

СОЦИАЛЬНАЯ ИНТЕРАКЦИЯ *SOCIAL INTERACTION*

<https://doi.org/10.21638/2226-5260-2021-10-1-77-95>

BODILY-AFFECTIVE ATTUNEMENT IN SOCIAL INTERACTION

ANNA KHAKHALOVA

PhD in Philosophy, Researcher.

Department of History of Russian Sociology, Sociological Institute of the RAS.
190005 St Petersburg, Russia.

E-mail: khakhalova@mail.ru

The paper intends to supplement the studies of emotional affordances of BAA by elaborating on the conception of participatory sense-making as well as developmental studies on joint attention and interattentionality. I address different spheres of expertise from the experience-based phenomenological perspective, which allows exploring the problem both from the first-person and second-person perspectives. This research presents the conception of inter-selfness that carries on M. Merleau-Ponty's idea of intercorporeality, T. Fuchs' et al. analysis of intersubjectivity and phenomenologically oriented psychoanalysis by E. Z. Tronick et al., R. Stolorow et al. The mechanism of BAA is presented through the conception of participatory sense-making and the idea of minimal inter-attentionality in developmental studies. The paper presents an emotional affordances scheme that illustrates the emotional regulation of BAA. By examining this process of regulation one could see in what way the self becomes an inter-self in communication. The article also postulates correlation between cultural mediation of emotional affordances and their direct accessibility from the second-person perspective. In the last part of the paper, I examine social interaction from the viewpoint of developmental studies (C. Trevarthen, V. Reddy, M. Carpenter). The developmental perspective supplements the idea of emotional regulation in interaction, by focusing on primary such forms of BAA between a caregiver and a baby, as joint attention and mutual gaze. Herein, I demonstrate how the initial forms of the positive bodily-affective attunement develop into the interattentionality and self-representation practices of the subject. This point could contribute to the theory of personal identity by exploring the process of maturing of the sense of self in its different aspects. The results of the research could be useful for further study of BAA

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and its pathologies. The results could also be of use for the discussion on non-human or human-like affordance-based technological interaction theory.

Keywords: inter-subject, inter-body, intercoporeality, emotional affordances, sense-making process, bodily-affective dynamics, self.

ТЕЛЕСНО-АФФЕКТИВНАЯ НАСТРОЙКА В СОЦИАЛЬНОМ ВЗАИМОДЕЙСТВИИ

АННА ХАХАЛОВА

Кандидат философских наук, исследователь.

Сектор истории российской социологии, Социологический институт РАН.

190005, Санкт-Петербург, Россия.

E-mail: khakhalova@mail.ru

Данная статья призвана дополнить исследования эмоциональных аффордансов телесно-аффективной настройки (ТАН), развивая концепцию партисипативного процесса осмыслиения, а также дополнить исследования по развитию совместного внимания и интераттенциональности. Я обращаюсь к различным сферам знания из феноменологической оптики, которая позволяет исследовать проблему в перспективе как первого лица, так и второго. Данное исследование представляет концепцию интер-самости, опирающуюся на идею интеркорпореальности М. Мерло-Понти, анализ интерсубъективности Т. Фукса и др., феноменологически ориентированный психоанализ Э. З. Троника и др., Р. Столороу и др. Механизм ТАН представлен через концепцию партисипативного процесса осмыслиения и идею минимальной интераттенциональности. Статья представляет схему эмоциональных аффордансов, иллюстрирующую эмоциональную регуляцию процесса ТАН. Исследуя этот процесс регуляции можно проследить, как именно самость становится интер-самостью в коммуникации. Статья также постулирует корреляцию между культурной медиацией эмоциональных аффордансов и их непосредственной данностью в перспективе второго лица. В последней части статьи я разбираю социальную интеракцию с точки зрения психологии развития (К. Тревартен, В. Редди, М. Карпентер). Перспектива психологии развития дополняет идею эмоциональной регуляции в интеракции, фокусируясь на первичных формах ТАН между воспитателем и ребенком, таких как совместное внимание (*joint attention*) и взаимный взгляд (*mutual gaze*). Здесь я демонстрирую как изначальные формы позитивной телесно-аффективной настройки развиваются в форму интераттенциональности и практики само-репрезентации субъекта. Эта мысль может внести вклад в теорию идентичности благодаря исследованию процесса взросления чувства самости в его различных аспектах. Результаты исследования могут быть полезны для дальнейшего изучения ТАН и форм ее патологии. Также результаты могут быть полезны для обсуждения теории че-ловекоподобной или нечеловеческой, выстроенной с помощью аффордансов, технологической интеракции.

Ключевые слова: интер-самость, интер-тело, интеркорпореальность, эмоциональные аффордансы, процесс осмыслиения, телесно-аффективная динамика, самость.

1. INTRODUCTION

The problem of bodily-affective attunement (BAA) during social interaction is a subject-matter addressed by many disciplines (sociology, psychology, cultural studies, neurosciences, philosophy and so on). There are a number of studies on intersubjective pathologies where phenomenologically oriented approach uses the conception of social (emotional) affordances (Fuchs, 2016; Krueger & Colombetti, 2018). However, there is still no unified explanatory model of how emotional affordances regulate BAA in a concrete situation. I intend to supplement the studies of emotional affordances of BAA by examining the conception of participatory sense-making process as well as some developmental studies on joint attention and interattentionality.

For this purpose one should formulate an appropriate epistemological background which would satisfy all criteria of inter- or multi-disciplinary approach to the problem. I suppose that contemporary phenomenology, being more of a methodology than a rigorous philosophical doctrine, best suits this task¹. It allows to address different spheres of expertise from an experience-based viewpoint, which allows exploring the problem from the first-person and second-person perspectives, which arguably makes investigations truer-to-life. The phenomenologically oriented approach can also profit from knowledge from different other perspectives, while its own contribution to the field consists in the fact that it permits expressing the meaning of interaction from the inside of the phenomenon itself. Coupled with developmental studies, this approach helps provide a thorough study of social interaction from a developmental point of view.

The underlying ontology could be traced back as far as to G. W. F. Hegel's dialectics of the self and otherness and L. A. Feuerbach's anthropology. Both of these philosophical approaches suggest a non-Cartesian, externalist theory of subjectivity. In brief, it relies on the idea of the ecological constitution of the self. According to it, the "I" as a spatiotemporal dynamic system is always larger and farther than "Myself"; I tend towards something other than me, avoid something else, interact with other dynamic systems and, therefore, I constantly go beyond myself. This ecological thesis refers to the biological, psychological and social sciences that explore different levels of the subject's environment. The enactive approach to the self, made known by F. Varela et al. in their conception of embodied cognition, accentuates the interconnection between the agency of the subject and the environment. In their turn, psychoanalysis and psychological tradition, as well as philosophy of dialogue and phenomenology, express this intrinsic tendency of the self from an intersubjective perspective through phenomena such as love or

¹ S. Gallagher wrote about the possibility of non-reductionist science of embodied mind that phenomenology can bring to it (Gallagher & Schmicking, 2010, 21).

striving towards the other, who inspires me, demands my presence or else opposes me. As O. Flanagan, a contemporary philosopher, who argues for interdisciplinary methodology, puts it: it is necessary to bring into equilibrium the insights from phenomenology, psychology, anthropology, sociology, evolutionary biology, cognitive sciences, because the nature of social interaction takes place in every sphere of human existing².

Another strong ontological point lies in the clarification of the notion of the self. To be a self is akin to feeling selfness as a permanent quality of one's experience, sensing "my own being," "myness" (*Jemeinigkeit*). Whenever I start acting, I am aware of my own being, not by way of a high-level conceptual consciousness, but rather by means of low-level conscious activity, such as emotional and bodily ones. From the start, I am a unique bodily-affective dynamic system.

The paper defends the thesis that BAA as a primary form of sociality constitutes the self as an inter-self, that is as an intersubjective bodily-affective form of being. In order to clarify the idea of inter-self I address to M. Merleau-Ponty's idea of intercorporeality, T. Fuchs's the analysis of intersubjectivity and phenomenologically oriented psychoanalysis by E. Z. Tronick et al., R. Stolorow et al. Then I proceed to examining the participatory sense-making process so as to introduce the mechanism of BAA. In the first part of the paper, I discuss possibilities to schematize BAA by addressing the idea of social affordances. The Gibsonian idea of affordance, being understood as a joint achievement of the "organism-environment" system is close to the phenomenological conception of meaning as an experiential sense-making process. I offer the notion of emotional affordance for characterizing the sense-making process of social interaction³. Here, I argue for regulating the bodily-affective attunement with help of emotional affordances. By explicating the scheme of this regulation one could see in what way the self becomes an inter-self in communication. I also consider the question of correlation between mediated and direct nature of the emotional affordances. In the last part of the paper, I examine social interaction from the viewpoint of developmental studies (C. Trevarthen, V. Reddy, M. Carpenter). The developmental perspective supplements the idea of emotional regulation of interaction, by focusing on the primary forms of BA attunement between a caregiver and a baby, such as joint attention and mutual gaze. Herein, I highlight the discussion of how the feeling of joy and pleasure helps regulates joint attention. The results of the research could be useful for further study of BAA and its pathologies. The results could also be of use for the discussion on non-human or human-like affordance-based technological interaction theory.

² For the clarification of the methodology see (Flanagan, 1993; Gallagher & Zahavi, 2008; Varela, Thompson, & Rosch, 1991).

³ See also (Fuchs, 2016).

2. SENSE-MAKING MUTUALITY AND SIMULTANEITY

People permanently attune to each other on different levels in everyday bodily practices. A subject is in constant sensorimotor interactions with others in different situations, and is sort of an inter-subject with an inter-body. Today there is a big amount of research of that basic level of self, but most of the phenomenologically oriented researchers agree with the idea that the sense of self is based on embodiment, intersubjectivity and enactivity⁴. One could conceptualize the self as being in a bodily-affective dynamics in particular situations. Here *dynamics* refers to the “alive” character of being, *embodiment*—to the embodied nature of self, while *affectivity* refers to social nature of the self.

The other knows me as an embodied self, just like I myself know others. Body is a “primary process of signification in which the thing expressed does not exist apart from the expression, and in which the signs themselves induce their significance externally. In this way the body expresses total existence, not because it is an external accompaniment to that existence, but because existence realizes itself in the body” (Merleau-Ponty, 1962, 191–192). Bodily attunement is a constituent of selfness and basic relational skills, which are stored in long-term body memory (implicit memory)⁵. As such, body memory provides the subject with bodily continuity over time (Fuchs, 2012, 9–22). This bodily extension of one’s self is a cornerstone of the personality, and its directedness towards the other is the foundation of social being, because the sense of self is, at the same time, the sense of others (Gallagher, 2001). The dialectics between self and otherness is well described by M. Merleau-Ponty as follows: “The memory or the voice is recovered when the body once more opens itself to others or to the past, when it opens the way to co-existence and once more (in the active sense) acquires significance beyond itself” (Merleau-Ponty, 1962, 191). Regulation of bodily-affective dynamics constitutes the basis of self-other experience, where an agent gains her tendencies, patterns, habits, skills of being with others in the situation, where her wishes, desires and self-image are formed.

⁴ See for example (Gallagher, 2013).

⁵ “Being affected by each other’s expressive behaviour results in shared states of bodily feelings and affects. Moreover, already during the first months familiar patterns of interaction and affect attunement are stored in the infant’s implicit or procedural memory as interactive schemas (‘schemes of being-with’, Stern, 1985). For example, through interacting with their caregivers, babies soon learn how to share pleasure, elicit attention, avoid overstimulation, re-establish contact, etc.” (Fuchs, 2015a, 193). Similarly, there is a psychoanalytic conception of implicit relational knowledge (Lyons-Ruth et al., 1998).

An agent of interaction has no isolated body, but shares some aspects of her bodily experience with other agents. She possesses an “inter-body,” that is, a body “in-between” herself and others. Even in her own thoughts, the subject is constrained by such factors as society, cultural traditions, language, memories and so on. Even standing with others at a bus station implies normatively accepted social behavior, every deviation from which could raise questions. It seems that the constant flow of bodily-affective attunement with others could range from unconscious, non-tacit attunement (for example, when we enter the stadium and start to breathe more intensively without thinking about the possibility to catch the ball or to run), to the high-leveled reflexive attunement (ex. gr. when we deliberately keep ourselves upright and restrained in a philharmonic hall).

Because of the idea of “inter-“ which is presented in self-other experience one should take into account not just the first-person perspective, but the second-person perspective as well. It is the second-person orientation which is responsible for inter-phenomena, such as intersubjectivity, intercorporeality, interintentionality of interaffectivity and so on. From this perspective, there is a mutual process of defining each other, mutual bodily-affective regulation. Regulating each other the agents come to the shared bodily-affective dynamics, becoming inter-body, or intercorporeality (Merleau-Ponty, 1964b). This inter-body also has its own meanings, preferences and affordances which it manifests to others.

As elements of one system, a dyad, the self and the other in-form each other in a mutual simultaneous self-altering sense-making process, “mutual incorporation” (Fuchs & De Jaegher, 2009)⁶. “The coordination of their body movements, utterances, gestures, gazes, etc. can gain such momentum that it overrides the individual intentions, and common sense-making emerges. This process has been described at the systems level as the social interaction gaining an autonomy of its own” (De Jaegher & Di Paolo, 2007). The idea of inter-self as an autonomous agent strengthens the externalist ontological thesis on extended mind. In posthumanism the idea of extended mind also includes interaction with different, more-than-human forms of agency. The idea of extended mind is also valid for feminist theory, because here one can address to the intercorporeality of pregnancy. It makes “the separation of the ‘merely’ visceral or biological from the more profoundly intersubjective, socio-affective modes of embodiment” very problematic (Neimanis, 2014). It also has its implications for the problem of freewill and agency: every action or thought can display an agency of its

⁶ Phenomenologically oriented psychoanalysts, such as E. Z. Tronick, D. N. Stern, Lachman etc., are expressive of the idea of dyadic state of consciousness as well. See eg. (Tronick, 2017).

own or that of a social, collective actor; there is always some social surrounding of the self that somehow constrains her willings and desires. Fuchs and H. De Jaegher give the example of humour as a truly joint sense-making, which arises as an attempt to fix a mismatch or another counter-intentional event (Fuchs & De Jaegher, 2009, 476). In the same sense, psychoanalysts, such as Tronick et al. write about moments of meeting in the therapy when a unique possibility for sense-making arises⁷. Tanaka continues this idea: "There is a type of empathy that does not belong to the individual but to the 'in-between' of the self and the other" (Tanaka, 2015, 465).

While the real subject of social interaction is the inter-agent which contains both of the participants' perspectives, each of the participants possesses their own expectations and intentions. "[T]he course of our encounter is more or less unpredictable. At the same time, however, each participant brings implicit expectations and protentions to the encounter that may or may not be fulfilled" (Fuchs & De Jaegher, 2009, 476). This means that process of interaction is not always smooth and orderly, but it could become a confrontation or even fight. Interaction is about how two centers of gravity oscillate between enactivity and receptivity (Fuchs & De Jaegher, 2009, 476). Action-perception loop makes possible decision-making processes in the initial emotional (bodily-affective) evaluation and response to the situation that enables to distinguish between them in interaction⁸. Thomas Fuchs and Hanna De Jaegher understand participatory sense-making process as "circular processes of mutual understanding, negotiation of intentions, alignment of perspectives and reciprocal correction of perceptions" (Fuchs, 2015b, 178). This idea demonstrates initial decentralized, the other-oriented excentric position of self. "Thus, intersubjectivity implies a continuous co-construction of meaning through mutual interaction and perspective taking." (Fuchs, 2015b, 179). The embodied self functions as a "resonance board" of interaffectivity and intercorporeality (De Jaegher et al., 2017, 514). Merleau-Ponty clarifies intercorporeality, which includes embodiment and otherness of interaction, elaborating Husserlian notion of Parung (paring): "In perceiving the other, my body and his are coupled, resulting a sort of action which pairs them [*action a deux*]" (Merleau-Ponty, 1964a, 118). The effect of pairing consists in the possibility to anticipate outcomes of another's actions in order to respond relevantly. In other words, to see affordances which are created in the interaction. The concept of intercorporeality permits to discard theory of mind and mind reading as an explanatory model of predi-

⁷ Similarly, D. N. Stern elaborates the conception of present moments in the therapy when a unique possibility for sense-making process is raised (Stern, 2004).

⁸ By analogy, as for to perceive an object one need to be in continuous sensorimotor interaction with it (O'Regan & Noë, 2001).

tion capacity by neonates. It is dyadic state of mind (Tronick et al., 1998), or interintentionality (Stern, 2004), that helps the baby to grasp the other's intention.

The shared sense-making process “is generated and constantly transformed through the interaction which implies an alignment of perspectives or mutual perspective-taking” (Fuchs, 2015a, 205).

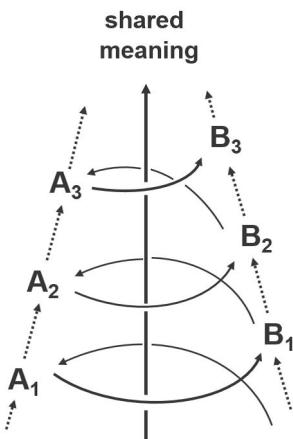


Figure 1. Spiral of participatory sense-making (Fuchs, 2015a, 205)

One could supplement this model with a grain of more spontaneous, disruptive, context-sensitive interactive touch by addressing the theory of affordances. J. Gibson's idea of affordance proves phenomenological intuition about BAA in interaction. Indeed, just like the organism manipulates objects around him, the subject deals with others in her social surrounding. It seems plausible to speak about social or emotional affordances (by analogy with emotional intelligence as a capacity to understand others in concrete situations). They show mutual intersubjective meanings of the interaction for all participants of it. Thus, emotional affordances clarify the intrinsic connection and mutual interdependence between action, perception and emotional (bodily-affective) evaluation. One could address the conception of felt or experienced meanings, which could precede any conceptual and verbal symbolization of the experience⁹.

⁹ In his book E. T. Gendlin articulates the link between experience and symbols through the idea of felt meaning which is a first specification of the experience (Gendlin, 1997).

For example, a mother gives her baby the affordance of relaxing and sleeping well by comforting her in her hands¹⁰.

I present a scheme of affordances, where one can misunderstand the other's gesture or both of the participants could give each other opposite affordances simultaneously, which would lead to the conflict of meanings in the interaction. There could be affordances that the other does not recognize as such. In that case, one should speak about one-directed affordances that remained without response. Another class of affordances will present common, shared social affordances that all participants have believed to be.

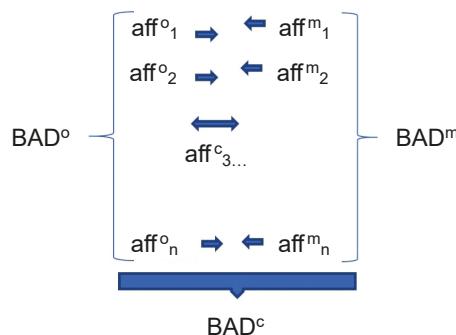


Figure 2. Scheme of affordances.

Author's picture — A. Kh.

Here is a scheme of an interaction: subjects are represented by their bodily-affective dynamics (BAD)s: BAD^o —BAD of the other; BAD^m —BAD of the subject (Me). Every BAD has its own set of social (emotional) affordances (aff)—meanings-opportunities for acting, including self-thought projections and expectations of the outcomes of the situation. aff^o refers to set of affordances which are created as a result of interaction from the other's perspective (the other looks at me—she could expect my look back), aff^m —to set of affs from My perspective (I could smile for continuing the conversation or turn the head away), aff^c refers to shared meanings which are at hand for both of the participants. They represent normatively accepted and common known affordances which leads an agent to well-known defined practices which are

¹⁰ The idea of shared emotional affordances could be considered from the viewpoint of feminist phenomenology, where there is a discussion on feminine body constitution, which presupposes otherness as its inherent distinctive feature (Smith, 2016, 15–49).

at hand at every times whenever we communicate with each other (for example, we wave to each other at the same time). BAD^c—Bodily-affective dynamics of the inter-body, the “Me-Other” system, which is a kind of intercorporeality that appears as behavior matching. (A dyad of mother and a baby has its own rhythmical structure which is observable in their attuned movements and emotional expressions.)

3. MEDIATION OF EMOTIONAL AFFORDANCES

In everyday interaction an agent’s surrounding is full of artifacts, things, symbols and other cultural meanings. They are all at-hand for a person who is acquainted with the culture at question (cultural traditions, codes). They afford to use themselves in a conventional manner. Culture, Society as such, is the global agent (Agent) with whom one interacts and interflows as the inter-agent. “The meaning of artifacts cannot, therefore, be understood in terms of the individual-object dyad, but, rather, within a wider social framework” (Costall, 2012, 90). Arguing for a social mediation of meanings Costall expands the practical map of a subject. There are not just an object and others who deal with it, but, there are artifacts, society and culture which all together coordinate emotional responding of the infant. In this sense, artifacts as affs presume normatively defined practices, where the agent is the society at large. “Indeed, it is through the tacit, embodied understanding of the “canonical affordances” of things, as much as through explicit representations, that young children enter our cultural world” (Costall, 2012, 91). Thus, culture presents “in-between” of the interaction, and also “around-between” (around self-other interaction) of it. “Our shared humanity, history, skills and know-how and more specific shared elements such as interests and current goals ensure that we do intuit at least something of how the interaction may unfold” (Fuchs & De Jaegher, 2009, 476). Costall insists that canonical affordances involve indirect perception, noticing their conventional, normative character. In this case, affordances have become impersonal.

Nevertheless, it is also true that impersonal affordance is subject to opposite process, that is mediation through unique personal bodily-affective dynamics of an actor as well as a different bodily-affective dynamics of a recipient. For example, one could smile every time when he feels himself uncomfortably. But the person who does not know that could well conclude that she is laughing at her. I suggest that through bodily manifestations and expressions of one’s intentions one can have a direct understanding of the social (emotional) affordances in the interaction. This means that on the basic level of bodily-affective interaction (intercorporeality) there is no need to make any inference about what it means or what I can do. Usually, we start attun-

ing to each other without a conceptual understanding of “what is going on”, “in-between” the self and the other. In other words, it seems that there is no need to make any reference or a judgement for detecting the other’s anger or fear, or joy, we just see (understand or empathize) it not so much from the third-person perspective, but rather from the second and first-person perspective which underlines social interaction. Accentuating the moment of *Gegenwärtigung* of the other’s presence in social communication we also contribute to the philosophy of dialogue and to the phenomenological tradition¹¹. There are mirror and canonical neurons that code perceptual information into the motor terms that enables the reciprocity of acts and intentions of the other. They furnish us with the ability to immediately understand what we see the other doing (Rizzolatti & Sinigaglia, 2008, 131). Whereas the idea of directness or pre-conceptual understanding is not constrained by the moment of “now” of the interaction: the “here and now” of the situation reveals itself through the complex implicit structures of retential-potential temporality as well as in phenomenological spatiality. Every recognizing process of affordances rests on the implicit associative thinking, which goes back far earlier than the analogical one and which permits us to ap-prehend (ap-percept) the whole picture of a situation, to have a holistic view. In a similar vein Fuchs and Jaegher describe operative intentionality discussed by Merleau-Ponty: “Through its habits and skills, the body anticipates or implies potential actions or events: It is prone to act in a way that is determined both by its acquired dispositions and by the affordances of the present situation. Thus, operative intentionality is directed towards the future, namely through implicit expectations or protentions that may or may not be fulfilled. This temporal aspect is also connected to particular affects such as interest, curiosity, suspense, fear, surprise, joy or disappointment” (Fuchs & De Jaegher, 2009, 475–476).

Some researchers deem emotional affordances to be naïve due to their primitive and biological origin. “Naïve sociology would be a phylogenetical adaptation for picking up the elementary social gestalts or patterns that are important to the fulfilment of survival and cooperation needs” (Kaufmann & Clément, 2007, 228). Kaufmann and Clément point also that “between the affordances for physical interactions with the environment (grasping, eating, walking, etc.) and the culturally determined affordances that reflect preferred but not necessary interactions (i.e. hat affords wearing on one’s head), there might be affordances for social interactions: aggressive behavior affords defensive reaction, a gift affords cooperation and kin in distress affords help. (Kaufmann & Clément, 2007, 228). They emphasize the “demand character” of social situations,

¹¹ For the discussion see (Zahavi, 2014; Khakhalova, 2014).

actions and relations, which provoke and constrain an agent to certain responses. Thus, they insist on the position of *moderate naturalism* which avoids radical positions of both cultural constructivism and naïve sociology, arguing for universality at least of part of social affordances such as facial expressions of pain or pleasure. Nevertheless, in our everyday life one never experiences just basic simple emotional reactions alone. Even if we fear the snakes, we accompany this feeling with other high-level mental activities, such as picturing, telling the stories, expectations, which are sociocultural constructed. When a mother sings a lullaby for better soothing, this points on the fact that she is a carrier of the cultural heritage of a certain society. Thus, we can conclude that every interaction is complex: on the one hand, it is unique and contextually sensitive, on the other hand, it is more or less culturally mediated by the system of canonical affordances and normatively accepted rules and patterns of behavior.

4. FEELING REGULATION OF INTERATTENTIONALITY

The analysis of emotional affordances that help regulate bodily-affective attunement within multidisciplinary phenomenologically oriented approach becomes more thorough and will benefit from a development perspective that focuses on primary attunement between a caregiver and a baby. Indeed, developmental psychology and psychoanalysis explore the primary forms of shared feelings (interaffectivity), shared attention and action (inter-attentionality, inter-intentionality and inter-corporeity), thus, advancing our concept of inter-self¹². Developmental studies raise the issue of emotional regulation that underlies joint attention and primary social attunement as such. As Stolorow points out, the baby is in need of the other's specific emotional (affective) responsiveness (Stolorow et al., 2014, 67–69). This need is implicitly at the basis of every social interacting. Similarly, Tronick sets forth the idea of an inter-subjective goal of therapeutic communication, which along with the explicit goal of solving a problem regulates the process of therapy (Tronick, 2007, 427). Here one can mention the way feelings of joy and pleasure regulates joint attention. Data like this provide phenomenological research with empirical observations of the primary attunement and help to create an interdisciplinary perspective there upon.

¹² This theme is connected with problem of shared intentionality and joint action theory (Searle, 1995; Tuomela, 2002). There are studies of joint attention where the concept of shared, or common, knowledge is presented as a mark of it (Carpenter, 2011, 169; Peacocke, 2005). Alex Seeman points that joint attention is better understood from the enactive approach as a kind of agency (Seeman, 2011, 183). Costantini & Sinigaglia study joint attention in the frames of affordance-based accounts of perception (Costantini & Sinigaglia, 2011).

Trevarthen differentiates between primary, secondary and tertiary intersubjectivity, where only the latter represents the authentic intersubjectivity. Whereas on the secondary intersubjectivity an infant is capable to joint (share) the other's attention. Schematically, joint attention is an interaction between tree elements: while I'm looking at an object, I'm monitoring that you're also looking at the same object. Shared attention presupposes gaze alternation between distant objects and social partners. Thus, there are triadic relations Me-Object-Other, which constitute authentic intersubjectivity. But, of course it is not enough just have such a coordination. In joint attention there is a self-reflexive point of view ("what the communicator thinks the recipients want for themselves"). However, it is not just the reflexive thought about the other's thought. According to rich, nonreductive view, joint attention is characterized by a deeper level of attunement which presupposes emotional (bodily-affective) attunement between the participants. Ordinarily, joint attention is observed from the age of 9–11 months, but bodily-affective interaction takes place earlier, before an infant can share any experiential situation with the other. Before an object appears in the infant's surrounding she has only a dyadic, person-centered reciprocal experience of mutual gaze. At this stage, the affective quantum of interest grows in infant as a form of minimal interintentionality and corresponds to emotional attunement between a caregiver and the baby. As consequence, it presupposes shared feeling of joy and pleasure. An infant expects the other shares his feeling of joy and pleasure in joint attention and joint action, not just to follow the rules of the game¹³. "Human babies often display obvious joy, and these joint attention episodes are punctuated by looks from baby to mother and vice versa with intense bursts of apparently shared positive emotion" (Carpenter & Liebal, 2009). The researchers discover that "[i]nfants were satisfied only when adults share their attention and their interest" and not just following their gaze of declarative pointing to the object of perception (Carpenter & Liebal, 2009, 162). Infants search for "agreement about qualities of experience, and they exhibit an endless curiosity about possibilities of action and discovery, and how to negotiate about them" (Trevarthen, 2011, 74). In the same vein R. Stolorow et al. talks about affective responsivity on the part of the adult which is responsible for the infant's sense of self (Stolorow, 2007).

Moreover, a baby not just shares the feeling with an adult but complements and completes it appropriately. Even at the mutual gaze stage, when a baby cannot point to the object or look at it, her bodily attunement to the adult's behavior is responsible for

¹³ Seeman defines such simple feelings as "integral part of a perceptual experience and constitute general affective dimension of it" (Seeman, 2011, 195–198).

meaningful exchange of the gaze¹⁴. “Mothers could readily influence what the infant would do, not by giving full demonstrations of a desired action but by *indicating* or *suggesting* with gesture and request, and this led the infant to ‘complete’ the intention and gain competence” (Trevarthen, 2011, 96). This shift in dyadic relationship is marked as beginning of cultural learning. This “eagerness of the infant to learn what others are interested in is accompanied by an enhanced cleverness in teasing and joking, which strengthens both the infant’s sense of self-presentation” (Trevarthen, 2011, 97).

There are original forms of time and space feeling (rhythm synchronization of movements) and proto-linguistic activity as emotional vocalizations in interactions with neonates that characterize primary attunement between the infant and the adult (Trevarthen, 2011, 78). All three parameters are presented in primary bodily movements of the neonate. The self could be understood as a unique trace of a primary bodily movement of an organism. For example, M. Sheets-Johnstone focuses on primary anonymized sphere of animation structured by kinetic-affective dynamics of an organism (Sheets-Johnstone, 2004). However, the mother-child interaction demonstrates not so much the primacy of the individual movement, but rather that of the *dyadic* bodily-affective dynamics¹⁵. In this way,

[d]evelopmental trajectories suggest that gaze following arises before a rich spatial representation is present. Human infants begin to co-orient with adults within the first year but only later gain the ability to follow gaze toward objects outside their immediate field of view or hidden behind barriers [...]. Moreover, gaze processing accuracy continues to improve throughout human children’s first six years. (Shepherd & Cappuccio, 2011, 211)

The multimodal nature of perception underlies the mechanism of sharing. Whenever a modality of sensory activity is engaged, there are always other forms of sensual activity, which attune thereto. One can speak about sensory attunement or even more global mental attunement not just between feelings, but amongst such mental modalities, as thinking-process, mental association mechanism, reflexive activities and so on. Indeed, externalist perspective unveils constitutive complexity of the act of perception.

¹⁴ As Threverthen shows, babies can adjust their movement to the other. For example, when they move in synchrony to track an object in front of them. These findings shows us the initial form of interactivity of the infant who not just react but co-create the meaningful world with the other. “The jaw, lips, and tongue of a newborn may move in ‘prespeech’ as if articulating vowels and consonants, but these actions are performed without sounds” (Trevarthen, 2011, 82).

¹⁵ Analogously, C. Gilligan wrote about the other-oriented feminine identity versus self-sufficient masculine type of development (Gilligan, 1982). The topic of mother-child interaction is also discussed from the point of feminist phenomenology. For more detailed clarification see (Bornemark & Smith, 2016; Fisher & Embree, 2000).

Whereas Carpenter argues for a communicative gaze of the infant as an expression of her active position as an initiator of the interaction (Carpenter & Liebal, 2011, 170), Reddy insists on the adult's gaze at the infant that initiates the infant's response as a crucial point in the infant's development of jointness. The "ability to feel gaze to self is crucial for further development of the meaning of attention" (Reddy, 2011, 144). One can conclude that by engaging in a mutual gaze the infant gains her primary form of reflexivity as an initial body-image as well as arrives at a primary form of object directedness (object-oriented perception).

It is the other's attention at grips with the infant that makes attention exist for the infant. Within this account, others' attending is first *felt* by the infant neither as an intellectual deduction nor as an empathic extension from his or her own experience of what it is like to attend but as a *response* to encountering it when it is directed toward himself or herself within engagement. (Reddy, 2011, 138)

Reddy cites observations of Farroni and colleagues, who found that two- to five-day-old newborns prefer frontal photograph of a face whose eyes were turned directly to them¹⁶.

It seems that from the start neonates are more sensitive to the other's look at them, under which the baby matures in her body-image and self-manifestation as an inter-body and inter-self. It could mean that the other is encoded in the self's body schema and body image, and is a constituent of one's experience. "The baby pre-reflectively acknowledges through his body (i.e., through his motor capacity) the adult's intention of biting, and as such the intention to bite is shared intersubjectively between the baby and the adult" (Gallagher, 2005)—the body schema helps to co-construct the intention of the other without explicit knowledge of it. Facial imitations of neonates point on their ability to transpose the seen expression of the other into their own proprioception and movement, becoming familiar with others (Fuchs & De Jaegher, 2009). Facial communication is the most important dimension of self-other experience: "I live in the facial expressions of the other, as I feel him living in mine" (Merleau-Ponty, 1964a, 118).

¹⁶ Chien et al. demonstrate that both adults and babies older than 20 weeks old show preference for photos of real upright faces than photos of unusual, unnatural faces (Chien et al., 2011). Whereas, Macchi Cassia et al. (2004) reported that newborns did not show a preference for normal upright faces over scrambled but still top-heavy faces. One of the hypothesis consists in the idea that top-heavy figures preference is salient for newborns but disappears quickly in 3 months—the exact time when toddlers display more mature scheme of the other. At that time they have more accurate discriminating between species, gender and races. (Mesman et al., 2009).

Prior to joint attention which corresponds to the secondary intersubjectivity, when the subject starts to perceive others as intentional agents and starts to understand that others perceive her as an intentional agent too, the infant already experiences awareness of mutual gaze—minimal interattentionality. The interattentionality comes with interaffectivity because the infant is interested in the other's interest about herself (infant). She is excited about such a mutuality.

There is a mutuality in the grip—a loosening here [...], an extension here (e.g., when parents in desperation at infants' decreasing interest in exclusive face-to-face interactions start inventing newer actions such as tickling and rhythmic actions and games), a violation here (e.g., infants' humor and provocative teasing which changes adult consciousness of what infants seem able to do and thus ups the ante in terms of their own potential actions), and an imitation or a memory there (e.g., narratives and parents' evocation of things past or possible), which shifts attention on to newer realms of attentional objects. (Reddy, 2011, 149)

The interattentionality just like other forms of inter-being is rooted in the very corporeality and affectivity of the infant's experience. The studies of primary forms of BAA help to detect the earliest forms of self-disorders, such as autism and schizophrenia. Phenomenological analysis of intersubjectivity pathologies explores tacit, implicit layers of the bodily-affective dynamics of being with others from the first-person and second-person perspectives, or the inner experience of the self (Jaspers, 1963). I believe that the phenomenological analysis of emotional affordances could contribute to the comprehension of pathology and bridge its alienation¹⁷. “What autistic and schizophrenic patients primarily suffer from is not a theory of mind deficit but rather a disturbance of bodily being-with-others and social attunement which they try to compensate by hypothetical constructs and assumptions about others” (Fuchs, 2015a, 193). Schizophrenic patients lack the natural self-evidence of social communication, or primary empathy (inter-selfness of the interaction), which leads to diminished self-affection and hyperreflexivity (Saas & Parnas, 2003). It is the same with autism (Hobson, 2014, 11). “As a result, patients report that they feel isolated and detached, unable to grasp the natural, everyday meanings of the shared life-world.” (Fuchs, 2015a, 200). T. Fuchs makes the conclusion that delusions are not just individual faults but rather correspond to an impairment of basic intersubjective attunement to others, to consensual and commonsensical reality. They are “disorders of the *in-between*” (Fuchs, 2015a, 208) or of the inter-selfness.

¹⁷ There is interesting research by J. Krueger & G. Colombetti, where the authors express ecological awareness of the individuals who suffer from different self-pathologies (Krueger & Colombetti, 2018).

5. CONCLUSION

The paper demonstrates the benefits of phenomenologically oriented multidisciplinary approach to the problem of the bodily-affective attunement within social interaction. It allows exploring the ecological constitution of BAA. Its constitution reveals the immanent otherness of the self from a new perspective. The scheme of emotional affordances presents the regulation of bodily-affective dynamics of the inter-agent as a result of mutual sense-making. This regulation possesses both culturally mediate and direct features of emotional affordances. Based on the influence on culturally mediated affordances one can conceptualize culture as an agent by itself with its own canonical affordances that surround the self and exist between the self and the other. The bodily-affective dimension of the self-other experience makes this mediation accessible from the second-person perspective. Phenomenologically oriented methodology allows expressing the meaning of interaction from the inside of the phenomenon itself, whereas the examination of social interaction in developmental studies provides strong evidence in favor of phenomenological insights concerning social being. The paper demonstrates the way positive bodily-affective attunement and synchronization develop towards the interattentionality and self-representation practices of the subject. The focus on primary forms of interaction opens the possibilities to examine different steps of pathological development of the inter-self, and the phenomenological account could bring a more accurate description and explanation of this process. The results of the research could be useful for further study of BAA and its pathologies. They also could also influence the discussion on non-human or human-like affordance-based technological interaction theory in posthumanism and artificial intelligence theory.

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