HYBRIS nr 38 (2017) ISSN: 1689-4286

6



WHAT DOES THE SENSORY APPARATUS DO WHEN THERE IS NOTHING TO PERCEIVE? THE SALIENCE OF SENSORY ABSENCE

An adequate and exhaustive explanation of the mechanism behind perception should cover both typical and anachronous instances of sensory acts under standard circumstances as well as in conditions deviating from the established norm. Subject to the discussion herein should be situations when a perceptual act occurs in the absence of sensory stimuli. There is no unequivocal resolution as to what happens in consciousness processing the lack of perceivable sensory qualities. Let us tackle the problem by sketching two different models of perceptual response to the absence of sensory signals.

The first model: Stimuli fuel the sensory apparatus. Whatever cannot be sensed, can be deducted. Inference of the absence of sensory stimuli

The first model stipulates that perceptual activity phases out with the shortage of stimuli. Since there is nothing to sense, sensation simply does not occur. If nothing excites the receptors, there is nothing to trigger sensations. This is, thus, a model that affords a minimal contribution of higher cognitive features to perception. Along these lines, the role of the senses in recording external environment goes no further than to relay the excitation by some form of external energy, be it visible radiation, an acoustic wave, etc. Pursuant to the model, there is a straightforward answer to the question of the function of the perceptual apparatus when there is nothing to sense and physical stimuli fail to achieve the absolute threshold required for their detection by the sensory receptors. The solution is: perception does nothing. Perception is restricted to the

registration of positive sensual qualities. However, since consciousness still stands or rather its stream briskly flows onwards even in the idle mode of the sensory functions, it remains to be brought out where the awareness of lacking sensory qualities resides if perception is not the one to grasp gaps in the incoming cascade of signals from ambient environment. This point undermines the model. The above line of reasoning proves the reaction-dependent model of sensory experience to be discriminatory in the sense that successful perception occurs only under steady external input. The model's explanatory power dissolves in the absence of positive sensory qualities. In order to restore credibility to the model, the lack of sensory qualities would have to be attributed directly to the subject. If there is nothing to see, this unperceivable absence cannot be referred to anything in the outside world and it is inherited by the subject herself. But can we defend the contention that the lack of sensory signals may be construed to fall within the domain of sensory experience? Under the conjecture that vision ends when there is no more to see another sensory faculty would have to take over, with proprioception being the only candidate left on the battleground. Ludicrous as it sounds, all missing components of experience would have to be considered as forged by proprioception. This would further lead to the conclusion that darkness or silence would be detected by inner sense organs and would belong to a different category than positive visual or acoustic sensations. Such an assumption cannot be upheld. Under the restrictions of the model, the absence of a specific type of sensory signals invokes higher cognitive faculties. You cannot see darkness or hear silence but there is no obstacle to inferring that darkness or silence is around. This model postulates an interventionist role of higher cognitive faculties with respect to sensory experience as they step into action only when lower level faculties face resistance. The model seemingly ascribes higher autonomy to the non-sensual component of experience but it invites confusion as to why abstract thinking and other forms of discursive operations can only be at stand-by under standard perceptual circumstances. The adoption of the model requires acknowledging a discrete, intermittent mode of operation of higher cognitive faculties in the perception channel as it is their task to ensure the continuation of perceptual activity upon a gap in the influx of sensory signals. The shortage of external stimuli may only be conceived of in abstract terms.

This brings us to the crux of the conceptual unease spawned by the reaction-only model. Granted that missing stimuli, regardless of their sensory channel, equal non-perception, it is unclear on what basis the subject could discriminate between the respective commonly identified types of perceptual absence. Now the lack of acoustic signals seems very conspicuous and has been dubbed silence, whereas the scarcity of visual stimuli goes by the name of darkness, the dearth of flavor is nowhere near the unavailability of odor. Zero gravity feels differently than an interruption in the flow of tactile sensations. There also exist states that do not readily yield to categorization, such as painlessness that seems devoid of specific constituent features. Is there a model that would do justice to the variations of missing sensory qualities? Conscious interpretation of the state of deactivation of sensory receptors must be revisited in further models.

Let me make one explanatory remark before it is contested that receptors are fueled by some form of energetically pumped signals from the outside. No matter what the actual neural activation pattern is, what I shall refer to as a receptor for the sake of this text should be scaled down to whatever organelle, substance, or structure that directly undergoes stimulation and absorbs the energy. It might not always be a cell. Even though photoreceptor cells, such as rods and cones, may undergo inhibition when hyperpolarized by light and release neurotransmitters when not hit by radiation, it does not challenge the fact that either there is external input or there is none. Confusion may only arise if we fail to clearly delineate what we mean by a receptor.

A counterargument against full dependence of perception on external stimuli stems from the consideration of the conceptual distinction between the inability to take in a specific type of stimuli, such as deafness, and the recording of a state conspicuous for the lack of signals from the environment, such as silence. Now the difference disappears if no line is drawn between sensory perception, activation of a sensory organ, awareness of the existence of a specific type of sensations, and the actual presence of a definite type of sensory stimuli in the environment. Some researchers point to the fact that we are often at a loss as to whether we have just forfeited hearing or silence has fallen until we are exposed to further acoustic stimuli. (Sorensen 2008, s. 2). A common denominator of these states is surely the lack of signal from the auditory organ. But what is salient for the conscious subject is not so

much the fact that nothing is to be heard, but why it is so. The source of disturbance in the reception of acoustic stimuli is what matters in terms of survival and effective action. The organism should discriminate between its own sensory failure and a null level of the intensity of a specific type of stimuli. The explanatory and discriminatory futility of the model is manifested by the unavailability of a clear distinction between deafness and the sensation of silence.

This calls for a recasting of the posed question concerning the function of the perception of sensory qualities in terms of external world representations. The outside world is not out there for the sake of being subject to perception. Perception serves for the organism to stay a part of the world and survive by navigating within it. Not only what stimuli impinge on the sensory organs is of significance. Of equal or far surpassing importance is to determine why exactly their influx has stopped. The recognition of perceptual absence falls short of the task of staying alive unless the context of the omission is embraced. We can, by all means, speak of a continuous sensory deprivation of a person suffering from an irrevocable loss of specific sensations in the wake of damage to either sensory organ, neural path leading to the brain, or the respective cerebellar area itself. It may be doubted, however, that it is sound to claim that such a person is constantly exposed to silence. She is deprived of acoustic sensations on equal terms with a person with intact hearing but staying in a completely soundproof room. However, it is a transient experience for the latter person who expects a deluge of acoustic signals once she leaves the room. It shall not be an overstatement to claim that such a person hears silence, whereas the deaf person, in fact, fails to hear. The state of missing sensory qualities does not only represent physical reality but is also crucial for a successful interpretation of the course of events.

The advocates of representationalism in the treatment of the status of conscious experience, such as Michael Tye, could repeal the objection concerning the lack of a representationalist component of silence or darkness by contending that such a component is indeed present and corresponds to the idleness of respective sensory organs. In effect, a sensation of silence or darkness would carry information pertinent to the state of sensory organs and not to the absence of phenomena in outside reality. (Tye 2003, p. 166) If we were to be consistent, however, we would have to assume on this view that we

exclusively perceive the states of sensory receptors both upon their excitation and upon deactivation, never reaching out deeper into the outer world. This would compromise the very concept of sensory perception. We perceive in order to navigate outside environment. If sensory perception is to retain its rationale, it should represent external reality and not the states of stimulation of sensory organs.

It seems, however, that a representation generated without the contribution of an external factor and designed exactly to stand for its absence may only be construed broadly as spanning a wide fragment of reality. A singular simple sensation appears to be ineligible for representing missing impingement of the environment on a specific type of sensory receptors. Only a non-atomistic, complex, manifold representation may render the deficiency of a chosen quality. The corollary is that there is no representation of silence, or darkness, or any other lacking sensation at the level of the sensory apparatus, and its identification requires the comparison of two representations, one sound-laden, the other - soundless. On this view, silence as a separate individual aspect may not be represented by the receptors. Although the initial state of missing stimulation is identical in the case of both sensory deprivation and the absence of sensory stimuli, brain-level representations may vary.

We reach the heart of the problem at this point. It seems fully justified to claim that silence may be heard. It must have the status of a sensation in order to fulfill its dedicated function. How to reconcile the status of a representation of the external environment with a full-blown sensation in case of negative sensory qualities? Is it possible that sensation is not confined to the domain of sensory organs? To what extent is the brain privy to the birth of sensory experience and how much does it conspire in the way the world seems to us? In what sense is the brain an accomplice in the formation of sensory experience and not only its recipient?

How far can we take the contention that the absence of sensory stimuli does not translate into the lack of experienced sensations but constitutes a separate type of perception? How are we to interpret the fact that sensory void is accompanied by perceivable neural correlates, negative sensory qualities? Silence does not stand as a state of completely damped acoustic stimuli. On the contrary, it designates a specific sensation, divergent from deafness in a constitutive way and not

only genetically, by dint of its cause. The analysis of the phenomenon of darkness approximates exactly such an account in the sense that darkness may be counted among other sensations. It was Aristotle who already identified darkness with black, i.e., one of three achromatic colors alongside with white and grey. Modern explanation of the sensation of black does not depart from the original ancient finding, and it is thought to be the response of the visual apparatus to the lack of electromagnetic waves in the visible bandwidth (Hurvich 1981, p. 61). The bottom line is whether a theoretical backdrop may be developed wherein sensory experience would be traceable to higher cognitive faculties.

The first model is not to be pronounced doomed altogether. What should be questioned is its pertinence to conscious perception. However, the model holds true for sensory receptors, adequately capturing their function, which consists in the detection and differentiation of stimuli. Without the perceptual apparatus in place, there is no point in tracking the emergence of sensory experience. But episodes when external stimulation discontinues do not involve sensory cell excitation. It is not the receptors that record the lack of sensory qualities. Negative sensory states are detected based on the absence of the output from sensory organs but they are identified only at higher level cerebellar structures. It remains to be determined at exactly what level. The analogy between senses and sensors that indeed record both positive and negative states of a chosen aspect of the environment - collapses. These devices operate in a binary way. This is their intended use. In the case of complex organisms such as ourselves, we may safely assume that it is the central nervous system that serves as the recording and storage medium of the unavailability of specific sensory qualities and not the subordinate sensory organs. A substantiation is called for at this point that the discussion concerns the lack of sensory stimuli and not the exclusion of a sensory aspect from the scope of attention. Sometimes, the disappearance of a sensory quality, what can and cannot be seen or heard, is not due to the actual state of the external environment, nor the dysfunction of receptors, nerves, or the respective information processing areas in the brain, but other global brain mechanisms impacting conscious thought. A varying share of awareness may be apportioned to distinct inputs, depending on their salience. Even a distinct sound may fall beyond the scope of consciousness if it becomes

too monotonous a signal for the brain to bother. Maybe, we only grasp the transition from an environment bathed in acoustic waves to silence, with the outcome being that we are only aware of changes. (see (Maruszewski 2001, pp. 62–67)) The absence of a conscious sensation does not necessarily mean sensory stimuli have failed to occur. This higher-level selectivity of perception has come to be called attention. It may well be just another side of perception. (Lupyan, Clark 2015, p. 282) What I address in this paper are the episodes when the lack of stimuli is in the focus of attention.

Feedback perception model: Reversal of the order of sensory perception. Perception as a continuous process of forecasting the environmental inputs by higher cognitive faculties assisted by the perceptual apparatus upon a mismatch of the top-down prognosis and the actual state of the matter

To address the second model we must revisit the heretofore introduced category of representation. Allow me to add that this applies to a representation at the level of neural tissue, regardless of the exact mechanism behind the coding (internal neuron composition, global cerebral reach of select neural connections, specificity of neural synapses, oscillations of electromagnetic waves at a specific frequency inside the brain, etc.) While this point is beyond the scope of this study, let me note in passing that the very claim and subsequent evidence that a fraction of the world, namely, the brain, carries a host of finely structured hierarchical neural representations of the world beyond and within the body (inner bodily affairs) poises us to discard the now redundant stipulation of a supplementary category of mental representations. If neural representations are forged through interaction with the world itself in a succession of generations, the mind need not internalize the world again.

In the discussion herein it is assumed that the senses consistently respond to specific types of external stimuli. This condition trivially assures the effectiveness in representing the environment. A stimulus of type X always invokes a reaction of sense a, while stimulus of type Y always triggers the response of sensory function b. It is pointless to ask about accuracy in representing the environment as access to physical reality is granted via the senses and higher cognitive faculties, so there is no external point of reference. As long as sensory experience ensures

survival and effective action, it may be considered that experience is indeed accurate - in a trivial sense. The more faithfully the structures and functions of the organism encode the external considerations, the higher the odds for survival and evolutionary success. The accuracy or correspondence of experience to the ambient environment, the resolution of this mapping, is the work of evolution and factors shaping neural machinery through the succession of the forms of life. It may be worthwhile to recast the assessment of experience in terms of precision. The question is not whether the representation of external reality in experience is true, but if it holds relevance. The precision of experience would consist in such an attunement of senses to the environment that they would serve not as signals for detection and interpretation but a clear call for action. Imagine a sensory landscape in need of further thorough processing, providing a complex map to be read according to a detailed legend. Such a far removed sensory interface with the world is possible to navigate but hardly effectively. It lacks immediacy. A much better design would allow us to read signals from the world as signposts and warning alerts that are readily actionable.

While the accuracy of representation is granted, precision may be perfected also throughout individual development, by means of practice. What is more, precision only makes sense in terms of an organism's interaction with the environment. Passive staring at an object fails to serve a specific purpose and hence it does not fulfill the criterion of fitness. It is far from being a representative example of an organism's activity. What organism is solely engaged in perception? Perception usually accompanies intricate movements, keeping balance under challenging conditions, compensation of undesirable shift of the center of gravity through the flexion or extension of extremities, complex manipulation of objects. Its natural settings are those of motion and relocation of the organism within its environment. Organism herself finetunes her senses – through rearrangement of bodily location, posture and gestures, eyeline shift, etc. Perception is not available in a read-only mode, it is an editable interface with the external world.

Such a conception renders it impossible for experience to be born here and now only to be reborn a moment later, in every single instant of conscious life. Should it be that way, the subject would be constantly engaged in perception alone. If experience seems seamless and appears to carve the world at its joints, it must have been finely sculpted by the

cognitive machinery of the brain in the course of evolution. Its close alignment with external reality comes as no surprise. It has emerged in conjunction with reality. To represent the external environment, experience does not have to reproduce it each and every time, as it is reality's own extension, and reality has guided its formation and contributed to its development.

A question springs to mind: since the brain builds the image of reality so precisely, why does the organism ensure the constant activity of the senses? The image of reality (Clark 2015, p. 3) cascades with topdown traffic of forecasts and requires only some adjustments of the senses in case of a deviation from the prognosed flow of sensations. Alas, I have not authored this model. One of its advocates is Andy Clark, and the model is dubbed embodied predictionism. On this account, the brain is a prognostic device projecting the expected train of events amid the stream of sensations. Higher cognitive faculties bear the brunt of the burden and their projections are only so much as validated by the signals from the sensory receptors (Clark 2015, p. 5). Hence, most of the receipt of sensory signals occurs below the threshold of awareness. It is only upon a prognostic error that the senses come to the surface of consciousness and the direction of cognitive processing is reversed from receptors to higher brain areas. The tightly-knit frame of expected experience readily accommodates a direct sensation, the operation of external stimuli themselves. Errors in the prognosis of unfolding experience provide a window onto external reality. Under normal circumstances, which also explains why it seems to be the standard, the forecast conjectured by higher cognitive faculties prevails, undisturbed by perceptual discrepancies.

I have sketched the theory of predictionism. It is now time embodied predictionism is put to the test in the context of the lack of sensory stimuli.

How does this theory account for the perception of missing sensory stimuli? Let's reframe the question in more detail. It goes without saying that an exclusive comprehension of individual negative sensory qualities gives rise to a cognitive discord. Imagine an attempt to narrow down all sensory channels to just the receipt of the absence of, let's say, sounds. How could you possibly experience solely silence or contemplate deafness with the attenuation of all other sensations? That said, the reconciliation of a single missing type of sensory quality with

the overall representation of a vast momentary perceptual landscape invites few objections. The sensory repertoire seems richer and is not limited to singular qualities. A collective perceptual act of a full sensual stage, albeit deprived of acoustic or visual sensations, occurs commonly and allows to avoid the paradox of directly seizing something that isn't there. In a further step, also forecasting such rich multi-ingredient sensory vistas, devoid of individual types of sensory qualities, satisfies all criteria of credibility. It is clear that a conscious subject shall expect darkness at night and shall not be surprised by the fact that there is nothing to excite her rod and cone cells. Except perhaps for a lone photon.

What seems counterintuitive and requires a thorough theoretical analysis is the defense of the embodied account of perceiving the lack of sensory qualities. Here, embodied predictionism encounters a true challenge and opportunity for deploying the depth of its explanatory potential. Negative sensory qualities may be represented, they may also be predicted. But will they succumb to the account of embodiment? The idea behind embodiment rests on the deliverance from the need to build a succession of finely detailed models of the world in individual instants of experience for the sake of putting in place a stable precise representation of the external environment in the brain as well as interaction with reality. A simpler, less challenging explanation of the conformity and convergence of the actions undertaken by conscious creatures and the actual state of the matter indicates not as much an incredible ability to seamlessly represent outside reality as the involvement of reality itself in the workings of the sensory apparatus. Neither at the receptor level nor at the level of higher brain structures is there room for a real-time, ongoing strict mapping of the world at a suitable resolution. However, there is room for a matrix of probable responses and the selective activation of this matrix causing specific sensations. The senses and higher brain areas need not elaborate baroquesque world representations in each fleeting moment. Rather, an evolution-licensed cognitive template is set against the ambient circumstances and only interferences must be accounted for, if there are any. Thus construed, perception is an interplay with the world and not an act of collecting inputs to be encoded so that other parts of the brain may unpack them and process them further. The organism takes advantage of a sophisticated matrix corresponding to the outside

environment that forecasts the unfolding of experience. It is none other than the brain along with its integral neural correlates of phenomena (Clark 2015, p. 4). Since the bulk of sensory details comes from our own prognostic-representation machine, should there emerge an inconsistency between the forecast and the actual stimulus, the subject is poised to stand face-to-face with a single sensory stimulus, something unthought-of in traditional representationalist work where all perceptual interactions were considered to be heavily mediated (Feldman&Friston 2010, p. 2). An interference with the prognosis makes a direct appearance in consciousness, rather than being passaged via the entire convoluted interpretation and decryption pipeline of perceptual brain areas, which would impair immediacy. To ensure the readiness of capturing a random element gone against the strain of the top-down forecast, the influx of stimuli must be met with an equally complex correlate so that no other detail burdens the processing channels but this one outlier. Another prerequisite is the active manipulation of this correlate against and within outer environment - through motion, adjustment of bearings, etc. This is what embodied cognition is all about. The organism may incessantly tweak its vantage point, by tilting the head, moving around in space, squinting eyes. This makes sensory cognition a dynamic and multidimensional act. Perception does not occur statically, we do not come to learn about the world from aloft, from the position of a remote observer, but from the inside. The senses do not have to simulate the external world as their calibration with the world occurs in real time through actual motion, adjustment of posture and bodily position in space against external objects.

How are we then to interact with something that isn't there? The subject must deploy a model of states of sensory deprivation. But such a model indeed exists and is inscribed in the brain structures. There is thus no need for the cognitive functions to form a representation of negative sensory qualities on each individual occasion. Under the assumption that the subject is equipped with rich resources representing the world of which it is an extension, amassed through long-term exposure of its ancestors and itself, the paradoxicality of the experience of sensory absence is dissolved. It remains a fact that if no acoustic waves reach the environment, there are no visible electromagnetic waves to occur, there are no tactile stimuli, sensory cells stay idle. The respective types of sensory deprivation may not be encoded at the level of sensory receptors

as it is precisely them that are not involved in the least. But they are not the carrier of consciousness, and the brain that takes advantage of their machinery by no means succumbs to idleness. After all, it manages to determine with precision what sensory cells fail to evince activity. The mechanism behind this relies on the same principles that account for external excitations triggering respective responses at the level of conscious experience. If specific neurons fall silent, isn't it a sufficiently clear signal to release an appropriate sensory response? Why shouldn't gaps in the flow of a specific type of sensory qualities be interpreted as direct experience? If the elaborate correlate of external reality covers also negative sensory qualities, why shouldn't the subject detect the absence of specific stimuli in the environment under suitable circumstances? Directly. The lack of sensory qualities does hold the status of experience. It is the subject herself that integrates such qualities into the image of reality even though they are absent in the environment. In this respect, the subject's repertoire of sensory qualities exceeds the one available among external stimuli. We may indeed see darkness.

The account of embodied predictionism strives to demonstrate its empirical viability. Much as a raft of evidence has been submitted in favor of the soundness of predictionism (see, e.g. Friston 2011), embodiment is yet to be demonstrated more thoroughly in empirical settings (although a body of relevant studies exists - see Beer 2000, p. 97; Glaescheri et al., 2010, p. 585). In pursuit of research methodology and an empirical trial of the theory, let us resort to a thought experiment.

Let us consider a unique situation of a person with a condition fit to be called "negative synesthesia". Such a person manifests sensitivity to all sensory stimuli that invoke a conscious response in a human being adequately equipped for her species. It, therefore, comes as no surprise that this person can also properly identify the lack of stimuli of any type. The specificity of perception in such a person consists in that the sensation of silence is accompanied by a visual experience of darkness, the deficiency of tactile stimuli leads to the feeling of odourlessness, etc. We could point out all the feasible ways the senses may interfere with one another, according to the principles of combinatorics, but let me leave it at the examples provided. Now let us now turn to the thought experiment. Let us assume that a negative synesthete enters a dark room reverberating with the chords of the piece *Kind of Blue* by Miles Davis. The hapless gal recognizes in the sequence of sounds one of her favorite

musical compositions but acoustic bliss is spoiled by the ambient darkness that she is susceptible to experiencing as silence. The cognitive state of a negative synesthete may be preliminarily described as that of dissonance. Contrary to visual and acoustic illusions and other standard cases of paradoxical perceptual acts, such as the detection of motion in a static drawing, or the attribution of various dimensions to objects with identical size due to the impact of contextual cues on the interpretation of sensory data, or hearing ever rising tones in a repeated sequence of music, negative synesthesia does not result from some kind of a conflict in higher level processing of sensory information and applies to baseline sensory qualities. It should be noted in passing that impairment of one of the senses usually causes the amplification of the function in others. The very phenomenon of negative synesthesia is thus scarcely probable in nature. It may, however, aid the discussion herein. How can you hear silence in the accompaniment of acoustic sensations? In the light of a standard model of bottom-up sensation, whereupon signals ascend from the receptors to brain areas without significant feedback from the brain, the receipt of sound stimuli excludes a sensation of silence. This is one and the same sensory channel. An analogous regularity pertains to all other sensory modalities. Please bear in mind that under this model two allegedly conflicting experiences occurring in the same sensory channel, i.e., the sensation of silence and audible tones of the melody Kind of Blue, belong to two separate orders. On the one hand, the representation of silence forms due to atypical stimulation of perceptual brain areas. On the other, the latter experience emerges as acoustic waves impact the sensory cells of the hearing apparatus. The paradoxicality of the experience of silence in the accompaniment of music dissolves if contradictory sensory components are assigned to disparate categories. The disintegration of sensory consistency is at its highest in case of negative synesthesia, with the model of bottom-up perception failing to rule out such a possibility.

Whereas on the grounds of predictionism, neural correlates also feature the representations of negative sensory qualities. It is thus possible for the brain, busy with forecasting the course of experience, to collate them with positive sensations. In principle, the case of negative synesthesia makes sense under the model of perception woven by the prognostic brain machinery, faced with the actual inputs of sensory stimuli. It remains an open issue what combinatorial algorithm could

serve for the cognitive apparatus to merge the tissue of experience. What would be the reaction of a brain identifying darkness with silence and simultaneously exposed to acoustic stimuli in a darkened room? Would a negative synesthete hear a hushed melody? Perhaps a negative synesthete would enjoy a full-bodied auditory sensation only in a well-lit room with light-colored walls and equipment, and she would encounter hearing difficulties in dimmed lighting? Before we delve into far-fetched speculations, let us evoke the temporarily disregarded aspect of embodiment. Predictionism in its own right fails to undermine the feasibility of negative synesthesia. Will embodiment prove more restrictive? Negative synesthesia implies that each occurrence of missing sensory stimuli would be accompanied by total sensory deprivation. However, with the emergence of the first tones of *Kind of Blue* the brain should align the feeling of severance from the signals from the outside world and reinterpret it as irrelevant to the auditory channel. Since hearing receptors detect acoustic waves, there is no room for the sensation of silence in the organism's cognitive economy. It is the external environment itself that serves as the referee in all unequivocal perceptual scenarios. The non-neurotypical brain structure of a synesthete may invoke the sensation of silence in response to the lack of visual stimuli, but further interaction with the environment and the intake of reverberating sounds should dismiss the unsubstantiated experience of silence. Whenever anything deviates from the prognosis, the subject witnesses the making of perception. The absence of observations of behaviors indicative of the hypothetical phenomenon of negative synesthesia comes as no surprise and serves as evidence in favor of embodied predictionism.

REFERENCES

- Clark, A. (2015). *Embodied Prediction*, in: Metzinger, T. & Windt, J.M. (ed.), "Open MIND".
- Lupyan, G. & Clark, A. (2015). Words and the World: Predictive Coding and the Language-Perception-Cognition Interface, *Current Directions in Psychological Science*, vol 24, no. 4, pp. 279-284.

Hurvich, L. M. (1981). Color Vision. Sunderland, Massachusetts: Sinauer

- Keeley, B. (1999). Fixing content and function in neurobiological systems: the neuroethology of electroreception. *Biology and Philosophy* 14: 395–430.
- Maruszewski, T. (2001). *Psychologia poznawcza*. Gdańsk: Gdańskie Wydawnictwo Psychologiczne.
- Sorensen, R. (2008) *Hearing Silence: The perception and introspection of absences,* Forthcoming in *Sounds and Perception: New Philosophical Essays,* ed. Matthew Nudds and Casey O'Callaghan, New York: Oxford University Press.
- Sorensen, Roy (1999). Blanks: Signs of Omission. *American Philosophical Quarterly* 36/4: 309–321.
- Sorensen, Roy (2007). *Seeing Dark Things.* New York: Oxford University Press.
- Tye, M. (2003). *Consciousness and Persons*. Cambridge, Massachusetts: The MIT Press.

ABSTRACT

WHAT DOES THE SENSORY APPARATUS DO WHEN THERE IS NOTHING TO PERCEIVE? THE SALIENCE OF SENSORY ABSENCE

This study aims to bring out the explanatory potential of embodied predictionism versus passive feed-forward model of sensory stimulation in the pursuit of a parsimonious naturalist account of sensation as a salient feature and an end point of conscious experience. Theoretical approaches towards sensory experience are tested against specific scenarios of the absence of observable or palpable qualities including but not limited to the thought-experimental phenomenon of negative synesthesia at the conclusion of the argument. Predictionism is first explored in its own right only to be found insufficient to do justice to the actual mechanism behind full-blown immediate perception. A case is made for the soundness of predictionism reconciled with the doctrine of embodiment.

KEYWORDS: embodied predictionism; representation; embodiment; sensory deprivation; absence of sensory stimuli; sensory perception