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The Phenomenology of the Body Schema and Contemporary Dance Practice: The Example of "Gaga"

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ABSTRACT

In recent years, the notion of the body schema has been widely discussed, in particular in fields connecting philosophy, cognitive science, and dance studies, as it seems to have bearing across disciplines in a fruitful way. A main source in this literature is Shaun Gallagher's distinction between the body schema—the "pre-noetic" conditions of bodily performance—and the body *image*—the body as intentional object—, another is Merleau-Ponty's writings on the living body, that Gallagher often draws upon. In this paper, I will first discuss Gallagher's presumed clarification of body schema–body image, and discuss a recent critique by Saint Aubert (2013), who evaluates it against the backdrop of Merleau-Ponty's thoughts on this issue. While I believe that Saint Aubert's criticism overshoots the mark, it is useful for a clarification of Gallagher's analysis and points to a problematic feature, namely the alleged inscrutability of the body schema to phenomenological reflection. This is particularly interesting in relation to contemporary dance and performance practice, where working with—and against—habitual structures is a core element. Certain contemporary training techniques are explicitly aimed at raising awareness of those bodily aspects that condition movement and expression—that Gallagher sees as pertaining to the body *schema*—and that in ordinary activities often remain hidden. In order to clarify the role that reflection on our own body and its habitual patterns plays in contemporary dance practice, I will examine the movement language and improvisation practice "Gaga," where this aspect is arguably fundamental.

KEYWORDS

body schema; body image; bodily awareness; bodily reflection; dance; skilled performance; Gallagher; Merleau-Ponty

In recent years, the notion of the body schema has been widely discussed, in particular in fields connecting philosophy, cognitive science, and dance studies, as it is a concept that seems to have bearing across disciplines in a fruitful way.[1] A main source in this literature is Shaun Gallagher's writings, particularly his distinction between the body schema and the closely related concept of the body *image*, another is Merleau-Ponty, whose ideas on the living body Gallagher often draws upon. The conceptual distinction between body schema and body image has served as an analytical tool in a number of analyses concerning human motricity, artistic performance and dance.[2] A cluster of questions that have been discussed relate to the manner that the body is given to the performer, to what extent and through what means we are conscious of it, and whether we *should* be conscious of the body in expert performance.[3]

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These issues are particularly interesting in relation to contemporary dance and performance practice, where working with—and against—habitual structures is a core element. The dancer today is to a large extent in charge of her own training, moving between techniques and participating in the creation of choreographies. Certain contemporary training techniques are explicitly aimed at raising awareness of those bodily aspects that condition movement and expression—that Gallagher sees as pertaining to the body *schema*—and that for the most part, in ordinary activities, remain hidden.

Still, there is some confusion regarding how the notions body schema–body image are to be understood, if applied to the performer's experience and practice. Saint Aubert has recently inveighed against Gallagher's analysis, both as an interpretation of Merleau-Ponty's ideas, and judged in terms of its fruitfulness for the philosophical understanding of the living body and of the intimate relation between perception and motricity. While I believe that Saint Aubert's criticism overshoots the mark, it is useful for a clarification of Gallagher's analysis and points to a problematic feature, namely the alleged inscrutability of the body schema to phenomenological reflection. If the body schema is to serve the account of skilled performance, it must in certain respects have a phenomenology. By this I mean not only, as occasionally suggested by Gallagher, present in a pre-reflective experience, but also sometimes given as such.

In this paper, I will first discuss Gallagher's presumed clarification of the body schema/body image distinction and examine Saint Aubert's assessment, in relation to Merleau-Ponty's thought. Although not primarily intended as an interpretation of the Merleau-Pontyan notion, Gallagher often presents his analysis with reference to and as in accordance with Merleau-Ponty's ideas. Further, I agree with Saint Aubert that the French phenomenologist's thoughts on the role of the body in cognitive and expressive processes are too rich to be left to historians, and can provide important insights into these issues. Moreover, Gallagher's methodological integration of empirical studies, particularly of pathological conditions, into a philosophy of embodied mind is a work in Merleau-Ponty's spirit, avoiding "reductions of either the phenomenological or the empirical variety [of method]."[4]

Against this backdrop, I will in the second part of the paper consider the phenomenology of the body schema, inspired by Dorothée Legrand, Susanne Ravn and others, who in their analyses of skilled performance have drawn on expert performers' experience as an alternative to studying pathological cases. In order to clarify the role that reflection on our own body and its habitual patterns plays in the practice of the contemporary dancer,[5] I will examine one current example of training for dancers: the movement language and improvisation practice "Gaga" where this aspect is arguably fundamental.

1. Gallagher: clearing up a conceptual confusion

The notion of body image/schema has been in use since the turn of last century[6] in a wide range of disciplines: neurology, psychiatry, psychology, psychoanalysis and, through Merleau-Ponty, phenomenologically inspired philosophy. Gallagher reviews a number of studies employing variants of this notion from their early proponents otologist Pierre Bonnier, neurologist Henry Head and neuropsychiatrist Paul Schilder, to more recent examples, and concludes that it is employed in a confusing way, and made to perform too

many and too disparate functions.[7] In studies drawing on Merleau-Ponty, the confusion is to some extent due to the 1962 translation of the French *schéma corporel* in Merleau-Ponty's *Phenomenology of Perception* to "body image."[8]

From Gallagher's perspective, much of the bewilderment hinges on the question whether and how we are conscious of the body image/schema. He therefore proceeds to distinguish between the two notions, with the body image as an intentional object, that we have "conscious awareness" of, and the body schema a "non-conscious" bodily performance.[9] The former is, then, an aspect of our body given as object of awareness or reflection, as in an experimental situation, or in "limit-situations," such as experiences of pain, pleasure, illness, situations of learning or physical challenges.[10] As an object of consciousness, the body appears as *mine*, and as separable from its environment. Further, the body image can be perceptual, and usually concerns a part of the body; it is thus often abstract or partial, Gallagher claims. As such, it involves a "conceptual construct," the understanding of our body in scientific or mythical terms, and also an emotional aspect: the attitude that I take towards my body, how I feel about it.[11] These three aspects are not completely separable—my attitudes can be the result of my knowledge, the perception distorted by my feelings and so on—but can still be distinguished analytically.

The bodily schema is less straightforwardly described by Gallagher. In an early article, he characterises it as a non-conscious performance of the body, where it acquires a "certain style or organization" in relation to its environment.[12] The schema involves physiological processes, but also the way the body lives and adjusts to its surroundings on a pre-reflective level, as when a woman—in Head's famous example—integrates even the feather on top of her hat in her bodily structure, so that she does not need to calculate the distance between the feather and the objects it might bump into.[13] Further, the body schema functions holistically, in intimate connection with its environment; for this reason, it is anonymous and subpersonal: only in becoming a thematic object for consciousness, and thus a body *image*, does it appear as mine, as my own.[14]

Gallagher also terms the body schema "prenoetic," since it both conditions and constrains conscious and cognitive processes.[15] It represents a fundamental aspect of mind's embodiment, and can therefore play an important role in neurocognitive and philosophical accounts of cognition. Through his own work together with psychologists, neuroscientists, psycholinguists, etc., Gallagher has put the body image/body schema distinction to work in order to understand pathological phenomena such as phantom limbs and deafferentation,[16] as well as neonate imitation and the functioning of gestures.

For Gallagher, the body schema is non-conscious in two senses: first, it is based on physiological processes and neural activity that are not accessible to consciousness, but function as presuppositions of conscious and mindful activity. Second, when we engage in the world, we are directed to the environment and its objects and not to our body. If our activities are to function smoothly, we cannot be focused on the performance of them, on Gallagher's view. However, the body schema is constituted by physiological processes and behavioural performances that can to some extent become objects of conscious awareness, but then they

stand out in the form of body *image*, "an incomplete and inconstant representation of the body."[17] The latter also appears as "abstract and disintegrated," in contrast with the holistic and unowned body schema.[18]

In Gallagher's more recent work, the distinction is formulated in terms of two *systems*: the body image as a system of "perceptions, attitudes and beliefs pertaining to one's own body," and the body schema one of "sensory-motor capacities that function without awareness or the necessity of perceptual monitoring."[19] These capacities are partly innate, partly developed through practice and the latter system is therefore dynamic, regulating further movement and action in relation to the environment. Further, it provides an interrelation between the different sense modalities, and helps structuring our experience of the world we engage in. This also explains the fundamental connection between self and other; the body schema is from the very beginning[20] developed in exchange with others (mother, parent, sibling, etc.).

If the body schema for Gallagher operates beyond awareness, this does not mean that it is reducible to neurological functioning or physiology. The body is not simply an automatism, but organizes its environment actively in relation to its tasks, in line with "pragmatic concerns."[21] Perceptual and motor activity together constitute an intentional project that cannot be reduced to a neurological account; thus, Gallagher disapproves of the view common among neuroscientists, that the body schema is a "set of neural 'representations' of the body and the bodily functions in the brain."[22] On the other hand, the prenoetic function of the body schema is "impenetrable to phenomenological reflection."[23] For this reason, the understanding of the body schema needs to be worked out with the help of interdisciplinary methods, using resources from both phenomenology, philosophy of mind and cognitive neuroscience.

2. Saint Aubert: the "amputated" notion of body schema

In his book from 2013, Saint Aubert criticises Gallagher's conceptual clarification, arguing that the clear-cut distinction or dichotomy resulting from Gallagher's analysis entails an "amputation" of the notion of the body schema.[24] It is thereby incompatible with Merleau-Ponty's approach, and even constitutes a "considerable regression" in relation to the founders of modern neurology.[25] In Saint Aubert's words, the point of the notion of the body schema was to clarify the "*unity* of perceptual, motor and expressive possibilities of the animal body,"[26] and that unity is torn apart by Gallagher's analysis.

Further, for Saint Aubert, the very idea of conceptual clarification is in sharp contrast to philosophical thought, at least if the clarification consists in definition in the proper sense of the term.[27] He maintains that there is a sharp contrast between the "density" of philosophical concepts and the rigorous, formalized functions of science.[28] In his reading of Merleau-Ponty, Saint Aubert gives prominence to the French phenomenologist's figurative and "analogising" writing, that lets the concepts "work" within a "web of phenomena" and in the end become "topological figures" rather than concepts.[29]

Here two related questions can be posed: first, is Saint Aubert's account of Merleau-Ponty's thought on these issues adequate, and second, does he give a fair interpretation of Gallagher's theory of the body schema? As for the first question, it is true that Merleau-Ponty emphasizes the importance of "fluid" notions, whose meanings are not rigidly

fixed in advance, and that his often metaphorical style must be taken as part of his philosophical argument.[30] However, this does not imply that such notions should not be critically examined and clarified, not even if we limit ourselves to exegesis of Merleau-Ponty's thought. It is also hard to see how Merleau-Ponty could have aimed for dialogue with the empirical sciences of his time if he had held such an antagonistic view of the relation between philosophy and science that Saint Aubert suggests, where the concepts of science are "univocal by necessity," comparable to mathematical functions, which are "foreign" to philosophy in general and Merleau-Ponty's thought in particular.[31] Yet, when Merleau-Ponty introduces the notion of the body schema in *Phenomenology of Perception*, he remarks that it is an "ambiguous [notion], as are all concepts that appear at turning points in *science*."[32] Moreover, this is only the preamble to Merleau-Ponty's scrutiny of this notion; he calls attention to the fact that such ambiguous concepts must be developed through "a reform of methods" and traces the transformations of meaning this particular notion has gone through.[33]

Furthermore, famous as he may be for his criticism of dualistic ontologies, Merleau-Ponty is incontestably not alien to *dual* terminologies—as in the well-known distinctions between speaking speech and spoken speech, living historicity and empirical historicity, etc.—which are related dialectically rather than in a dichotomic fashion.[34] And even though the terminological couple bodily schema–body image does not exist as such in Merleau-Ponty's writings, it is not entirely without support: in fact, before the *schéma corporel* enters the argument, a contrast has been made between two "layers" of our body, the "habitual" versus the "actual" body, that, without being equivalent, can be related to that distinction. More importantly, it seems that a dialectic between habitual structures and an object-appearance of the body is necessary if skilled and expressive behaviour is to be understood, and this is one reason why Gallagher's analysis has had quite an impact in dance research, for example.[35]

Merleau-Ponty brings the body schema into the picture in order to clarify the spatiality of the living body in relation to its environment, in a manner that does not reduce it to either physiology or psychology, mechanism or reason. Already in *The Structure of Behavior*, the analysis of habit acquisition revealed that the human organism is related to a "virtual space" beyond the actual one: the "power of choosing and varying points of view permits man to create instruments, [...] for a virtual use and especially in order to fabricate others."[36] The habit, he writes, "is neither a form of knowledge [*savoir*] nor an automatism," but a form of knowing that is part of the body.[37] One of Merleau-Ponty's favoured examples is the typist who may not be able to tell where on the keyboard the letters are found, whereas she instantly finds them with her hands.[38] When we acquire a new habit, a bodily form of understanding comes into play, that does not rely on concepts, and that sometimes makes us so familiar with the tools that the latter are integrated in the body's very structure. The typist's keyboard, the blind man's cane or the musician's instrument become part of bodily space and are no longer perceived simply as objects. Rather, the person familiar with an instrument, Merleau-Ponty argues, knows where its different parts are situated in a similar way that she knows where her limbs are.[39]

The body schema provides the body with unity—between motricity and perception, between the senses and in space and time.[40] It has a systematic character, regulating the relation between our posture, movements and perception, in relation

to the task we are engaged in. But it is also dynamic, in that it does not only consist of habits and skills that have become part of the body's very structure, but is also open to new tasks that make us reorganise the body schema through the modification or acquisition of new habits.[41] The body schema is, Merleau-Ponty writes, a "system of equivalences,"[42] that makes transpositions possible between my acquired habits and a given task (and between another person's behaviour and my own), so that a skilled driver will quickly adapt to a new car, or a musician to another instrument than that he is familiar with. This plasticity of the body schema is a recurrent theme in Merleau-Ponty's writings.

3. Gallagher's "close to automatic" body schema

So far, Merleau-Ponty's account seems compatible with Gallagher's analysis which is, in addition, explicitly described as a "functional distinction" and not an establishment of distinct ontological categories.[43] Moreover, Merleau-Ponty is quite explicit about the agreement rather than opposition between the empirical sciences and phenomenology,[44] and the need to sometimes substitute concepts that we have got used to, but that misrepresent experience, with others that are "consciously created [*faits consciemment*]."[45] Thus, definition in the sense of clarification and stipulation is sometimes portrayed by Merleau-Ponty as precisely the contribution that phenomenology can give to science.[46]

If we now turn to the question whether Saint Aubert makes an accurate reading of Gallagher on this issue, one thing seems clear: Gallagher never gives a proper definition of the distinction between body image and body schema, but rather, as he himself puts it, a "provisional characterization" to be expanded upon.[47] At heart of the difference between these notions is, then, its accessibility or not to consciousness: the body schema is beyond awareness, since our activities when they function smoothly are directed towards their purpose and not their means. On the face of it, this seems correct: a skilled driver, for example, does not focus on her body while changing gears or turning the steering wheel, but on the car in relation to the traffic around her, to pedestrians, cyclists, the sounds of the engine or possible hidden obstacles—or, in more monotonous driving conditions, on nothing much at all.

While there was a dichotomy looming in the manner that Gallagher distinguished body image and body schema in the earlier work—as "conscious" versus "non-conscious," or when the prenoetic function of the body schema was described as "impenetrable" to phenomenological reflection—he later emphasises that the contrast "cuts across" distinctions between conscious and non-conscious, personal and subpersonal, etc., and is careful to point out that the body schema does "not necessarily appear, *in an explicit manner*, as part of the phenomenal content that I experience."[48] The body image, on the other hand, involves perceptions as well as beliefs, attitudes and dispositions, and these are clearly not always present to our consciousness.

Nevertheless, Gallagher sometimes tends towards dichotomic formulations even in the recent work, as when he writes "a body schema is neither a perception, nor a conceptual understanding, nor an emotional apprehension of the body"; in other words, exactly *not* what the body image *is* said to be.[49] And if that was the end of the matter, we would have a dualism at least as clear-cut as Descartes's, and Saint Aubert's criticism would be right on the button.

For the most part, however, Gallagher uses qualifications: the body schema is characterised as "close to automatic"[50] and the more common description of the body schema as a system of sensory-motor capacities is not dichotomic in relation to the body image system of percepts, beliefs and attitudes. In Gallagher's discussion of our conscious awareness of bodily processes and activities, it is not always obvious if he assigns it to the body schema or the body image, and there is no independent argument for ascribing all the forms of awareness that he discusses—reflective/observational, pre-reflective, proprioceptive, performative, etc.—as related to the body image. It is hard to see why, for example, what Gallagher calls "proprioceptive-kinaesthetic" awareness, which is, as he writes, "non-perspectival,"[51] should be related to the body image rather than to the body schema.

Further, Gallagher states that the reflective awareness of the body—body image—and the body schema "interact [. . .] in complex ways."[52] The prenoetic system structures consciousness, but is at the same time dependent on consciousness to function properly[53]; its performance is defined in pragmatic terms, in relation to my intentional project. If I reach for a glass of wine in order to taste the wine, or in order to empty and wash it, exactly what I am doing with my hand in the two cases and the small difference between them are in general not something I am aware of. In such cases, the body schema supports intentional activity, while not itself an intentional object. If instead I need to focus on the movements I am performing, this awareness, on Gallagher's understanding, "helps to constitute the perceptual aspect of a body image"[54]; in other words, the body comes to my attention in a body *image*.

Following Gallagher, our awareness of parts of our sensory-motor functioning—for example when a driving school pupil focuses on her turning of the steering wheel in the way prescribed by the teacher (my example)—presents us with body images, and not a schema: " . . . to the extent that we can become aware of what the body schema usually accomplishes prenoetically, this awareness becomes part of the body image."[55] Conversely, aspects of the body image that function prenoetically bring this about "through the body schema system."[56]

For the most part then, *pace* Saint Aubert, Gallagher describes the body schema and the body image as two interrelated systems, rather than as sharply opposed categories. The tendency to dualistic formulas that can still be found hinges on the function of bodily awareness in performance, that is sometimes said to be "marginal," sometimes "pre-reflective."[57] However, Gallagher does not, to the best of my knowledge, elucidate how the repeated assertions that the body schema is non-conscious relate to the suggestion that it appears pre-reflectively, and for the most part bodily awareness is said to be of the body *image*. This seems connected to a general view of the active body in Gallagher's thought. As he writes in the introductory part of his 2005 book: "The body-in-action tends to efface itself in most of its purposive activities."[58] Or a bit later: " . . . the normal and healthy subject can in large measure forget about her body in the normal routine of the day. The body takes care of itself . . .."[59] The clearest argument in favour of this "close to automatic" functioning of the body schema is the idea that "our deliberation can be directed at the more meaningful level of intentional action" when we do not have to reflect consciously on our movements.[60] Thus, in everyday practice, awareness of the body hampers our active engagement in the world.

In order to assess Gallagher's theory on this point, we can distinguish two issues: first, is this a reasonable development of Merleau-Ponty's ideas of the body schema, or is it in comparison rather a regression, as Saint Aubert believed? And second, is this a fruitful story for understanding the body in skilled performance?

4. A global awareness of the body schema

It seems clear that Gallagher's characterisation of the body schema as "not completely automatic," brings it closer to an automatism than Merleau-Ponty's "*neither* knowledge, *nor* automatism." Further, even if Gallagher is right in pointing out that Merleau-Ponty "often left the relation between the schema and the marginal awareness [of the body] unexplained,"[61] the French philosopher does not call the body schema "non-conscious" or "sub-personal," but rather "prelogical," "implicit," or "latent" and sometimes explicitly refers to it as an *experience*: "the body schema is not merely an experience of my body, but also an experience of my body in the world."[62]

For Merleau-Ponty, the notion of the body schema serves not only to comprehend the way that the living body has a unity and how it structures our experience, but also, precisely, the manner that it is *given*:

> If my body is to appropriate the conducts that are presented [*données*] to me and make them its own, it must itself be given [*donné*] to me not as a heap of utterly private sensations but instead by what has been called a "postural schema" or a "corporeal schema" [...]. The consciousness I have of my body is not the consciousness of an isolated mass [*bloc*]; it is a *postural schema*.[63]

Merleau-Ponty wants to understand how this particular worldly object that is my body is given ("*donné*") to me, doing justice to the fact that it gives us access to and connects us with the world—Gallagher's "prenoetic" functioning—but without reducing this aspect to an "almost" automatic functioning. He tries to capture this *in-between* intelligence and automatism through expressions such as "a global consciousness of the position of my body in space," "a thought given to itself," "an implicit intellection."[64] The notion of body (or "postural") schema is meant to convey the fact that my body is given in a systematic way and not as a "heap of sensations," in a manner that from the outset connects it with the world that we share with others, rather than as an agglomeration of private experiences or as unconscious functions. "The conception that I have of my body is a system, a schema ... "; it is a system of immediate, intersensorial equivalences.[65]

In a lecture note, Merleau-Ponty's analyses the notion of "schema" thus: "Schema = concrete, visible like a drawing, [...] it is like a map, an *aide-mémoire* that does not even need interpretation" and further "schema ≠ individual that is opaque and closed in upon itself [*fermé sur soi*]."[66] In other words, Merleau-Ponty saw the body schema as accessible to consciousness, although in a particular way that might not fit with the general idea of how objects are presented to us. As Merleau-Ponty puts it: "the body schema is not perceived," at least not in the sense of object perception.[67] Rather, it is the "norm or privileged position with respect to which the perceived body is defined."[68] In that the body schema is partly formed by habits and skills, it is determined according to certain norms, and "the consciousness we have of [the body

schema] is first and foremost that of a deviation [*écart*] with respect to these norms."[69] These norms or privileged behaviours—a notion he borrows from neurologist Kurt Goldstein—are often not at the center of our attention; there is a sense in which the smooth performance of our body is hidden from view, since we are focused on the task —typing a manuscript, driving a car, playing an organ—and not on the particular movements required to perform it.

Gallagher's qualification of the body schema as "prenoetic," "preintentional" or "non-conscious" and as apprehended (if at all) through a body image, was of course meant to articulate this fact that habits, once acquired, drop out of sight, so that we do not have to focus our attention on our feet when we have learned to walk, or concentrate on keeping our balance when we have learned to cycle. However, if our habitual structures are not present in our immediate experiential field, this does not mean that the body schema should be relegated to *non*-consciousness. Merleau-Ponty thought it was necessary to "recast" the notion of consciousness in order to accommodate for our experience of the body schema.[70]

Further, although it seems reasonable to distinguish the body schema from a more direct awareness of certain parts of our body, as when we learn a new movement, this hardly implies that the body schema is not given to us at all. If we want to account for the dynamic aspects of the body schema system, and the manner that it not only structures our knowledge but is also restructured through our conscious aims, it seems that we have to acknowledge that it can be accessible to us and inquire into the situations and the manners that it does present itself to us.

5. A pre-reflective awareness of the body schema

Given Merleau-Ponty's emphasis on a "pre-reflective" level of experience, the idea of an appearance of the body at this level seems a plausible step towards the transformed notion of consciousness he called for. While in Gallagher's writing, we get no elaborated story of how the body schema can be both non-conscious, "below the threshold of awareness," and given in pre-reflective awareness,[71] nor what these forms of awareness correspond to more precisely, this question is examined by Legrand and colleagues. They analyse various levels of awareness of one's own body, drawing on, among other examples, the experience of dancers. First, a distinction is made between the pre-reflective consciousness of *self-as-subject*, given within intentional experiences in general, and an objectifying experience of my own body as intentional *object* (Gallagher's body image). While in the former case, the intentional experience is directed at objects in the world (phenomenologically understood, as including physical, abstract and other objects), in the latter case, the object is my own body, and thus we have both an objectifying consciousness of (an aspect of) my body and a pre-reflective, non-objectifying consciousness of myself as a "a bodily anchored *subject*."[72]

This non-objectifying bodily self-consciousness is the "paradigmatic form" according to Legrand et al.[73] However, there is yet another form of pre-reflective bodily self-consciousness according to Legrand. Discussing Gallagher's notion of the body schema, she argues that the "implicit" character of the sensori-motor processes is not incompatible with a pre-reflective consciousness of them (as was suggested also sometimes by Gallagher). As dancers describe, "the body as subject-agent" is clearly experienced, as an "attuning" of sorts to the sensory information coming from the outside.[74] Therefore, the body schema/

body image distinction cannot match precisely with that of non-conscious and conscious if we are to understand that experience. Rather, we should see the body schema as sometimes accessible in a pre-reflective way to consciousness, and the more so in body experts. Legrand calls the latter form "performative," or more specifically an experience of a *performative body*, that is mostly had by dancers or other body experts. Here, the body and its activities come "at the front" without being turned into an intentional object.[75]

Drawing on this discussion, Giovanna Colombetti adds another layer to the "performative body" in examining the manner that the body can be given in *emotion* experience, without being an intentional object of awareness. She suggests the metaphor of "self-luminosity" to capture the various degrees of pre-reflective givenness of the body-subject in emotion experience, where these emotional states "glow from within."[76] In such experiences, too, the body sometimes "moves to the front of awareness" without being objectified.[77]

The givenness of one's own body is further explored by Legrand and Ravn, who identify yet another level of bodily consciousness: the body in its *physicality*. The authors point to a "non-reifying form of attentive perception," directed to "the experience of the body in movement" that can also be called a form of "reflection."[78] Here it is no longer question of the body schema, since the experience at issue is said to be different from that of "prenoetic embodiment"[79]; it is an experience of one's own physical body, as part of the world and "opaque to our gaze," but in a non-reifying way.[80]

To sum up, these authors have distinguished between (a), an objectifying consciousness of my own body as an intentional object, equivalent to an experience of the body image, (b), a pre-reflective, non-objectifying awareness of myself as a bodily subject, as my consciousness is directed towards an intentional object, (c), a pre-reflective consciousness of a performative body, that Legrand connects with the enhanced body schema of expert performers. Colombetti points out that the latter form of experience of my body—the body-subject not simply pre-reflectively given in an experience directed elsewhere (b), but "at the front" of awareness (c)—can be had in other situations, too, by non-body experts, as in certain emotional experiences, and in various degrees that are captured through the metaphor of self-luminosity. Finally, Legrand and Ravn called attention to (d), a consciousness of one's own body in its physicality that is non-reifying, but yet reflective, and that is likewise experienced most clearly by dancers and other body experts.

It should be noted that neither (c) nor (d) is claimed by Legrand and colleagues to be *merely* had by dancers and performers, but rather to appear most succinctly in these examples, and thus compatible with Colombetti's important work on the appearance of the body in emotion experiences. Yet, dancers are an interesting case to examine in relation to the body schema, in that they work with their own bodies as their instruments that are constantly developed and refined, whereas most spend the majority of our lives focusing on other elements of the world. One notable aspect of dancers' practice that is not discussed—at least not explicitly—by Legrand or Legrand and Ravn, is the importance, especially in contemporary dance practice, of the presentification of the habitual structures, of the body schema, that help to constitute those instruments.

6. Contemporary dance practices: the example of "Gaga"[81]

In contrast with classical ballet and modern dance with their determined training techniques—often named after a charismatic choreographer—contemporary dance practices are characterised by what dancer Veronica Dittman called "self-styling."[82] Due to choreographic and artistic trends as well as the increasing difficulty for dancers to obtain longer contracts,[83] the dancer has become an "entrepreneur" supposed to fashion her training, adapt to various choreographic styles and practices, and often provide movement material to the pieces she works with.[84] Whether this is seen as liberating the dancer's agency and authority over her work or as an accommodation to a societal context marked by neoliberalism where marketability is an imperative,[85] the contemporary dancer has an eclectic approach where training can vary from ballet, modern, jazz, capoeira, pilates or yoga classes to swimming or running.[86] In the post-postmodern dance world, emphasis is no longer on moulding the body into a certain form, as in classical ballet, or to dismantle habits in order to uncover natural movement patterns, as in early modern dance, but rather on continuously deconstructing and repatterning the body.[87]

One significant example of a contemporary dance practice where the above-mentioned elements are prominent—self-styling, identifying and restructuring habitual movement patterns as well as strengthening the dancer's capacity for improvisation and creation of movement material—is the movement language *Gaga*, a "workout" created by Israeli choreographer Ohad Naharin. It was aimed partly as a rehabilitative technique in the wake of a serious back injury, partly as a tool for communication with his dancers. Today, Gaga has become the main training method for Batsheva and some other dance companies and is gaining importance around the world.[88] To briefly describe this practice, Gaga is a movement research with two different but highly interconnected paths: Gaga for Dancers and Gaga for the People.[89] The latter is, as the name informs us, open to everybody, to the non-trained as well as to dancers passing by. Gaga/people developed in the late 1990s, and the playful name "Gaga" for Naharin's approach to teaching movement was introduced in 2003, with the aim of dissociating the movement language from his person. Although much in the following is also valid for Gaga/people, I will focus on Gaga for dancers.[90] Gaga here serves several entwined purposes: as a warm-up that strengthens the body and prepares it physically in terms of flexibility, stamina, etc., as preparation for rehearsal and for the dancer's embodying the choreography, and as an exploration that cultivates her "creative force"[91]—but also as an exercise that helps maintaining the body in the long run, for life.

What is particular about a Gaga class is, first, that both the teacher and the dancers are in constant movement, and that there is no set order of what is going to happen—the content of the class is to a large extent improvised.[92] Further, the teacher does not show predetermined movements that the dancers are supposed to imitate—although they are free to be inspired by the teacher's and other participants' movements—but instead gives a task often formulated in terms of sensual imagery, "Let's connect to the feeling of warm honey trickling through the limbs," or "Imagine lava running through your body, and the lava is making you move," for example. It is a form of improvisation, where both teacher and participants are seen as researchers, and the recurrent but evolving images and tasks serve as tools to explore different textures, speeds and qualities of movement.

Fundamental in Gaga classes is the challenge the teacher gives to participants through multi-layered tasks: the participant may go from lifting her arms with their own weight, lifting them as if carrying a heavy weight, lifting them and letting them fall, then falling into movement with the same speed as the falling arms, and so on. Gaga's aim is to open up new pathways in the dancers' bodies, to disrupt old habits, and to heighten awareness and inner listening. For Naharin the dancer must be connected to her moving body, to the sensation of movements and never perform automatically. This also involves not taking oneself too seriously, connecting to one's silliness as well as pleasure. An essential goal of Gaga is therefore to develop the dancer's capacity to listen, to be aware not only of what she is doing while in movement, but also of its presuppositions.

Even though Gaga is seen by Naharin as "the higher education of dance" and not as a replacement of all dance training, it clearly reflects the present tendency discussed above, where not only the contemporary dancer must work explicitly with her bodily habits, but also the ballet dancer of institutions is asked to adapt to a number of different dance techniques and styles.[93] In this context, the capacity to become aware of the "prenoetic" structure of the body has become a necessity for the dancer.

This means that the goal of a dancer's training is no longer so much to build up, from a very young age, a second nature where a number of automatisms are at play, to make room for narrative mime and virtuosity. Rather, she must develop her flexibility in all senses of the term, including the ability to co-create choreographic material.[94] In this context, the "toolbox" of Gaga helps the contemporary dancer to transform her bodily schema—to "un-form," "break down" the habitual structures in the body.[95] "Overwhelm yourselves," is a recurrent instruction. After a while, however, certain images won't be helpful anymore and Gaga's tools must thus be in continuous evolution, so that they do not ossify. This means that a task encountered some years ago, such as "stretch out your skeleton, stretch it through the flesh, let the flesh fall off as from an overcooked chicken," striking as it once was, will have disappeared from today's classes.

Against the backdrop of contemporary dance, where "retraining" one's bodily structures, identifying habitual patterns and installing new ones that allow change, is a recurrent aesthetic desideratum, it seems that the body schema must have a phenomenology.[96] Certain features of the body schema must be accessible to the performer in order to be identified, and not merely in the abstract, partial way of a body image, but rather precisely as a comprehensive, habitual pattern that we can attend to and reflect upon. As one dancer put it, Gaga "is not like riding a bike," a skill that once it is mastered remains as a rather stable disposition.[97] Instead this practice is "fluid," one must return again and again to the same points and work on them, in order to grasp all the layers. The sensuous images and tasks—"float as if in water, your spine like seaweed"—serve to open up the dancer's awareness of the default positions that she on a daily basis tends to forget about, therewith exploring new movement qualities and textures. Imagining that one moves in quickly drying concrete, freezes when the concrete has become hard, and then tries to move out of that concrete; or move as if one's body were a chewing gum; or again yawn first with one's mouth and face, then with other parts of the body—such tasks promote the renewal of movement patterns, but also, and as importantly, the exploration of unfamiliar textures and sensations that serve the dancer's capacity to "listen."

7. A case for bodily reflection

Now, is this search for diverging movement patterns pertinent mainly for people who are working with their bodies on a daily basis, constantly striving to acquire new physical potentials and to refine their expressive capacities—or can it tell us something about ordinary bodily experience? Further, through what form of consciousness do we have access to the body schema? As for the first question, I agree with Legrand and Ravn that the functioning of the body and its accessibility to consciousness is clarified in examples of expert performance,[98] much as pathological cases can throw light upon the healthy performance of body and mind. This does not mean that "body experts" correspond in all respects at the positive end to pathological cases at the negative: if there may sometimes exist a clear-cut distinction between, for example, an ordinary person and a deafferent subject who lacks proprioception altogether,[99] the difference between the non-dancer and the dancer is rather one of degree: we all have the experience of learning difficult tasks and are experts at a number of skills, such as walking, talking, or writing.

For the second question, let us return to the example of learning to drive. Here the experience of the body being in the way is certainly a reality: the limbs not always reacting as we have learned at a theoretical level that they should, perhaps pressing the brake instead of the accelerator. In such cases, the body becomes conspicuous in a manner that differs from its ordinary withdrawn presence, and the term "body image" is appropriate: the body appears as a clumsy object of sorts, and this is why Gallagher and others have argued that the body in action functions most smoothly when it hides itself, or is given, at most, in pre-reflective consciousness.

But the body can also appear to one's mind in another way that links up with the examples from expert performers, and that I believe must be distinguished from the former: imagine that I basically know how to drive, but I want to become a *good* driver. That is, I want to learn to brake smoothly, take an even curve when turning, strive for energy-efficient driving through choice of gear, steady speed, engine brake when suitable, and so on. In such cases, I do not need to monitor every detail of my movements, as a beginner who clutches the steering-wheel while keeping track of the car on the road, or who tries again and again to find the biting point of the clutch.

Rather, there is an awareness of general aspects of the body schema,[100] in the sense that I oversee my movements along with their habitual structures and the environment I am moving in: knowing that, for example, I have a tendency to break slightly too hard, that I should turn the corner of a street closer to the pavement, etc., I keep these things at the back of my head, not focusing too much on them, because by now I drive fairly well, but still having them within reach so that they can guide my movements as from a distance. Here there is a form of reflection going on that is not hampering but sustaining my action.

Or imagine that I am a skilled driver used to my car that I drive every day, and now I have rented a trailer to transport some furniture. In this situation, my habitual structures appear quite clearly: uphill, I must consciously press the accelerator more firmly, consider the larger turning radius while taking turns, etc., focusing on modifying my habitual performance—much as the dancer challenged to un-form her body, to, in Gaga language, "open new highways" in her body, although there is in the latter case no extension attached to the habitual body. In

both cases, the body schema enters reflective consciousness aided by the body itself —I do not simply turn my intentional gaze towards aspects of my body that were hidden or given pre-reflectively, but rather it is the body that, in trying new movement patterns, makes its habitual structures appear in what I will call, with Merleau-Ponty, a bodily reflection.[101]

We saw that for Merleau-Ponty, the notion of the body schema was intended to convey the manner that our own body is given to us as a whole, the structure of its presence to us in contrast with the givenness of an object. While the object is present through the change of perspectives and thus requires a "possible absence," our body appears "from the same angle," it has a certain permanence "on my side," close to me, with me, in the margin.[102] This idea was developed by Gallagher into a distinction between the perspectival, partial givenness of the body image and the non-perspectival, holistic body schema, functioning mostly below awareness. Legrand and colleagues elaborated the suggestion that the body schema could be given pre-reflectively, and distinguished the paradigmatic form of pre-reflective consciousness of the body schema, that forms the background to my intentional experiences, and another kind of pre-reflective consciousness where the sensori-motor processes associated with the body schema could sometimes come "at the front."[103]

To this I would add a reflective form of access not only to the body in its opaque physicality, as Legrand and Ravn suggest, but to a layer of the body schema. This layer—or this body schema out of many schemata—can appear when, for example, the Gaga mover is challenged to struggle out of her default position, stretching in all directions, and even, in imagination, against the laws of anatomy ("smash your pelvis into pieces," "deglue your bones from the flesh, let them float in the body"), through the body's own activity. As Merleau-Ponty put it, the body schema comes forth when the norms governing our movements are contrasted with new forms of behaviour.

Thus, in order to understand the role of the body in skilled performance, we need—rather than a unified concept of a body image–schema, as Saint Aubert suggests—a more fine-grained analysis of the body schema in its relation to the various ways that we can be conscious of the body in all its dimensions. Merleau-Ponty and Gallagher have provided the groundwork continued by Legrand and colleagues, Colombetti and others. Still, the reflective accessibility of body schematic structures outlined above and the body's own capacity to expand its space of possibilities must be acknowledged, as a bodily reflective consciousness.[104]

Notes

1. See e.g. several of the articles in Bermúdez et al., *Body and Self*; Bresnahan, "Improvisational Artistry"; and De Preester and Knockaert, *Body Image Body Schema*.
2. E.g. Bardet and Ginot, "Habit and Change"; Clark, *Supersizing the Mind*; De Preester, "Perform the Layered Body"; Ginot, "Body Schema Body Image," "Inventer le métier"; Hogstad, "Finding Layers in Gaga"; Katan, *Embodied Philosophy*; and Legrand, "Pre-Reflective Self-Consciousness."
3. The latter issue is discussed by Montero, see *Thought in Action*.
4. Gallagher, "Body Schema Intentionality," 233.

5. I am here using the notion of "contemporary dance" very broadly, not as a genre, but as referring generally to today's theatre dance with experimental tendencies and influences from somatic practices.
6. For a brief overview, see Gallagher, *How the Body*, 19.
7. Gallagher, "Body Image Body Schema," "Body Schema Intentionality," "Dimensions of Embodiment," *How the Body*, "Dynamic Models."
8. It should be noted that the English term here follows Paul Schilder's rendering of the German *Körperschema* (in his study from 1923) as "body image" in his book-length study *Image and Appearance*. By contrast, in Landes's recent translation of *Phenomenology of Perception, schéma corporel* is consistently rendered as "body schema."
9. Gallagher, "Body Image Body Schema," 544.
10. Ibid., 545.
11. Gallagher, "Body Schema Intentionality," 229; "Body Image Body Schema," 546.
12. Gallagher, "Body Image Body Schema," 548.
13. Ibid., 548; cf. Merleau-Ponty, *Phenomenology*, 167/144. (References to Merleau-Ponty will in the following be given, first, to the French original, and second, when available, to the English translation).
14. Gallagher, "Body Schema Intentionality," 228, 233; Gallagher, "Body Image," 551.
15. Gallagher, "Body Image Body Schema," *How the Body*, "Dynamic Models."
16. Deafferentation means loss of sensory input from a part of the body. Here, the case concerned is Ian Waterman, who lost proprioception and the sense of touch due to illness (first documented by Cole, *Pride and Daily*).
17. Gallagher, "Body Image Body Schema," 551.
18. Ibid., 552.
19. Gallagher *How the Body*, 24.
20. And even earlier than e.g. Merleau-Ponty believed, influenced as he was by the psychology of his time according to which the small infant did not yet have any notion of self.
21. Gallagher, "Body Schema Intentionality," 235.
22. Stamenov, "Body Schema, Body Image," 21; cf. Gallagher, "Body Schema Intentionality," 226–227, *How the Body*, 3.
23. Gallagher, "Body Schema Intentionality," 233.
24. Saint Aubert, *Être et Chair*, 44. English translations in the following are my own.
25. Ibid., 45.
26. Ibid., 44, emphasis in text.
27. Cf. ibid., 41, 43, 44.
28. Ibid., 41.
29. Ibid., 41; and Saint Aubert *Du lien des êtres*, 19.
30. As I have discussed elsewhere see Foultier, "'First Man Speaking'."
31. Saint Aubert, *Être et Chair*, 41.
32. Merleau-Ponty, *Phenomenology*, 114/101; my emphasis.
33. Ibid., 114f./101f.
34. See further Foultier, "'First Man Speaking'."
35. See note 2 above.
36. Merleau-Ponty, *Structure*, 99/90, 190/175.
37. Merleau-Ponty, *Phenomenology*, 168/145.
38. E.g. Merleau-Ponty, *Structure*, 131/124.
39. Merleau-Ponty, *Phenomenology*, 168/145.
40. Ibid., 115/102.
41. Ibid., 166/143.
42. E.g. Ibid., 165/142.
43. Gallagher, *How the Body*, 5.

44. Merleau-Ponty discusses the relation between phenomenology or in general philosophy and the sciences in e.g. the lecture notes "Human Sciences and Phenomenology" (*Parcours deux*/*Primacy of Perception* and *Child Psychology*), where *les sciences de l'homme* include empirical psychology, neuroscience, sociology, linguistics, among others.
45. Merleau-Ponty, *Parcours deux*, 77/161 translation modified.
46. While Saint Aubert argued that scientific concepts can nourish philosophy only after the philosophical work has been accomplished, *Être et Chair*, 41.
47. Gallagher, *How the Body*, 24.
48. Gallagher, "Body Schema Intentionality," 233; *How the Body*, 18, 3, my emphasis.
49. Gallagher, *How the Body*, 32.
50. Ibid., 26.
51. Ibid., 138.
52. Ibid., 26.
53. Ibid., 32.
54. Ibid., 26.
55. Ibid., 35.
56. Ibid.
57. Gallagher, "Body Image Body Schema," 542, 545; "Dynamic Models," 239.
58. Gallagher, *How the Body*, 26.
59. Ibid., 55.
60. Ibid., 241.
61. Ibid., 20.
62. Merleau-Ponty, *Phenomenology*, 231, 269/205, 241; 165/142.
63. Merleau-Ponty, *Parcours*, 176–177/117, emphasis in text.
64. Merleau-Ponty, *Parcours*, 184/122; *Monde sensible*, 133. English translations in the following are my own.
65. Merleau-Ponty, *Child Psychology*, 311/247; *Monde sensible*, 129.
66. Merleau-Ponty, *Monde sensible*, 133.
67. Ibid., 143.
68. Ibid.
69. Ibid., 139.
70. Cf. Ibid., 143.
71. Gallagher, "Dynamic Models," 234.
72. Legrand, "Pre-reflective Self-as-subject"; Legrand et al., "Close to Me," 695; emphasis in text.
73. Legrand et al., "Close to Me."
74. Legrand, "Pre-reflective Self-as-Consciousness," quoting Carolien Hermans, 509.
75. Ibid., 502, 505.
76. Colombetti, *The Feeling Body*, 121. The metaphor is derived from Dan Zahavi.
77. Ibid., 122.
78. Legrand and Ravn, "Perceiving Subjectivity," 402, 398, 404.
79. Referring to Gallagher's characterisation of the body schema as "prenoetic," Ibid., 389.
80. Legrand and Ravn, "Perceiving Subjectivity in Bodily Movement," 398.
81. This section has been informed by classes with Olivia Ancona, Billy Barry, Shahar Binyamini, Stefan Ferry, Korina Fraiman, Deborah Friedes Galili, Saar Harari, Rebecca Hytting, Ohad Naharin, Gili Navot, Rachael Osborne, Noa Paran, Emma Rozgoni, Lee Sher, Gavriel Spitzer, Wies Van Houplines and others.
82. Dittman, "New York Dancer," 23.
83. Bales and Nettl-Fiol, *Body Eclectic*; Galili, "Gaga," 379; Roos, "From Movement," and "Appreciating Skill."
84. Bales and Nett-Fiol, "Preface," viii.
85. Quinlan, "Gaga as Metatechnique."
86. Bales, "Dancing Dialectic," "Training as the Medium"; Roos, "Appreciating Skill"; Hilton, "A Dancing Consciousness"; and cf. Bales and Nettl-Fiol, *Body Eclectic*.

87. Bales, "Introduction," 2.
88. Charton, "Le Gaga"; Galili, "Gaga," 364; Quinlan, *Gaga as Politics*; and cf. Vassileva "Réflexions."
89. Galili, "Gaga," 365.
90. Dancers often attend Gaga/people classes, depending on accessibility.
91. In the words of Naharin, cited in Galili, "Gaga," 384.
92. Hogstad, "Finding Layers."
93. Naharin quoted in Galili, "Gaga," 377.
94. Roos, "From Movement," "Appreciating Skill."
95. In the words of Gili Navot, former dancer and present artistic director of Batsheva, trained in classical ballet (workshop "Gaga in the Desert," Israel, October 2015).
96. Hilton, "Dancing Consciousness," 74; and Parkinson and Roos, "Authoring Experience," 8.
97. Hogstad, "Finding Layers," 39.
98. Legrand and Ravn, "Perceiving Subjectivity," 394.
99. Cole, *Pride and a Daily*; and Gallagher, *How the Body*, 43f.
100. Or of one body schema out of many related schemata/motor habits, if this system is thought in the plural as Gallagher sometimes proposes (e.g. *How the Body*, 24 footnote 5).
101. Merleau-Ponty, *Phenomenology*, 109/210.
102. Ibid., 106/92–93.
103. Legrand, "Pre-reflective Self-Consciousness," 502, 505.
104. I discuss this topic in a parallel paper, Foultier (forthcoming).

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