

CONSCIOUSNESS-BODY-TIME: HOW DO PEOPLE THINK LACKING THEIR (SENSE OF) BODY?

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Abstract

War captivity is one of the most extreme traumatic experiences, typically including a series of repeated stressors such as social isolation, torture and humiliation. Captives are flung from their previous known world into a foreign reality in which their state of consciousness changes significantly, their sense of self may collapse, and repeated dissociation may ensue. Experiencing sensory isolation, captives typically lose their sense of body. The present paper focused on whether failing to sense one's body can diminish the capacity to effectively distinguish between reality, hallucination and dream. On a deeper level, this question concerns the mechanism of human thought, and the extent to which a sense of body is needed to determine whether a thought is 'true' or 'false'. To investigate this question extensive interviews were conducted with fifteen Israeli former prisoners of war (POWs), who spent long periods in war captivity.

Thinking plays an essential role in one's (internal) life, and it is not for nothing that the western philosophy grounded on Descartes (1637/1996; 1641/2008) famous statement: "I think, therefore I am" (Je pense donc je suis). We are thinking creatures: that is to say, as long as we are awake there is something going on inside our heads. Furthermore, we are reflective creatures. Reflection, or introspection, is an exclusively human ability; it is what makes us (humans) special (for introduction see: (Schwitzgebe, 2010)). In fact, the capability to reflect is what makes our consciousness distinctive, and, accordingly, it is one of the most important of all human features.

Thoughts do not exist in open spaces; rather, they exist, at least allegedly, "inside our heads", within our brains (the brain is obviously part of our body). Thoughts are inside one's body as well as "for the sake" of the body, and, fundamentally, thoughts can be looked as rooted in one's body (Thompson & Varela, 2001; Varela, Thompson, & Rosch, 1991; Lakoff & Johnson, 1999).

In *altered states of consciousness* (ASC), the characteristics of human thought may be dramatically changed (Ludwig, *Altered states of consciousness*, 1966; Vaitl, et al., 2005; James, 1974; Tart, 1969; Shanon, *The Antipodes of the Mind*, 2002). Many studies have shown that after experiencing ASC, humans may be exposed to a whole new body of knowledge (e.g., (Becker, 2004; James, 1974; Rouget, 1985; Shanon, 2002; Tart, 1969). The way that they see the world may be reconstructed and reshaped. Most notably, they may experience a sense of being cut off from their body. There is a wide agreement that sensory deprivation can (not necessarily) lead to ASC (Glicksohn, *Altered sensory environments, altered states of consciousness and altered-state cognition*, 1993; Zubek, 1969; Vaitl, et al., 2005).

In the present paper a sense of being cut off from one's body was explored in the hope of unveiling mechanisms that underlie regular human thought. Specifically, thought processes

among former prisoners of war (POWs) who reported being profoundly severed from their own bodies during isolation in captivity were explored.

Methods

We sought to explore ASC via extensive accounts provided by Israeli POWs who underwent extreme experiences during war captivity. This approach has been endorsed by major scholars who have suggested studying extreme experiences (pathological cases) when aiming to explore unique psychological processes: (Sacks, 1985; Ramachandran & Blakeslee, 1998; Metzinger, 2008; 2009; Gallagher, 2005; 2003; Frith & Gallagher, 2002). It was our a-priori assumption that the accounts of individuals undergoing war captivity would provide us with a rather unique opportunity to learn more about core components characterizing ASC, including changes in one's *sense of self* and one's *sense of body*.

We aimed to obtain detailed and comprehensive descriptions of ASC. To this end, we have used a phenomenological method (Lutz, 2007; Thompson & Varela, 2001; Varela & Shear, 1999; Varela, Thompson, & Rosch, 1991; Gallagher & Zahavi, 2008; Husserl, 1900/1970), to be precise, we use interviewing technique suggested by Petitmengin (see (2006; 2007)). The technique was designed to enable a close focus on the "how", in addition to the "what", to penetrate boundaries of "words" and to break through walls of "stories" aiming to capture the primary experience (Legrand, 2006; 2007; Zahavi, 2002; Gallagher & Zahavi, 2005/2010). We did not look only at "facts" but rather at the unknown, or yet to be known. All interviews were based on a questionnaire constructed in advance by one of the authors (YA). Yet, interviews were open and relatively flexible. We utilized Petitmengin's technique (2006; 2007), which attempts to reach the "how", and to go beyond the "what", by breaking through the walls of "stories" (narrative-self) and "words" into primary experiences which are pre-reflective self-consciousness. During the interviews subjects are often discover new details about their experiences while both the interviewer and the interviewee are seeking the right path into the primary experiences.

Fifteen Israeli ex-prisoners were interviewed face to face for a period of between one and four hours each. Ages of subjects ranged from 59 to 71 years old. All interviews were audio taped and transcribed. Military roles varied from being combat pilots to infantry soldier. Subjects had been held in captivity in Syria, Egypt, and Lebanon. Periods of isolation ranged from 36 days to three and a half years. With the exception of one interviewee, the native language of the interviewees was Hebrew.

Results and Discussion

State of consciousness in deep isolation

"I think I didn't sleep much. I would sleep a few hours at night, and during the day, I don't think I would fall asleep" (B.); "I slept for very many hours" (N.); "I slept between four and five hours in the daytime" (G); "During the third stage I slept about ten hours in captivity. Night came, there was nothing to do, lie there, fantasize, fall asleep. Wake up at dawn. Sleep was the ultimate flight. You tried to sleep as much as possible" (L.); "I slept very many hours – I got to the state where I slept 12-15 hours a day" (N.); "Towards the end of solitary confinement, I'm talking about the last month, we reached the stage – I think it wasn't only me – that we slept 18 hours a day. That means you are trying to sleep as much as possible, to pass the time" (G.); "You don't sleep in captivity, I almost didn't know what sleep was" (M).

In solitary confinement, where there is very little or no stimulation and the POW has no interaction with the outside world, the internal world becomes the only thing the captive possesses and the shift from wakefulness to sleep becomes unclear. Normally, there is a clear distinction between being asleep and awake. When we are sleeping, time comes to a halt;

when we are awake, time is so obvious that it is taken for granted and becomes transparent (Zakay, 1998). As we will see, a situation in which the subject cannot effectively distinguish whether he is sleeping and dreaming reality, or perhaps awake and in deep hallucinations is critical in order to learn about the character of thought. As captives emphasize, in a state of captivity they do not have the ability to qualitatively distinguish between the states of sleep, wakefulness, or hallucination:

"I remember that it was a great mix-up. In a dream you are cut off. You, in these cases...I don't know whether my thoughts were rational. I remember that there were intervals when I was hallucinating a bit, that dreams were mixed up with being awake... When you are in darkness all the time, you slowly, slowly begin...the difference between a dream during sleep and a dream while you are awake becomes unclear...The transition between being asleep and being awake, it begins to blur, and even when you are still awake, you can dream dreams. When you are very disconnected from real experience and you don't have all of the symbols, you begin more and more to enter a dream, even when you are not sleeping. The transitions are very unclear. You are crawling and you pass from being awake into dreams" (G).

The captive's state of consciousness is deeply connected to his inability to accurately perceive time as an objective dimension: *"There are daydreams which are very deep in which you cannot follow after some time has passed" (Y).* This can be summarized simply, by saying that *"during the period of captivity, intermediate states are intensified" (G.)*

Sense of body

"You are very busy with caring for yourself, for your wounds, with your body" (N.); The central experience in captivity, one is physically coping, which is very difficult, blows, thirst, tiredness. It is seared very deeply into your head and doesn't leave. And you almost don't have anything that, in its intensity, can deal with the physical difficulty" (E.).

Unfortunately, in order to survive in this extreme situation, the captive has cut himself off from his own body.

"I put myself into a balloon, the soul, I think that everyone will tell you something similar – of entering a bubble, so as not to get too scratched. So you have experiences but it is the body which suffers and not the soul" (L.); "From the moment that I was caught, there was no body, completely cut off from the body, a kind of automatic movement. The head is disconnected. In captivity the body was like not completely mine. It was a tool which they could use to hurt me, or a tool which produced pain and discomfort. There is a certain disconnection. There is the body which is concerned about having food, peeing, b.m., and that belonged to captivity, but my head was mine, you couldn't lose that, the battle was in your head." (D.)

The nature of thought in captivity

The accounts of the POWs reflect an inherent fear of “emptiness”; that is, a fear that no thoughts will be created in their mind:

"The most frightening thing is that a vacuum is created in your head, that suddenly the thoughts have run out, that a vacuum has been created. I continually tried to fill up the space. I created stimuli for myself with which I could fill this vacuum. I was really afraid of that vacuum. It's maybe the strongest threat" (S.); "That vacuum is something you fear" (Y.); "For me, more than thirst, than hunger, than fear and pain. For me, I think, physical pain was the easiest. For me, clearly, that emptiness, that was the most difficult thing" (S.).

However, in the absence of body, which is the rational object of consciousness (Damásio, 1999; 2003; Gallagher, 2005; Spinoza, 1677/2008), it is difficult for the captive to distinguish between reality, hallucination, and (controlled) imagination. One of the most important

insights arising from the interviews refers to the role of imagination during isolation. In a world without stimulation, imagination plays a decisive role in conjunction with the emptiness of thought. However, unlike in normal states of consciousness in daily life, the captive has an existential need to distinguish between dream and imagination, as he is not able to comprehend reality as something to be taken for granted (in this issue see: (Crane, 2005/Spring 2011 Edition; Soteriou, 2009)). The captive wants to (and must) be able to distinguish whether he is sleeping and dreaming reality, or awake and deep into hallucination:

"The significant difference between the world of captivity and our world is the amount of stimulation...In captivity everything is monotonous, you seek change in everything...The problem is how to create stimulus, while here we are flooded with stimuli, here you have to filter. There, the situation is exactly the opposite. You lack stimuli and you are constantly seeking them" (S.). The person puts himself into meditation of different types: I pretty much tried to meditate. I didn't know what it was but it was intuition, to cut yourself off in order to survive, to relax, to get away" (B); "When you enter a state of meditation like you are awake but not there; you are somewhere else. A kind of situation that you don't know if you are awake or asleep, but in any case, you are not there. There were times when a night disappeared for me. That's exactly what would happen. You are suddenly deep into some dream, though and not sleep. You are awake but you are not awake. You are like unconscious from the standpoint of wakefulness but you are not awake. You don't even hear the noises from outside. Usually you are very tense, a guard moves, shouts; in this state, nothing"(E.).

In summary, during isolation, the captive often loses his body in terms of how people usually sense their body, e.g., as it is my body (Zahavi, 2002; Legrand, 2007; 2006; Varela, Thompson, & Rosch, 1991; Merleau-Ponty, 1962; Heidegger, 1996; Gallagher & Zahavi, Phenomenological Approaches to Self-Consciousness, 2005/2010), and consequently, the character of the captive's thought changes.

The sense of time in captivity

The time dimension plays a key role in captivity (consistent with (Wittmann, 1999)):

I learned that the most important thing was time...the time is a dimension which is very very very significant"(P.); One of the great problems in captivity is how to cope with the dimension of time. Each day that passes, you become farther away from life...The problem of time is marginal but significant, see, I didn't how long it would continue"(L.).

POWs' accounts suggest that sense of time and sense of body may be tightly interrelated:

"I didn't have any organization of time, only body time. My body time was made up of needs, when I began to be thirsty, when I began to be hungry and the other needs. My time was my body rhythm. Hunger told me that time had passed" (D.).

The ability to "pass time" and to develop a daily routine and a "time framework" seems to be crucial for captives' survival:

"I tried to build a kind of pretty permanent daily routine for myself" (S.); "I tried to organize a daily routine" (Y.)

Despite, or, more accurately, due to the fact that the lack of sense of time as an "objective"/"Newtonian" dimension is missing, captives often try to develop a general time framework, aiming to consciously experience passage of time and to reduce suffering from isolation: "Every day a ritual, to mark a line on the wall, that another day has passed" (E.); But also: "You constantly give yourself a time target of...until then – in November I said to myself, until December, no more than that. After that, until Chanukah. If you are normal and don't become depressed, so you set a new target each time the date comes closer"(E.)

Captives' accounts suggest that disintegration of the body, the reduced ability to experience a perceived body (from within), and the deficient capacity to grasp time (or, more correctly, to exist in the dimension of time – not to sense it but to exist in it as an objective dimension) are all tightly related, and represent the core components of consciousness, which produce the feeling of being-in-the-world (Merleau-Ponty, 1962);

"It was after a week of standing that, I don't know if it was really a week. There I did get a bit lost, I was unclear about times, because it was after a series of very difficult torture, in which they starved us; they didn't give anything to drink and they demanded that we stand all the time. If I would fall or lean against the wall, they would directly pick me up"(S.); "Very slowly you lose the time. For example, I don't remember how much time the week of standing took (What, it was a week? Someone told you a week...?) I don't remember how much time it was. I don't know if it was a day or two days or ten days. Look, when you are in a difficult physical situation, you lose the sense of time..."Listen, you reach a state in which there is no time. The situation you're in—there is no time. Like there is no time. You don't know. You are in some kind of physical state, after you sink into a kind of meditation, you begin to think about some subject and the dimension of time suddenly doesn't exist. When you are in this state, you don't know if a half hour has passed – an hour or six hours (E.);

Thought and time

Often, struggling captives tend to explore the associations between Time and Thought, or more accurately, the associations between the *nature* of thought and the *sense* of time. P. tells us:

"With the feeling of some kind of... that maybe was real, but which ...what...how much time had passed, I think it was sometimes connected to the task that you had taken on yourself or in the story that you were experiencing ...in its quality or its essence. If it was to go and search for a childhood memory and that or some short story, so if the story was short, then it was like it was a small amount of time. If it was a long trip which was a week, and you, it was then, time. So it was something that was not real... with a kind of feeling, also that, OK, I did serious work here. If I did serious work, so that's a sign that it went quickly. If I did something short, simple, so it appears that it, it appears, I emphasize again, that's one thing. The second thing, that connects with...if it was something an outside factor, before it happened it was outside, and when you came into that thing, and when you get out, it still has echoes. If that, that, so it gives you the sense of time. Because if it is something that was, and it still exists, then that's a sign that it was something relatively short".

P. has difficulty describing his experience, yet the connection between the depth of thought and the mental process (which may perfectly go along with some cognitive models, i.e., information processing, , (Glicksohn, 2001)), and the sense of passing time is clear to him. It is the sense that deeper mental processes continue for longer than usual (which fits well into the principle of cognitive load presented by Zakay (1998)). P. does not know how much time has really passed and therefore, thinking becomes the point of reference for creating any kind of time which can be measured, and for the sense of time.

It seems that when the sense of body is lost, the sense of time becomes anchored (and fixed) in one's thoughts. This is, once again, consistent with Wittman (2009):

"Although hardly any convincing evidence exists that would show how specific physiological cycles function as an internal clock for judging time, body states as a whole could, nevertheless, form the building blocks of a timekeeping mechanism [...] One attempt to explain these and other findings is that the insular cortex, which integrates body signals, is the anatomical basis for the creation of emotions and the sense of time" (Wittmann, 2009, p. 1962).

To sum, captive accounts suggest that the relationships between time and thought may be severely impacted in captivity. First, thought starts to progress independently of the body and of the *arrow of time*, which the body seemingly brings with it from the outside (the dependence of thought on time from the beginning is a habit rather than a necessity). Then, in

isolation, the sense of time stems from thought, not only from the flow of changing thoughts, but also, and especially, from the *content* of thought. The word "content" may seem vague, however, from a cognitive perspective, we may simply say that "content" is, in fact, information processing (Glicksohn, 2001; Zakay, 1998). So, the sense of time is reduced to information processing, meaning that the sense of time in essence can be deduced from the cognitive resource consumption needed in order to process information.

Conclusion

While trying to distinguish between imagination and reality, between illusion and dream, between hallucination and truth, the present paper aimed to evaluate the mechanisms of human thought. We found that: (a) in ASC the loss of one's sense of body results in the loss of the sensation of objectivity *because the body is not only an object of consciousness but also its rational basis*; (b) the perception of time and thought are anchored in the body, so time perceived as an objective dimension (since it always arrives with the body), namely, as if the *arrow of time* truly exists; Thus, (c) from the viewpoint of the subject, the *arrow of time* is a fundamental condition for rational and logical thought; Principally, (d) the previous arguments (b+c) are constitutive and preliminary conditions for an individual to perceive the world in an objective manner; (e) the sense of time (on the scale that goes from totally objective to completely subjective) enables the subject to qualitatively distinguish between hallucination, reality and dream, *because, time is at the heart of the structure of thought and it establishes the experience*; and, in fact (f) it [time] plays the most critical role in designing thought, consciousness and the human experience.

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