ourselves as entities enduring identically in a diachronic sense. He might be right that story-telling is constitutive for our self-perception and self-understanding. Without doubt a person who has many different and incoherent stories about herself in mind will have difficulties to understand herself as a unity. This argument, however, does not show that personal identity is just a matter of story-telling.⁵⁰ The corner-stone of consciousness and our identity through time is already established previously to this story-telling in the organizational structure of our organism. This organizational structure is stable through our entire life-span and thus, the basis of an understanding of living beings as endurants.

In Christian tradition there is, of course, yet another problem of personal endurance: the endurance beyond biological death. This was also attributed to the soul which was construed as being indestructible. As the most prominent and classical author of this thinking, we will refer here to Thomas Aquinas and his theological Summa. Aquinas on the one hand is clearly an Aristotelian thinker, so that his interpretations seem to be relevant to our analysis of

⁵⁰ If Dennett was right and the personal identity is merely a myth, it would not make sense to treat DID, since there would be no patient suffering from this mental illness. In Dennett’s theory the biological self develops different personalities to cope with different difficult situations; and this would be just fine. Since all the personalities are but an illusions, treatments to establish an integral personality would but just be mere efforts to construct another illusion.

Aristotle's concept of soul. On the other hand, Aquinas wanted to interpret the pagan Aristotle in a way that was consistent with Christian doctrines. In this process, some argue, he amalgamated Aristotle with Platonic thinking. Let us take a very brief look at Aquinas's teaching on the soul:

For one he agrees with Aristotle that the human soul is the substantial form of the human body, so that a complete human being is neither mere body nor mere soul but the complex entity that we have described so far.⁵¹ However, Thomas parts way with Aristotle in that the soul for him is indestructible; therefore it "subsists" even after the body has been destroyed by death. The assumption that Aquinas postulates that in order to account for the belief of life after death, though, is premature. The arguments he cites for that are not religious but epistemological in kind: Because human beings are enabled by their soul to understand the nature of all corporeal entities, this soul cannot be corporeal itself (otherwise it could not account for this kind of knowledge, it would taint the knowledge, as the perception of color would be tainted, if our eyes' pupils were colored themselves). That means for Thomas that the human intellectual soul has a pertaining operation of its own that is not dependent on any bodily function, and this can only be possible, if the soul is able to subsist without its pertaining body. Therefore it is subsistent⁵² and consequently endures, even if its pertaining body is destroyed.⁵³ Nevertheless Thomas stresses that the soul is not the human person but only an incomplete remnant of her that lacks most of the capabilities human persons normally have.⁵⁴ For that reason, the Christian idea of eventual salvation and final joy in heaven requires – contrary to many prevailing misconceptions – the resurrection of the flesh, because only whole human beings, not separated souls, can enjoy eternal bliss.⁵⁵

This brief account of Aquinas's treatment of the soul is mentioned here not for its own sake but to occasion some further thought on the problems we have already treated. Aquinas's idea that the human intellect can understand things independently of the body seems to have been thoroughly refuted by the findings of modern psychology and psychiatry described in the first section of this paper. His idea, however, that a subsistent soul can survive its body's demise and can (however only by God's miraculous intervention) regain its body to reconstitute the human person again, might be helpful in those very cases in which human identity cannot be guaranteed by memory functions anymore, when brain damage or psychic illness prevent that.

One might argue in the following way: If Aquinas is right in that the soul somehow can endure past the destruction of the body, it certainly endures when the body is only damaged, incapable of fulfilling its normal functions, yet alive. And while divine intervention might be necessary to recreate a deceased body, it is well conceivable that neuroscience and medicine will learn in the future to heal the kinds of illnesses that we described earlier and thus restore the body to adequate function again. In that case, it would be clear that it was not the 'self', not any memory-function, that guaranteed the person's endurance through that illness, but the soul in its capability to provide diachronic identity through grave bodily harm.

But what about the aforementioned problem that Aquinas's theory of the soul seems to be refuted by the very phenomena to whose solution it might contribute? This problem can certainly not be solved within this short paper because of the complexity and sheer strangeness of Aquinas's epistemology for the modern thinker. It can however be noted that

⁵¹ Cf. Thomas Aquinas, *Summa theologiae*, Ia qu. 76.

⁵² For the whole argument cf. *Summa theologiae*, Ia qu. 75, a. 2.

⁵³ Cf., *ibid.*, a. 6.

⁵⁴ Cf. *ibid.*, a. 5; and *Summa theologiae* IIIa, qu. 70, a. 1-2;

⁵⁵ Cf. IIIa, qu 75.

within his system the problem does not arise. For Aquinas does not claim that human understanding is accomplished by the subsistent intellectual part of the soul alone. On the contrary, it is dependent on outer sense data and the inner “computing” of that data, what he calls the *phantasma* and the *species intelligibilis*.⁵⁶ From these the intellectual soul understands the nature of things by abstraction.⁵⁷ This abstraction works independently of bodily functions, but the material it works on is the result of bodily functions. Thus, if these functions are faulty, even a correctly performed abstraction will not result in correct insights. Thus Aquinas would argue that it was one of these prior bodily processes that did not function adequately in the aforementioned patients, and that the soul performed its function quite correctly.⁵⁸ The result was flawed because the data from which the intellect has had to work were flawed.

This certainly does not lay at rest all the problems of Aquinas’s account of the human soul, but it restitutes enough plausibility to it that a further inquiry into the matter seems worth while.

Recall the scholastic principle that acting follows upon being (“*agere sequitur esse*”). This sentence concisely captures the fact that activities are exercises of powers that belong to substances as parts of their natures. Hylomorphism suggests a way of rejecting dualism and physicalism, for it allows the possibility of psychophysical substances, substances out of whose single nature physical and psychological activities flow. How exactly consciousness comes into being is still a puzzle unsolved, but there is more and more evidence pointing in the direction that the organizational structures of the organism play an important role. This empirical evidence does not run counter to an understanding of ourselves as a psychophysical substance but rather supports this view. In addition it provides the framework from which the human person can be studied and understood by positive science on the one hand, and the person’s subjective perspective, which cannot be excluded in our everyday life, is taken seriously on the other hand. For that reason we are convinced (to borrow a phrase from Mark Twain) that the reports about the soul’s death are highly exaggerated.

⁵⁶ Cf. Thomas Aquinas, *Summa theologiae*, Ia qu. 84, esp. a. 7. A most thorough analysis of Aquinas’s epistemology is still Karl Rahner’s seminal *Spirit in the World*, whose first chapter is entirely devoted to analyzing just article 7 of this *quaestio*. Cf. Karl Rahner: *Geist in Welt*. Philosophische Schriften. (Sämtliche Werke 2). Benzinger: Düsseldorf 1996. Rahner’s account, however, also makes plain how strange Thomas’s conception is for most of today’s epistemology.

⁵⁷ Cf. Rahner, *ibid.*, 98-181.

⁵⁸ Cf. Aquinas, *Summa theologiae*, Ia qu. 84, a. 7 co.

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