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INTERWEAVING SOMATIC PRACTICE AND THEORY: A DANCING RESEARCHER'S AESTHETIC EXPERIENCE

Abstract: This paper presents a personal, autoethnographic account of how a distinct theory, namely selected aspects of the extended mind theory, can give rise to novel aesthetic experiences while dancing Argentine tango. It illustrates the enhancement of an aesthetic practice that is forged by, but also transcends, the interplay between theory and practice. The report recounts how theoretical propositions regarding the distribution of agency in extended cognition, when applied to a somatic practice, can uncover novel aesthetic experiences and approaches towards the author's own dance practice. The aesthetic experience is described as the sensation of being danced by the interactions between the dance partners and the music, which afford somatic awareness. Furthermore, the paper emphasises the often-neglected significance of a researcher's personal inclinations towards and the practical effects of the theoretical propositions they engage with.

Keywords: autoethnography, somatic practice, aesthetic theory, awareness, aesthetics experience, distributed agency, extended cognition, Argentine tango

Context: Investigating aesthetic experiences of dancing

This paper exemplifies an aesthetic experience that transcends the interplay between theory and practice by revealing an experiential state prior to the dichotomy of theory and practice. It does not purport to present scientific findings, nor does it extensively delve into existing academic concepts in a strictly academic manner. Instead, it is a personal account illustrating how theory, in this case theories of cognition, can give rise to novel aesthetic experiences and realizations. Given its personal nature, this account does not adhere to the typical discursive structure of academic papers, with hypotheses, elaboration, and conclusion as foundational components. It should be read

as a personal report that describes my search for a distinctive mode of experience. It is an autoethnographic report that applies dancing, self-observation, and critical scaffolding by philosophical aesthetics and selected theories of embodied cognition.

The report opens with a description of my current research. It then problematises the relationship between practice as the informant for analysis and theory formation followed by an introduction to Argentine tango. It then elaborates on the theoretical challenge of describing aesthetic experiences of one's own actions. To address this, the report examines embodiment theories with a focus on extended mind theory. However, the report does not present a theoretical solution but instead considers and describes the effects on the author's aesthetic practice and experience.

So, let me begin by briefly introducing my current research of which this report is a part of. I am an academic researcher studying the aesthetics of social dancing, specifically Argentine tango. My theoretical and practical (and also personal) interest lies in the aesthetic experience while actively engaged in dancing. While social dancing serves various purposes, including cultural, societal, and various personal ones, the sheer pleasure it provides is an indisputable and important purpose. Thus, dancing can be viewed and investigated as an aesthetic experience, with pleasure being an integral part of it. The aim of my overall research is to devise a theory that can conceptualize and contextualize the aesthetic dimensions of one's own experiences of moving together to music. The terms 'aesthetic' and 'experience' are certainly related but not comparable. When using the term 'experience', I primarily refer to Dewey's notion of experience as a transactional¹ relationship between a living being and its surroundings and it experienced as "doing and undergoing".² An experience is aesthetic when it involves a reflective level that allows for an affective and imaginative evaluation of the experience. The aesthetic is understood as an experience that incorporates sensing, sense-perception, and sense-making.³ In other words, an experience is aesthetic when there is an evaluative dimension present, such as different kinds of pleasure. Aesthetic experiences entail a meta-observation of the experiencer's emotional status (see, for instance, Menninghaus et al., 2019⁴). Additionally, Dewey's notion of aesthetic experience adds the objective materiality of the experienced being as an integrated part of the 'meanings imaginatively summoned'.⁵ In my case, one's own movements constitute the materiality and somatic factuality of the experience.

Since my subject field is the aesthetic experiences of one's own actions (of dancing Argentine tango), I can, in principle only speak about my own experiences of

¹ J. Dewey, A. Bentley, *Knowing and the Known*, Beacon Press, Boston 1948.

² J. Dewey, *Art as Experience*, Perigee Books, New York 1980.

³ This is very clearly expressed by Baumgarten, the founder of aesthetics as an academic discipline, and his notion of lower or inferior cognition (see: A.G. Baumgarten, *Theoretische Ästhetik – Aesthetica*, Felix Meiner Verlag, 1750). I consider this as the very foundation of modern aesthetics.

⁴ See for instance: W. Menninghaus, V. Wagner, E. Wassiliwizky, I. Schindler, J. Hanich, T. Jacobsen, S. Koelsch, *What Are Aesthetic Emotions?*, "Psychological Review" 2019, No. 126 (2).

⁵ J. Dewey, *Art as Experience*, op. cit., p. 274.

dancing and only refer to others' experiences. Furthermore, I must record my experiences in a form that makes them available for academic scrutiny. To conduct my investigations, I rely on autobiographic memories of specific experiences and situations of dancing that arise (also) when writing about the aesthetics of dancing. Autobiographic recollection is the closest I can get to what Dewey calls "primary experience".⁶ Furthermore, I have chosen to apply autoethnography⁷ as a qualitative method. Autoethnographic inquiry builds an "epistemology of insiderness"⁸ in which the researcher's experience is transformed into empirical material. My autoethnography consists of practicing Argentine tango and recording this practice in the form of logbook entries. After each dance session (whether it be training, participation in workshops, or tango balls), I wrote down my impressions and reflections in a logbook. These notes consist not only of phenomenological recollections of situations, movements, and feelings while dancing but also of rudimentary analysis, incipient conceptualizations primarily in the form of descriptions, hypotheses, and questions. My dancing and the logbook constituted the empirical field of my investigation. Therefore, my logbook must primarily be seen as a part of the process of finding an adequate language that is able to express, and more importantly, facilitate the recall of aesthetic experiences of dancing Argentine tango.

Concurrently, my theoretical investigations and elaborations proceed in my university office. In developing my theoretical framework, I drew upon existing theories from philosophical aesthetics and dance studies, complemented by theories from related fields such as phenomenology and also various scientific theories on cognition. Thus, my theory development is based on the analysis and critical assessment of already existing conceptualizations of aesthetic experiences seen in the light of my own experiences of dancing. Expressed differently, my recollection of dancing and the logbook evaluated existing theories by looking for explanatory shortcomings that demanded novel concepts.

At the same time, as a feedback loop, this scrutinizes and modifies my dancing practice and my experiences of it. In general, this is nothing new and an intrinsic part of aesthetics as academic endeavour. It is the methodical basis for research within philosophical aesthetics and art theory – reflected upon or not. By empirically founding my theory development on my personal experiences, I inevitably also examine the direct interface between my somatic practice of dancing and abstract descriptions

⁶ J. Dewey, *Experience and Nature*, Dover Publications, New York 1998, p. 8.

⁷ Autoethnography is a qualitative research method that "engages with the dialectics of subjectivity and culture, albeit with different emphases by different authors on the elements of, respectively: the self (autos), the 'race' or nation-extended to include a cultural, subcultural or social group of some kind (ethnos), and the research process and its representation (graphein)" (J. Allen-Collinson, *Autoethnography as the Engagement of Self/Other, Self/Culture, Self/Politics, and Selves/Futures* [in:] S.J. Holman, T.E. Adams, C. Ellis, *Handbook of Autoethnography*, Left Coast Press, Walnut Creek 2013, p. 283).

⁸ T. Adams, S.H. Jones, C. Ellis, *Autoethnography*, Oxford University Press, Oxford 2015, p. 31.

of aesthetic perception and experience. This is the topic of this paper: it is about the interweaving of somatic practice and aesthetic theory. This relationship is not unidirectional from practice to theory; theoretical conceptualizations also influence practice. The emphasis of this paper is on how theory can challenge my experience; this is an important dimension and motivation for my research. I have written on that before⁹, but here I want to concretise it in the form of an autoethnographic report.

Of course, the bidirectionality between theory and practice is an open door because the purpose of philosophical aesthetics (and philosophy in general) is not only the love of wisdom in the form of intellectual knowledge but also to be a means of improving our way of living and, in my case, of my dancing and my experiences of it. However, such improvements (or, more modestly, changes) are rarely made the subject matter of scrutiny proper but are rather often implicitly hoped for. This paper wants to tell such a real story of aesthetic pleasure through theory-practice transactions.¹⁰

Who is the informant?

Within academic research, the aesthetic perception is normally considered the informant; academics examine someone's practice of creating or receiving cultural expressions such as art, design, or any other cultural activity. Various methods (e.g., ethnographic observations, interviews of various formats and purposes, or hermeneutical or phenomenological analyses of cultural artefacts) are employed to understand the internal structures and socio-cultural significances of these practices. This was also the case and starting point of my investigation of dancing, as shown before. However, my own practice of dancing tango also served as the recipient of theoretical propositions. Gradually, theoretical notions and ideas became the informants for my practical investigation, influencing my practical exploration and my experiences. I considered the practical significance of theoretical nuts and bolts for my dancing. For instance, I pondered Kant's proposition of the indeterminate concept, which plays a significant role in his understanding of the aesthetic interplay between imag-

⁹ F. Heinrich, *A Somaesthetics of Performative Beauty – Tangoing Desire and Nostalgia*, Routledge, New York–London 2023.

¹⁰ Evidently, the societal purpose of research is to find solutions to existing problems. All knowledge generation serves this purpose, whether in the natural sciences, technical fields, social sciences, or the humanities. However, many disciplines have evolved into descriptive and explanatory fields, including aesthetics, particularly when understood as the theory of art. I believe that academic quality is measured by a theory's ability to describe and explain phenomena in reality. The sciences (including, for instance, cognitive science) especially value nomothetic laws and explanations. Much of aesthetics, particularly analytical aesthetics, appears to follow this approach. There is nothing inherently wrong with this, as it forms the foundation for invention and solutions. However, in this paper, I am interested in the direct effects of theoretical endeavours on my practice – specifically, on my ability to experience pleasure and delight while dancing.

ination and understanding. I questioned whether the experience of dancing involves indeterminate concepts and, if so, how they contribute to the aesthetic perception of dancing tango. Where and what are indeterminate concepts while dancing?¹¹

Using theory as an informant for practice is a rare methodological occurrence because not many professional theorists explicitly use their own aesthetic and creative practice as an empirical touch-down base, unless it is the practice of the audience contemplating and interpreting an artifact or event. Furthermore, the primary task of the academic aesthetician is to produce articles, books, and lectures with the objective to generate and disseminate generalised and applicable knowledge. The improvement of practice (which cannot be disseminated as knowledge) must be understood as the secondary, derivative goal of knowledge generation.

However, some theoreticians do actively engage in this bidirectional relationship of theory to practice, particularly within the realm of dance and performing arts, mostly academics who have been professional practitioners before becoming academics and continue to practise in some form or other. I am part of that group, I worked as a professional stage actor prior to my academic career and continue with social dancing as a somatic practice. Other aestheticians actually found their way to practice, be it artistic or daily somatic practices (see, for instance, Eco who also wrote novels besides being an academic or Shusterman, who recently engaged in performance art activities¹² besides his practice as a Feldenkrais therapist). Similarly, not many practitioners form aesthetic theories to further their aesthetic and artistic work, although there are exceptions mainly to be found in the past such as Schiller, Goethe, Hogarth, Brecht, etc. One can only assume that theoretical thinking was not only nurtured by their artistic practice but also had an influence on it in terms of artistic content, form, process, and sensibility. The recent emergence of art-based or practice-based research within the arts must be seen as a more formalised attempt to bring aesthetic practices¹³ into fruitful interplay with philosophical aesthetics and related theories. These are examples of fruitful mutual transactions between theory and practice and between the conceptualising mind and the practising body. Yet, this is not the place to investigate these research projects.¹⁴

¹¹ My investigation reveals that indeterminate concepts are experienced as improvisational potentialities while dancing, offering a distinct range of possible next steps depending on the specific situation – for instance, the previous steps taken, the music, and the conditions on the dance floor.

¹² R. Shusterman, *Body Consciousness: A Philosophy of Mindfulness and Somaesthetics*, Cambridge University Press, Cambridge 2008.

¹³ I understand the term ‘aesthetic practice’ to entail all forms of practices that in one way or another apply, use, or target aesthetic experiences, as described by J. Dewey, *Art as Experience*, op. cit. This can be art, design, and other cultural practices such as social dancing.

¹⁴ S. McNiff, *Art-Based Research*, Jessica Kingsley Publishers, London 1998; G. Sullivan, *Art Practice as Research: Inquiry in Visual Arts*, Sage Publications, Los Angeles 2010; H. Borgdorff, *The Production of Knowledge in Artistic Research* [in:] M. Biggs, H. Karlsson (eds.), *The Routledge Companion to Research in the Arts*, Routledge, New York 2010.

I, more modestly I think, want simply to emphasise an often-neglected dimension of aesthetic research, which is its transformative potential for the researcher himself. Investigating aesthetic experiences renders the division of labour between research and its production of explanatory knowledge and practice as the production of aesthetic artefacts, events, and exercises, impossible and, in my opinion, not always fruitful. Investigating aesthetic experiences depends on the researcher's participation and, in the case of social dancing, action. There is no doubt that one of the most important functions of aesthetic theories is to enrich aesthetic experiences and pleasures by creating awareness of how aesthetic cognition works and what stimulates aesthetic pleasures.¹⁵ This is the main topic in Baumgarten's theoretical aesthetics.¹⁶ I want to have a look at the impact these theories have on the academic researcher himself, because I consider the enhancement of aesthetic experience as one major incentive for the academic researcher himself. What happens to me and my practice when I practically experiment with theoretical propositions?

Philosophical aesthetics becomes the informant for the theoretician's aesthetic practice. This is often seen as a side effect of theory generation, but it should be treated as one main objective and surely as an intrinsic part of methodology. Hence, aesthetic theories dealing with contemplative art should consider the practice of art reception, including the effect of theory on aesthetic perception proper. In the case of the aesthetics of artefacts and events that include the recipient's participation and (inter-)action as an intrinsic dimension of the artefact or in the case of the aesthetics of somatic activities, aesthetic experience of and in the practice must be an intrinsic part of theory formation proper. Hence, I advocate for a much tighter feedback loop between theory formation and practical skills and experiences. The latter should not only be a field for empirical investigations but should be understood as lived experiences integral to theory and theory formation, and vice versa. It just might be that a practical investigation of theoretical propositions discloses novel aspects of aesthetic experience that otherwise would be impossible to capture through theoretical discourses alone.

To make my claim concrete and plausible, the rest of the paper describes one aspect of my own theoretical and practical investigation of aesthetic experiences of and while dancing Argentine tango.

¹⁵ One puzzling aspect is that, when confronted with abstract representations of sensory and perceptual processes, we inevitably strive to concretise such propositions by drawing on our life experiences and imagination. The abstract description of the perceptual apparatus at work when experiencing a beautiful sunset or landscape evokes a concrete, yet imagined, sunset or landscape. To truly grasp Kant's dictum on the interplay between imagination and understanding (I. Kant, *Critique of the Power of Judgment*, Cambridge University Press, Cambridge 2000), I need to envision something concrete, such as a rose or a painting of a rose. I can only comprehend the perceptual formation of an aesthetic object by exemplifying it – by sensing the (imagined) colours and forms (and perhaps smells and textures) that contribute to the rose's formation in the first place. This implies that I am already engaged in aesthetic perception as we undertake this mental exercise of understanding a proposition.

¹⁶ A.G. Baumgarten, *Theoretische Ästhetik...*, op. cit., §§ 14–24.

Practice: Argentine tango

At this point, I need to explain a bit more about Argentine tango and one of my research questions. Tango is a social, coupled dance that is performed to music with specific rhythms, harmonies, and distinct sound qualities. Argentine tango dance is improvised; it does not consist of fully choreographed movements. Instead, the basis of these improvisations is a distinct technique regarding the performative and somatic relationship between the two dancers and their movements, and some paradigmatic types of moves. The movement technique has developed to afford interactions of a specific kind between the two dancers. A dance couple consists of a leader (or proposer) who initiates steps, and a follower who interprets the leader's invitations by reacting (making steps). Tango is danced at tango balls (*milongas*) during which the dancers often switch partners; one dances with many different people, including those whose ways of dancing and level of proficiency are unknown.

The fact that it consists of improvisations and that one often dances with strangers demands not only skills in these types of movement techniques, but especially awareness, decisiveness, and the ability to react almost seamlessly to the other. Not surprisingly, misunderstandings are quite common; the leader proposes or initiates a next step, but the follower does not 'understand' the proposal, which might result in a collision or another kind of disruption of the flow of movement. Experienced dancers can reconnect instantly by using the unintended and surprising situation as the starting point of a new movement. Thus, the dance unfolds depending on the dance partners' skills and moods and the music's rhythm and atmosphere. Even though tango entails some paradigmatic figures and steps, the dance partners must always be aware of each other to be able to act and react in a way that enables the seamless continuation of the dance. The goal of each tango dancer is the seamless connection to the partner that brings about the experience of dancing as one entity. In these moments, the time-distance between action and reaction becomes so tight and experientially non-existent. Individual intentional acts are transformed into one performative unity, one organism, a four-legged beast.¹⁷

Argentine tango presents itself as a well-defined arena of a distinct somatic practice that lends itself perfectly to the investigation of aesthetic experience while moving. However, there is a theoretical problem that allegedly makes it impossible to have aesthetic experiences of one's own actions. The problem can be addressed from the angle of the notion of agency that also underpins the distinction between theory (reflection) and practice (action). Why?

¹⁷ M. Kimmel, *Intersubjectivity at Close Quarters: How Dancers of Tango Argentino Use Imagery for Interaction and Improvisation*, "Journal of Cognitive Semiotics" 2012, No. 4 (1).

The problem of agency for the aesthetic pleasure of dancing

According to our Western discourse, living beings are agents that act and react in relation to their environment. At least human beings can also be conscious and reflective about their agency. However, reflection is seen as an agency in its own right, often disturbing the execution of a primary agential action. There are phenomenological approaches that negate the possibility of skilful execution of an action and a simultaneous aesthetic awareness of the action.¹⁸ Athletes often exert agency without letting their reflective consciousness follow the action. Their bodies act and react instinctively based on incorporated movement patterns. Is something similar happening for tango dancers in moments of felt unity?

In the context of social dancing, the individual dancers are normally seen as the agents of their dance movements and steps. The dance itself is seen as an emergent phenomenon based on the interaction between two agents. The music is often seen as a third agent. The music scaffolds tango dancing, it presents the rhythm and the speed, the tonality and atmosphere for each single dance.

Still, we normally (and especially when learning to dance) experience every movement of our dancing as initiated by ourselves, either as an action or a reaction to our partner's moves. Likewise, what the dancer registers and feels is their own physical, moving body and only indirectly the bodily movements of the partner; a dancer feels the partner's body and movement through their own body and its movement. Therefore, within our Western epistemic paradigm, the individual dancers are regarded as autonomous agents. One of the consequences of this notion of agency is that a dancer cannot aesthetically experience their own dancing. They can experience their actions as something exciting, gratifying, even enjoyable, etc., or conversly, as displeasing and frustrating but not as something aesthetic. This would necessitate another agential act. The aesthetic sentiment is commonly understood as the result of a distinct mode of perceiving something external to the contemplating individual; external because, as said, one cannot be the agent of an action and simultaneously being engage in aesthetic contemplation as a reflective action. Accordingly, we, as onlookers, can perceive others' dance movements as aesthetically pleasurable (or not), but not the dancer themselves.

¹⁸ S. Gallagher, *Performance/Art: The Venetian Lectures*, Mimesis International, Milan 2021; M. Merleau-Ponty, *Phenomenology of Perception*, Routledge, London 2002. Shusterman discusses this issue in his critique of Merleau-Ponty's conceptualization of the body (R. Shusterman, *Body Consciousness...*, op. cit.) and proposes the possibility to let our (aesthetic) awareness follow one's own action without sabotaging the effectiveness of the action. The phenomenologist Gallagher (*Performance/Art...*, op. cit.) also opens up for the capacity to have aesthetic experiences of one's own actions in the area of theatre and performance art. He focuses on the enhanced pre-reflective self-consciousness that is in integrated part of all intentional actions.

Yet, there are many testimonies including my own experience¹⁹ that state that dancing Argentine tango can be a beautiful and an aesthetic experience. Social dancing entails the wish to transcend one's own agency and form part of an agential unity with our dance partner. The individual agency seems distributed to another agential power. The experience of unity is supported by the music that frames joint action impulses. Regarding movement and dance, music operates through the phenomenon of entrainment that aligns the rhythm of the music with the rhythm of our body and its movements.²⁰ Furthermore, sound create sonic atmospheres and music's succession of tones also indicate spatial trajectories that have direct influence on our dance action.²¹ Skilful dancers have learned to somatically listen to music, that is, letting the music's aesthetic characteristics directly influence their movements, sidestepping volitional interpretation.

My problem was to explain theoretically what practical experience shows. However, this is not this paper's trajectory, just its framing.

The challenge of some concept(s) of extended cognition for dancing tango

I tried to solve this problem by consulting embodiment theories of cognition²², especially the enactivist approach.²³ These theories are based on the assertion that all

¹⁹ F. Heinrich, *A Somaesthetics of Performative...*, op. cit.

²⁰ R.I. Godøy, *Sound-Motion Bonding in Body and Mind* [in:] Y. Kim, S.L. Gilman (eds.), *The Oxford Handbook of Music and the Body*, Oxford University Press, New York 2019; G. Starr, *Feeling Beauty: The Neuroscience of Aesthetic Experience*, MIT Press, Cambridge 2015.

²¹ E.F. Clarke, *Ways of Listening: An Ecological Approach to the Perception of Musical Meaning*, Oxford University Press, New York 2005; G. Orgs, C. Howlin, *The Audio-Visual Aesthetics of Music and Dance* [in:] M. Nadal, O. Vartanian (eds.), *The Oxford Handbook of Empirical Aesthetics*, Oxford University Press, Oxford 2022; N. Schaffert et al., *A Review on the Relationship Between Sound and Movement in Sports and Rehabilitation*, "Frontiers in Psychology" 2019, No. 10, <https://doi.org/10.3389/fpsyg.2019.00244>; J. Schulkin, *Music and Movement: Expectations, Aesthetics, and Representation* [in:] Y. Kim, S.L. Gilman (eds.), *The Oxford Handbook of Music and the Body*, op. cit.

²² Embodiment theories within cognitive science are often grouped under the umbrella of 4E cognition theories (embodied, enacted, extended and embedded). Baumgarten conceived of aesthetics as an academic discipline as a theory of cognition. Aesthetic perception involves or is even a product of the cognitive system encompassing affects, feelings, reflections, in form of, for instance, association and recollections and, at least according to Kant, also conceptual thinking. Cognitive science has much to offer aesthetics. The field of neuro-aesthetics traces the neurological conditions of aesthetic perception.

²³ I want to emphasise that I have neither the intention nor the prerequisites to participate in the cognitive sciences in a scientific manner. Nonetheless, findings and propositions from this and other fields can be incorporated into the theories of philosophical aesthetics and serve as inspiration for aesthetic practice. The appropriation of concepts from different disciplines necessitates the translation and application of notions and discourses. Through these translations and transitions – which may even involve misunderstandings – novel perspectives can emerge. S. Gallagher, *How the Body*

organisms form part of particular and dynamic environments, and that cognition cannot be understood without taking this relation as a fundamental aspect of cognition itself. These theories furthermore elucidate that cognition is embodied and must be understood as a performative activity in relation to a concrete environment.²⁴ Not surprisingly, I found some aspects of these approaches, especially of the enactivist approach, suitable for my investigation of the aesthetic dimensions of one's own movements while dancing.

According to the enactivist approach, sensorimotor activities are a foundational part of cognition, thus cognition must also be an intrinsic part of the experience of one's own movement. Of course, the term cognition covers many mental activities and levels of consciousness, yet simple awareness of movement and conceptual thinking, such as philosophical propositions about movement, are different turnouts of the same system that connects movement, awareness, and conceptual thinking. They are actions based on the relatedness to the surrounding world, imagined or not. Accordingly, somatic activities and conceptualisations cannot be thought and realised apart. This also means that theories regarding enacted and embodied cognition do not only describe and analytically explain cognitive aspects of (in my case) aesthetic perception, but they also shape and potentially enhance soma-aesthetic experiences – such as my experience of dancing – simply because these theories entail an intrinsic, bi-directional interlacing between cognition and movement. Indeed, the whole philosophical project rests on the assumption that cognitive realisation based on reflection can change our perceptions and our behaviours by relying on the conviction that human realisation and moral volition can override bad habits and egocentric behaviour.²⁵

However, this paper's point is not to explain the aesthetics of one's own movements by applying aspects of embodiment theory, but to report on experiences that were brought about by theoretical propositions of embodiment theory. My question was very concrete: how can the proposed integral relationship between theoretical propositions and movements be actively used in practice? Can somatic practices beneficially be inspired by and even enact such propositions in a more or less direct man-

Shapes the Mind, Oxford University Press, Oxford 2005; A. Noë, *Action in Perception*, MIT Press, Cambridge 2004; F.J. Varela, E. Thompson, E. Rosch, *The Embodied Mind: Cognitive Science and Human Experience*, MIT Press, Cambridge 1992.

²⁴ There are various approaches under the umbrella term embodiment theories (F. de Vignemont, *Affective Bodily Awareness*, Cambridge University Press, Cambridge 2023) dealing with different functional dependencies between perception and the body and the cognitive system. Seen as a movement, they epitomize a change in the theory-practice distinction within cognitive science by emphasizing sensorimotor actions as medium and intrinsic part of perception and cognition.

²⁵ However, scientific research in the form of facts and causal relationships – such as the fact that human activities have decisively contributed to climate change – does not automatically lead to changes in our behaviour. Human volition appears to be less free than we like to believe; instead, it is governed by innate tendencies and learned social habits embedded within a societal system – factors that are exceedingly difficult to change.

ner, or must we rely on the belief that philosophical realisation only in an indirect, almost mystical, way can change the way we relate and act?

I explored one aspect of embodiment theories: the extended mind theory (one dimension of the 4E cognition complex). Extended mind states that cognition not only relates and refers to but also functionally incorporates objects from the actual environment. Clark & Chalmers²⁶ assert that objects can be constitutive extensions of the sentient mind, making them an intrinsic part of cognition. This foundational proposition has developed over the past twenty-five years and has yielded various explanatory models (the first wave that proposes a parity of functional mirroring between internal and extended processes, the second wave that identifies a complementarity of integrating internal and external features together in cognitive assemblages, or the third wave that proposes a redistribution of agency affecting the development of cognitive capacities over time.²⁷ Without going into much depth, I will present some aspects of this third wave extended mind theory because it fits to my investigation. The third wave proposes a much more performative, transformative relation between the cognising body and external objects and events (find a presentation in Ryan & Schiavio²⁸). Some proponents of the third wave focus much more on the performative qualities of actions as an effect of extended cognition. Prosen asserts that the borders of a sensorimotor system are constituted by the manner of coupling; “the operational boundary of the autonomous agent can come to incorporate all manner of external media.”²⁹ It can also incorporate gestures and actions of other persons and is not delimited by the objects and notes of Clark and Chalmers’ first example. Also social interactions can be seen as examples of an extension of the mind; this questions the notion of the autonomy of an agent.³⁰ Important for my trajectory is that a cognising organism must be seen as an integral part of a dynamic interaction system that includes its environment.

Let me be more concrete: dancing with a partner makes my dance partner an integral part of my cognition. Their and my corporality and movements establish an interaction system or organisation that is based on the dancers’ mutual observations. Another important part is, as already mentioned, the music and its direct affect in terms of feelings and action tendencies. But let me focus on the interaction with the dance partner. Seen from the perspective of the dance as interaction, the purpose of cognition is to decide on and initiate my next dance steps to secure the continuation

²⁶ A. Clark, D. Chalmers, *The Extended Mind*, “Analysis” 1998, No. 58, pp. 7–19.

²⁷ M.D. Kirchhoff, *Extended Cognition and Fixed Properties: Steps to a Third-wave Version of Extended Cognition*, “Phenomenology and the Cognitive Sciences” 2012, No. 11.

²⁸ K. Ryan, A. Schiavio, *Extended Musicking, Extended Mind, Extended Agency. Notes on the Third Wave*, “New Ideas in Psychology” 2019, No. 55, p. 11, <https://doi.org/10.1016/j.newideapsych.2019.03.001>.

²⁹ T. Prosen, *A Moving Boundary, a Plastic Core: A Contribution to the Third Wave of Extended-Mind Research*, “Constructivist Foundations” 2022, No. 17 (3), p. 225.

³⁰ S. Gallagher, *Social Interaction, Autonomy and Recognition* [in:] L. Dolezal, D. Petherbridge (eds.), *Body/Self/Other: The Phenomenology of Social Encounters*, Routledge, Albany 2017.

of the dance. Dancing is dependent on my imagination, which is my ability to recall and envision in order to select, order, or adjust dance movements to fit the concrete situation. Here, cognition supports my status as an agent while dancing.

What happens when I try to apply the extended cognition theory to simple tango dance steps? The embodiment theory of extended cognition asserts that I perceive the dance partner's movements not only while but also because I am moving myself.³¹ This is particularly evident in social dance such as tango. From the outset, I am not standing still and waiting to sense my dance partner's movement to react thereafter. I am sensing my partner while I am moving because my bodied 'I' is reacting almost instantly to my partner; otherwise, the dance would feel very fragmented and not aligned. While dancing, I am sensing my partner in a specific way because I am moving. The sensations (comprising not only the movements in space but also the feel of the skin, the volume and height of the body, the smell etc.) contribute to selecting and shaping the ongoing movement. I am moving because I am sensing my partner's movement as part of my embodied 'I-in-action'. Considering the extended cognition theory (and my own experience of dancing), my dance partner's movements are incorporated into my movement and thus into my body and mind; they become an intrinsic part of my movement and sensory perception of the movement. And vice versa, I also *excorporate*³² my body movement by offering it to be part of my partner's movements.

To be danced by the dance

All this sounds very abstract and somehow constructed because we discursively still consider the physical body as the locus of our agency. But it is palpably concrete. For instance, before making a dance step forward, I must initiate the movement by projecting my intention (which is not only a mental but also a bodily impulse) towards my partner. The embrace used in social dancing supports the direct transmission of impulses. The partner senses my impulse by incorporating it as a step backwards. When dancing is aligned and seamless, my partner senses by making a step. Likewise, their step backwards creates a kind of perceptual and agential drag in me and yields my step forwards. I am not waiting to realise my partner's backwards step (that is creating a mental image of the action) prior to reacting; no, I sense by reacting because their movement is part of my felt body. Almost every tango step could be presented in this way. When in flow, both dancers *ex-corporate* and incorporate the other's movements. The other's action becomes a part of my experience of the dance and a part of the formation of the next steps in space and their qualities (energy, speed, rhythms etc.).

³¹ A. Noë, *Action in Perception*, op. cit.

³² See also Schmitz's terms "incorporation" and "excorporation" (Schmitz, 2015) with which he tries to extend the lived body beyond its physical limits.

This makes the agential status theoretically difficult: who is the agent? Of course, one could say that the dance partners divide the task and take turns in applying agency. Kimmel characterises it as micro-coordination.³³ Sometimes, in extraordinary moments, the coordination between the dancers gets very tight; the interactions are felt as happening simultaneously. In these cases, the question is whether we still can talk and, more importantly, sense the division of labour? If not, what is initiating this micro-coordination? One could claim that dancing together yields another emergent agential level where the interaction proper exerts agency – all the while I have the feeling that I am conceiving and executing the dance steps. Something similar has been put forward by proponents of enactivism under the headline of participatory sense-making. “Social interaction is the regulated coupling between at least two autonomous agents, where the regulation is aimed at aspects of the coupling itself so that it constitutes an emergent autonomous organization in the domain of relational dynamics, without destroying in the process the autonomy of the agent involved.”³⁴ There are some elaborations of this assertion (e.g., Gallagher, 2007) and applications to dancing.³⁵ However, I am interested in the practical consequences of this assertion. How do I as a practitioner deal with this proposition? How could academic propositions such as some aspects of the extended mind theory and participatory sense-making enhance my aesthetic experience?³⁶

Evidently, by enacting the proposition, by dancing it, that is, by somehow transforming it into an aesthetic experience. But how? How can I distribute my agency—that defines me as an autonomous being, a subject – voluntarily to another authority that is not even a human being but an occurrence (or, worse, a mental construct)? How can I let go while initiating and reacting to dance steps? This seems almost like a puzzle, a Zen koan³⁷ – and it just might be one.

³³ M. Kimmel, *A Cognitive Theory of Joint Improvisation: The Case of Tango Argentino* [in:] V. Middelgouw (ed.), *The Oxford Handbook of Improvisation in Dance*, Oxford University Press, Oxford–New York 2019, pp. 563–589.

³⁴ H. Jaegher, E. Di Paolo, *Participatory Sense-Making: An Enactive Approach to Social Cognition*, “Phenomenology and Cognitive Science” 2007, No. 6, p. 493.

³⁵ F. van Alphen, *Tango and Enactivism: First Steps in Exploring the Dynamics and Experience of Interaction*, “Integrative Psychological & Behavioral Science” 2014, No. 48 (3), pp. 322–331, <https://doi.org/10.1007/S12124-014-9267-1>; S. Ravn, *Improvisations in Argentinian Tango* [in:] V. Middelgouw (ed.), *The Oxford Handbook of Improvisation in Dance*, op. cit., pp. 297–310.

³⁶ The overall objective of cognitive science is to accurately describe and explain how cognition functions through observations, tests, and analyses of the resulting data. Findings are often formulated as hypotheses and theories intended to explain the observed phenomena. But that does not necessarily mean that our experience of cognitive reality aligns with the proposed hypotheses. Our experience is shaped by socio-cultural discourses. Applying the extended mind theory to my tango practice involves challenging my habitual way of experiencing myself and my environment. This could enhance my aesthetic perceptual capacity.

³⁷ A Zen koan is a difficult, often paradoxical, question given by a Zen master to his apprentice. It is a pedagogical means that helps the trainee to practice attention, focus and understanding by forcing the trainee to leave habitual thinking and action patterns. There is often no one correct answer to a koan, but there is always one correct, personal response.

At some point during my attempts to solve this puzzle, I began to focus on my awareness of the unfolding dancing by being an observer of my own and my partner's movements and of the interaction between my dance partner and me. I call this performative awareness because it is an awareness of the ongoing (inter-)action including or connected to my sensorial state (proprioception, interoception). It is a panoramic and qualitative awareness. This is not an easy thing to do, especially while learning to dance because learning means to take agential control of the ongoing action. But once one has built up a certain repertoire of basic steps, once the technique and paradigmatic moves have been sedimented and have become embodied memory ("kinaesthetic melodies," to use Sheets-Johnstone's term³⁸, the distribution of agency to the interaction is possible. Performative awareness necessitates the acceptance that movements are initiated – or felt initiated – elsewhere than by my own volition. Once one lets go of the urge and will to initiate and control the dance, there is space for performative awareness.

One entry in my logbook reads: "One can only dance anew when the dance is sedimented in the body. Only then does one have time to observe oneself, not from an external position, but from a position in-between myself and the other. It's an awareness that expands the limits of the body. It is part proprioception (kinaesthesia) and yet tied to the (re-)actions of the others. Maybe it can be best described as an energy field between agents" (Heinrich, logbook 29.05.2021). And another, "[f]ocus is on listening, bodily listening without forcing the focus: find a state of awareness where impulses appear and affect my body-mind without agential force [...]"³⁹ (Heinrich, logbook 22.01.2022).

This panoramic awareness adds another dimension to the experience of dancing, it contributes to the ecstatic feeling of being danced, not by the dance partner and their agency, but by the dancing itself. Here, it is not important to clarify whether this physiologically actually happens; it is enough to assert that I (sometimes) experience it this way.⁴⁰ To let one's awareness follow the unfolding interactions one is an integrated part of, discloses the field of aesthetic experiences while dancing. This is a pleasurable experience of dancing as an integrated part of the dance proper. The altered and enhanced awareness changes not only my experience of dancing but also my dancing. It becomes lighter, the steps seem to produce themselves and there is

³⁸ M. Sheets-Johnstone, *Thinking in Movement*, "Journal of Aesthetics and Art Criticism" 1981, No. 39 (4), pp. 399–407.

³⁹ I wrote this entry after dancing the role of the follower (or interpreter, traditionally danced by the woman). I also rehearse this role to complete my understanding and experience of dancing this dance. The pleasure of this role is that the follow is not in charge of forming the dance but to interpret the initiating moves of the leader (proposer). However, the role of leader is not a hindrance to this enhanced, panoramic awareness while dancing.

⁴⁰ There are attempts to find explanations for the aesthetic experience of one's own actions (S. Gallagher, *Performance/Art...*, op. cit.). I am working on an theory that can explain this aesthetic experience on the basis of Dewey's pragmatic aesthetics complemented by propositions made by enactivism (F. Heinrich [forthcoming], *A Pragmatic and Somaesthetic Account of Performative Beauty*).

a flow of aligned movements even if the quality of the dancing (in alignment with the music) might be sad, dark, or melancholic.

To be an aesthetic onlooker to one's own actions is not a passive attitude where one just executes already determined movements like a puppet. Aesthetic awareness enables the dancer to modulate and adjust the interaction to the actual context, for instance, to the music, the movement qualities of the dance partner, the other dancing couples on the floor. But awareness is not attention. The latter is experienced as an intentional focus on distinct things, the former registers relationships and energies. One entry in my logbook describes this as “[p]ure aligned movements, dance of energies almost without bodies” (Heinrich, logbook 5.07.2019). The body has become a body-in-action that is perceived as continuous transformations, fluctuating energies in space and time.

Of course, one does not need embodiment theory and the notion of extended cognition to discover the aesthetic experience of being danced by the dancing. Many hours of practice train a dancer's extended cognitive system. The dancing incorporates more and more external elements such as the music and the energies and movements of the partner. This might eventually yield the feeling of being danced and the possibility of letting the awareness follow the flow of action-reaction cycles initiated by the dancing proper. Argentine tango and other coupled dances and somatic practices have evolved to support this kind of transaction between partners. Kimmel writes that the tango technique and its figures scaffold actions in which the partner and the music become constituents of the extended mind-in-action.⁴¹ One could add many more aspects of tango culture. Ryan and Schiavio⁴² term this “performance niches” (in their analysis of extended mind theory in the context of music performances).

However, the rather abstract propositions of extended mind theory impelled me to actively experiment with the concretisation of them through my own practice. It has become a praxis, here not understood as the application of theory to practice (as put forward by, for instance, Arendt⁴³) but rather as a mutual diffusion, where theory becomes filled with recalled actions and action becomes reflective and bulging with awareness. Evidently, I did not ponder theories while dancing, but theoretical challenges spurred my awareness-in-action not necessarily to find theoretical answers but to find experiences that might help to make theoretical proposition more tangible. I learned to sense more precisely and differentiated. For me, some of the explanations of extended cognition became a leverage to discover that performative awareness of my own dance movement can yield aesthetic pleasures.

Hence, my practice is the personal verification of a hypothesis that normally is verified theoretically by looking for possible theory-internal, logical contradictions. A tighter integration of theory formation and practical actions and skills transforms every theoretical proposition into a hypothesis or preliminary conceptualis-

⁴¹ M. Kimmel, *A Cognitive Theory of Joint Improvisation...*, op. cit., p. 570.

⁴² K. Ryan, A. Schiavio, *Extended Musicking, Extended Mind...*, op. cit.

⁴³ H. Arendt, *The Human Condition*, The University of Chicago Press, Chicago 2018.

ation that must be verified by the academic investigator's practice. But such kind of verifications can never be final and, if the preliminary concept is poignant enough, must be repeated and verified, time and time again. Repetitions further, firstly, a theoretical realisation through differentiations and specifications; these differentiations can be seen as common analytical topology for both theory and practice. Secondly, repeated practical verifications of theoretical claims surely also heighten practical proficiencies and might ultimately bring about aesthetic pleasures, which, to repeat, must be the pragmatic aim⁴⁴ of any aesthetic theory. Thus, my practice is more than a verification, it is an aesthetic experience itself, which is the most important thing.

Opening open doors

While reading and reflecting on a distinct proposition of embodiment theory, the (embedded) body of the reader/thinker is necessarily activated to imagine and even verify or falsify the propositions made on behalf of the body. Thus, embodied practice must be an intrinsic part of forming and discussing a theory (not only theories on embodiment). Through my investigation of the somatic activity of dancing, I found myself in the situation to practically experiment with theoretical propositions and their potential significances for practice. I came to realise that the common ground for both embodiment theories and somatic practices is the enhancement of awareness. In my case, a performative awareness that enhances the aesthetic experience of dancing Argentine tango. This sounds very simple and rather naïve, but it nevertheless helped me to intensify aesthetic pleasures while dancing. In a feedback loop, performative awareness enabled me to come up with propositions about the aesthetics of dancing (for instance, about the beauty of dancing.⁴⁵ Performative awareness (or reflection-in-action) harbours both aesthetic sentiments and proto-theoretical realisation. Aesthetic sentiments and proto-theoretical realisation are two sides of one coin (at least in the field of aesthetics). However, proto-theoretical and aesthetic experiences of action are based on skill. This skill of dancing tango is not measured by the ability to perfectly perform many dance figures; rather, it is a somatic skill (founded on the technique of Argentine tango that allows for the distribution of agency to the interaction at hand thus creating space for aesthetic awareness.

The theoretical contentions, I am considering here, are not new. Nietzsche⁴⁶ wrote about rapture (Germ.: *Rauch*) as a poetic, creative state in which agency is distributed to the artwork in its becoming. Later, Dewey (1980) pointed to aesthetic experience as the experience of a felt unity between the human being and its surrounding includ-

⁴⁴ Surely, there are also other motives for engaging with a distinct practice besides aesthetic ones. However, I am only discussing the theoreticians' relationship to the practical dimensions of their subject fields.

⁴⁵ F. Heinrich, *How Can There Be Beauty in Participatory Art?*, "Journal of Somaesthetics" 2020, No. 6 (1), pp. 53–64; F. Heinrich, *A Somaesthetics of Performative...*, op. cit.

⁴⁶ F. Nietzsche, *Der Wille zur Macht*, Kröner Verlag, Leipzig 1917.

ing sense-perception, action, and reflection. Recently, Noë, Jaegher et al., Gallagher, Lakoff and Johnson, Montero⁴⁷ and many others have written on the importance of the acting and situated body as an integrated part of cognition. Sheets-Johnstone⁴⁸ has written on the importance of kinaesthetic experiences for cognition. 600 years ago, the Japanese actor and director of No theatre, Zeami, wrote about something similar. He required from the actor that he should observe his own acting from behind while fully engaged in the action (quite contrary to what Stanislavskij demanded).⁴⁹

However, my theoretical and practical investigation did not only discuss existing propositions and (re-)discover the importance of aesthetic awareness as a skill alongside the skill to produce tango dance movements, but, much more important for me, actual aesthetic experiences while dancing. This is opening doors others already seem to have opened. The paradoxical metaphor of opening open doors entails two intertwined but different facets: one is that of understanding and the other of practical life and living practice. Living (and learning) most often means re-enacting the thoughts and experiences others have already had and disseminated as ideas and theories. Reading and understanding does not mean opening the open door; the understanding must be realised (manifested and incorporated) by my actions in life. Thus, the very act of opening opened doors is important – and in the case of dancing tango also pleasurable. The overall objective of this paper was to point to one aspect of research that is often forgotten and that does not have a proper or neglected place in research: the importance and significance of the possible practical upshots of theoretical propositions in researcher's life.

References

- Adams T., Jones S.H., Ellis C., *Autoethnography*, Oxford University Press, Oxford 2015.
 Allen-Collinson J., *Autoethnography as the Engagement of Self/Other, Self/Culture, Self/Politics, and Selves/Futures* [in:] S.J. Holman, T.E. Adams, C. Ellis, *Handbook of Autoethnography*, Left Coast Press, Walnut Creek 2013, pp. 281–299.

⁴⁷ A. Noë, *Action in Perception*, op. cit.; idem, *Strange Tools: Art and Human Nature*, Farrar, Strauss & Giroux, New York 2016; H. Jaegher, E. Di Paolo, *Participatory Sense-Making...*, op. cit.; H.D. Jaegher, E.D. Paolo, S. Gallagher, *Can Social Interaction Constitute Social Cognition*, "Trends in Cognitive Sciences" 2010, No. 14 (10); S. Gallagher, *How the Body Shapes the Mind*, op. cit.; G. Lakoff, M. Johnson, *Metaphors We Live By*, The University of Chicago Press, Chicago 1987; B.G. Montero, *Proprioception as an Aesthetic Sense*, "The Journal of Aesthetics and Art Criticism" 2006, No. 62 (2); idem, *Practice Makes Perfect: The Effect of Dance Training on the Aesthetic Judge*, "Phenomenology and the Cognitive Sciences" 2012, No. 11 (1); idem, *Thought in Action*, Oxford University Press, Oxford 2016.

⁴⁸ M. Sheets-Johnstone, *Embodied Minds or Mindful Bodies? A Question of Fundamental, Inherently Inter-related Aspects of Animation*, "Subjectivity" 2011, No. 4 (4), pp. 451–466.

⁴⁹ Zeami, *Blumenspiegel (Hama-no-kagami)*, Kommissionsverlag Otto Harrassowitz, Tokyo 1953.

- Alphen F. van, *Tango and Enactivism: First Steps in Exploring the Dynamics and Experience of Interaction*, “Integrative Psychological & Behavioral Science” 2014, No. 48 (3), pp. 322–331, <https://doi.org/10.1007/S12124-014-9267-1>.
- Arendt H., *The Human Condition*, The University of Chicago Press, Chicago 2018.
- Baumgarten A.G., *Theoretische Ästhetik – Aesthetica*, Felix Meiner Verlag, 1750.
- Borgdorff H., *The Production of Knowledge in Artistic Research* [in:] M. Biggs, H. Karlsson (eds.), *The Routledge Companion to Research in the Arts*, Routledge, New York 2010.
- Clark A., Chalmers D., *The Extended Mind*, “Analysis” 1998, No. 58, pp. 7–19.
- Clarke E.F., *Ways of Listening: An Ecological Approach to the Perception of Musical Meaning*, Oxford University Press, New York 2005.
- Dewey J., *Art as Experience*, Perigee Books, New York 1980.
- Dewey J., *Experience and Nature*, Dover Publications, New York 1998.
- Dewey J., Bentley A., *Knowing and the Known*, Beacon Press, Boston 1948.
- Gallagher S., *How the Body Shapes the Mind*, Oxford University Press, Oxford 2005.
- Gallagher S., *Simulation Trouble*, “Social Neuroscience” 2007, No. 2 (3–4), pp. 353–365, <https://doi.org/10.1080/17470910601183549>.
- Gallagher S., *Social Interaction, Autonomy and Recognition* [in:] L. Dolezal, D. Petherbridge (eds.), *Body/Self/Other: The Phenomenology of Social Encounters*, Routledge, Albany 2017.
- Gallagher S., *Performance/Art: The Venetian Lectures*, Mimesis International, Milan 2021.
- Godoy R.I., *Sound-Motion Bonding in Body and Mind* [in:] Y. Kim, S.L. Gilman (eds.), *The Oxford Handbook of Music and the Body*, Oxford University Press, New York 2019.
- Heinrich F., *A Somaesthetics of Performative Beauty – Tangoing Desire and Nostalgia*, Routledge, New York–London 2023.
- Heinrich F., *How Can There Be Beauty in Participatory Art?*, “Journal of Somaesthetics” 2020, No. 6 (1), pp. 53–64.
- Heinrich F. (forthcoming), *A Pragmatic and Somaesthetic Account of Performative Beauty*.
- Jaegher H., Di Paolo E., *Participatory Sense-Making: An Enactive Approach to Social Cognition*, “Phenomenology and Cognitive Science” 2007, No. 6, pp. 485–507.
- Jaegher H.D., Paolo E.D., Gallagher S., *Can Social Interaction Constitute Social Cognition*, “Trends in Cognitive Sciences” 2010, No. 14 (10).
- Kant I., *Critique of the Power of Judgment*, Cambridge University Press, Cambridge 2000.
- Kimmel M., *A Cognitive Theory of Joint Improvisation: The Case of Tango Argentino* [in:] V. Midgelow (ed.), *The Oxford Handbook of Improvisation in Dance*, Oxford University Press, Oxford–New York 2019, pp. 563–589.
- Kimmel M., *Intersubjectivity at Close Quarters: How Dancers of Tango Argentino Use Imagery for Interaction and Improvisation*, “Journal of Cognitive Semiotics” 2012, No. 4 (1).
- Kirchhoff M.D., *Extended Cognition and Fixed Properties: Steps to a Third-wave Version of Extended Cognition*, “Phenomenology and the Cognitive Sciences” 2012, No. 11.
- Lakoff G., Johnson M., *Metaphors We Live By*, The University of Chicago Press, Chicago 1987.
- McNiff S., *Art-Based Research*, Jessica Kingsley Publishers, London 1998.
- Menninghaus W., Wagner V., Wassiliwizky E., Schindler I., Hanich J., Jacobsen T., Koelsch S., *What Are Aesthetic Emotions?*, “Psychological Review” 2019, No. 126 (2).
- Merleau-Ponty M., *Phenomenology of Perception*, Routledge, London 2002.

- Montero B.G., *Practice Makes Perfect: The Effect of Dance Training on the Aesthetic Judge*, “Phenomenology and the Cognitive Sciences” 2012, No. 11 (1).
- Montero B.G., *Proprioception as an Aesthetic Sense*, “The Journal of Aesthetics and Art Criticism” 2006, No. 62 (2).
- Montero B.G., *Thought in Action*, Oxford University Press, Oxford 2016.
- Nietzsche F., *Der Wille zur Macht*, Kröner Verlag, Leipzig 1917.
- Noë A., *Action in Perception*, MIT Press, Cambridge 2004.
- Noë A., *Strange Tools: Art and Human Nature*, Farrar, Strauss & Giroux, New York 2016.
- Orgs G., Howlin C., *The Audio-Visual Aesthetics of Music and Dance* [in:] M. Nadal, O. Vartanian (eds.), *The Oxford Handbook of Empirical Aesthetics*, Oxford University Press, Oxford 2022.
- Prosen T., *A Moving Boundary, a Plastic Core: A Contribution to the Third Wave of Extended-Mind Research*, “Constructivist Foundations” 2022, No. 17 (3).
- Ravn S., *Improvisations in Argentinian Tango* [in:] V. Midgelow (ed.), *The Oxford Handbook of Improvisation in Dance*, Oxford University Press, Oxford–New York 2019, pp. 297–310.
- Ryan K., Schiavio A., *Extended Musicking, Extended Mind, Extended Agency. Notes on the Third Wave*, “New Ideas in Psychology” 2019, No. 55, pp. 8–17, <https://doi.org/10.1016/j.newideapsych.2019.03.001>.
- Schaffert N., Janzen T.B., Mattes K., Thaut M.H., *A Review on the Relationship Between Sound and Movement in Sports and Rehabilitation*, “Frontiers in Psychology” 2019, No. 10, <https://doi.org/10.3389/fpsyg.2019.00244>.
- Schmitz H., *Der Leib, der Raum und die Gefühle*, Aisthesis Verlag, Bielefeld 2015.
- Schulkin J., *Music and Movement: Expectations, Aesthetics, and Representation* [in:] Y. Kim, S.L. Gilman (eds.), *The Oxford Handbook of Music and the Body*, Oxford University Press, New York 2019.
- Sheets-Johnstone M., *Embodied Minds or Mindful Bodies? A Question of Fundamental, Inherently Inter-related Aspects of Animation*, “Subjectivity” 2011, No. 4 (4), pp. 451–466.
- Sheets-Johnstone M., *Thinking in Movement*, “Journal of Aesthetics and Art Criticism” 1981, No. 39 (4), pp. 399–407.
- Shusterman R., *Body Consciousness: A Philosophy of Mindfulness and Somaesthetics*, Cambridge University Press, Cambridge 2008.
- Shusterman R., *The Adventures of the Man in Gold*, Éditions Hermann, Paris 2017.
- Sterr G., *Feeling Beauty: The Neuroscience of Aesthetic Experience*, MIT Press, Cambridge 2015.
- Sullivan G., *Art Practice as Research: Inquiry in Visual Arts*, Sage Publications, Los Angeles 2010.
- Varela F.J., Thompson E., Rosch E., *The Embodied Mind: Cognitive Science and Human Experience*, MIT Press, Cambridge 1992.
- Vignemont F. de, *Affective Bodily Awareness*, Cambridge University Press, Cambridge 2023.
- Zeami, *Blumenspiegel (Hama-no-kagami)*, Kommissionsverlag Otto Harrassowitz, Tokyo 1953.