

E2M – Embodied Emotion in Motion: Developing Dancers’ Tools to Explore Sensorimotor Patterns for Emotion and Peak Performance

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Abstract

This article discusses the results of a practice-as-research intensive project carried out in August 2019, which in turn applies the doctoral research of scholar-practitioners Jorge Crecis and Lucía Piquero. The project delved into ideas about embodied cognition to support a practice-led theoretical understanding of the experience of emotional import and peak performative states in theatre dance performances. A series of creative sessions were recorded and analyzed, and then presented to an audience at the end of each day. The experience of the audience is also collected through questionnaires and open discussion, to develop a multi-perspectival understanding of the experience of emotion in performance. The main pursuit of the project was to understand and develop tools in relation to the dancers’ awareness of their own sensorimotor patterns, in relation to peak performance and understandings of emotion in performance. The article develops a conceptual framework through the theoretical notions of embodied cognition, enactive perception, and sensorimotor patterns. This allows for analysis based on the experiences of the participants, and for an integration of views which then develops into a discussion of the dancers’ awareness of their sensorimotor patterns.

Keywords: embodied cognition; sensorimotor patterns; dance praxis; emotion; peak performance

1. Introduction

Performers often report that they have, at some point in their careers, entered a calm state of being, or a 'zone', whilst executing their greatest performances and personal bests (Hefferon & Ollis, 2006, p. 141). Equally, most performers acknowledge that although they know how it feels retrospectively, they do not know how to replicate those states of being at will, and they do not have a perceptual reference point in order to train them. The realm of emotion in dance performance seems equally obscure, both to performers and to the audience, and is often relegated to the equal parts mysterious and limiting work of self-expression. Although dancers normally would excel at controlling their actions in relation to time and space, they usually report that they have not developed a sophisticated awareness of the series of sensorimotor patterns which could hold the key to peak performative states, or to an understanding of the emotional work of performance—both in them and in the audience.

This article reports and builds on a practice-led research project¹ which focused mainly on these particular areas of the dancers' and choreographers' work, and included exploring the point of view of the audience. Our working methodology focused on providing the performers with 1) a theoretical context for perception of emotion and for peak performance, 2) a series of pre-devised exercises and tools, and 3) a guided self-exploration of the specific sensorimotor patterns and their potential associations to peak performative experiences or the experience and witnessing of emotion. The foundation of our thinking on sensorimotor patterns, and on embodied cognition and enacted perception, already implies that we are talking about individual experiences, but that these are complex and multi-layered themselves and can be discussed. This information, without reducing the experiences to something that can be completely prescribed or dissected, can inform the work of all the agents involved in the process of making, performing, and watching a work of dance.

The conceptual framework of the project was founded on the idea of embodied enactive cognition. According to scholars Francisco Varela, Evan Thompson, and Eleanor Rosch, 'cognition is ... the enactment of a world and a mind'

¹ The project was carried out in August 2019 in Malta—with the support of the Research Grants of the University of Malta and of the School of Performing Arts—applying the doctoral research of Dr Jorge Crecis and my own. The project gathered performers, choreographers/directors, and invited scholars and audience in, aiming to offer various perspectives, fitting to the complex experience that is performance. It developed a series of creative sessions which were recorded and analyzed, which together with other data-collecting methods, mainly questionnaires for participants and observers, allowed in-depth study. The creative results were then presented to an audience, and their experience was also collected through questionnaires and open discussion, completing the multi-layered view.

(1991/2016, p. 9), understood through ‘reflection in which body and mind have been brought together’ (Varela, Thompson & Rosch, 1991/2016, p. 27). Not only that, but they also ‘emphasized the role of the dynamical coupling of brain-body-environment’ (Newen, De Bruin & Gallagher, 2018, p. 3). Relatedly, Alva Noë and Kevin O’Reagan (2001) suggest that perception is something we do: an active endeavor, ‘a way of thinking about the world’ (Noë 2006, p. 189). The enactive approach proposes that ‘[p]erception might be a mode of encountering how things are by encountering how they appear’ (Noë, 2006, p. 85). The objects “out there” are necessarily apprehended through experience and hence through action. In dance terms, both the performer and the spectator are agents of perception, which in turn is a particular encounter with, or an enactment of the world/work. This also implies that the study of the performer’s or spectator’s experiences of dance necessarily refers to a particular action of a particular subject. That is, it is important to recognize that any view is perspectival, as it depends on the agent’s enacted perception. With this as foundation, we proceeded to our studio-based work.

Our main question in the project was then:

How can the experience of theatre dance performances, with focus on emotion and peak performance, be understood, through the internal points of view of the performer and choreographer, as well as the external views of scholars and the general public?

In retrospect, I think the question would be better focused as follows:

How does the performer’s attention to emotion and peak performance—especially in relation to sensorimotor patterns—affect both the performer’s and the audience’s perceptions of the dance?

It was important for us to start by situating the idea of sensorimotor patterns in relation to our research and the methodology of the project. Evan Thompson explains sensorimotor patterns within cognitive activity as follows:

Cognitive structures and processes emerge from recurrent sensorimotor patterns of perception and action. Sensorimotor coupling between organism and environment modulates, but does not determine, the formation of endogenous, dynamic patterns of neural activity, which in turn inform sensorimotor coupling (Thompson, 2005, p. 407).

Sensorimotor patterns can also be related to the work of the dancers: recurrent experiences of perception and action in their dancing but also their general experiences, integrated through the sensorimotor functioning of the mind-body-environment complex which is the dancer, create patterns of neural activity. If the dancer develops an awareness of these patterns, it is at least potentially possible that they might be able to replicate the situations which might give rise to experiences of emotion or peak performative states. The dancers’ awareness of their own sensorimotor patterns, then, can be explored

by referring to their relationship to the environment, and the repetitive activities that form around this relationship, in their training and performance.

Sensorimotor patterns can also be related to the audience's perception of emotion (they can actually be related to everything in our experiences, but I highlight here those experiences related to our work in this project). When discussing the audience's experience of emotion, I refer to "emotional import", indicating the importance of recognizing all the agents that play a part in this experience: the spectator, of course, but also the audience at large, the choreographer, the dancer/s, the contextual aspects of the performance itself, the background of the spectator... The only way in which this complex network of influences and factors can be made sense of is through a holistic approach to the experience. I argue that this is possible only through embodied cognition and enactive perception. Indeed, through these understandings of cognition, the work's properties are not simply "out there" to be grasped by the spectator, nor do they depend solely on intersubjectivity—that is, reality is "agreed", i.e. the perception confessed by majority. The perception of a dance work is in fact enacted in perception through the spectator's particular embodiment, through sensorimotor patterns emerging from their experiences in the past, in a form of embodied realism (Lakoff & Johnson, 1999, p. 93). Embodied realism suggests that 'we are coupled to the world through our embodied interactions' and that '[o]ur directly embodied concepts ... can reliably fit those embodied interactions and the understandings of the world that arises from them' (Lakoff & Johnson, 1999, p. 93). These embodied concepts and emerging sensorimotor patterns are also at least partially shared and cultural—hence explaining the relative commonality of experience.

2. Methodology

The project developed over a week, in which we trained the dancers in two perspectives/tools responding to our research projects. We also created some material in order to then share it with an audience applying either tools or a combination of both. We gave the dancers both theoretical introductions and practical tools, as well as time for guided self-exploration. I now detail the training methodologies ahead of giving ideas of the themes which emerged from the project.

Training methodologies

To explore the engagement and awareness of the dancers with their sensorimotor patterns in relation to peak performance and emotion perception, we trained the dancers (briefly!) on the two methodologies

emerging from our PhD projects². It is perhaps important to note that while Crecis’s framework is indeed developed as a methodology, while mine is an analysis tool or system, so the application differed slightly. I now review (again briefly) the main aspects of the two methodologies that relate to the work we carried out in this project, as well as the aspects in which the performers indicated correlation between them through this intensive application process.

Crecis’s methodology divides training for the performer into three phases, each of which has as many parts:

- ***Enter:***

Skill (becoming an expert on the skills displayed in a given work)

Collateral Training (Activities that seem not directly related with the work, but which end up informing it)

Demystification (Ronald L. Grimes stresses that to investigate sacred things ‘is to search out the ordinary beneath the special and sacred’ (2006, p. 90);

- ***Sustain:***

Games (A playful attitude can help give significance to the performers’ actions)

Unitasking/Multitasking (Training which allows the performers to class all the actions that they must accomplish simultaneously, as one instruction rather than many separate actions)

The Doer (Or ‘active surrendering’, a mechanism that facilitates performing with the minimum interference of willpower, while at the same time requiring the performer’s full commitment to what is happening); and

- ***Exit:***

Cooling Down/Supercompensation (To return the body gradually to a stable psychophysical functioning whilst maximizing the effects of the training)

Reflection (Reflecting and articulating the newly acquired knowledge to solidify its effects)

² The full research projects of both researchers can be accessed in their individual work: Crecis’s PhD *Towards Vivencia: A dance training methodology that generates a peak performative state through the ritualization of actions* (2018) is now published as a book, reference above; and my own *Experiencing Emotional Import in Works of 21st Century Contemporary Theatre Dance* (2019), monograph forthcoming.

Ritual Trace and Celebration (Celebrating the achievements within the training increases intrinsic motivation and reinforces the newly acquired knowledge).

We did not focus on this phase during this research, except for the reflection phase, which was implemented through discussions about both methodologies as well as questionnaires for the performers to articulate their experiences.

As presented above, the focus of Crecis's methodology is on the performer and their state of being and consciousness during the performance, to train these states and call them at will.

My method of analysis focuses on the views of both choreographer and audience, and is also divided in three parts:

- ***Movement Qualities*** (Space, weight, time, and flow factors)—based on the work of Rudolf Laban and later developments of his work (Laban and Ullman 2011/1950) (Laban & Ullman, 1966/2011);
- ***Spatial Rhythm*** (Lines of tension, points of attention, sense of pull, gaze of the performer)—based on Laban and on the work of psychologist of perception Rudolf Arnheim (1954/1974); and
- ***Movement-Music Relationships*** (Continuum from parallelism to counterpoint, including free sense of phrasing)—mainly based on the work of dance and music scholar Stephanie Jordan (2000; 2015), as well as the interactions between these three aspects and how from these perceptual properties emotional import might emerge³.

The relationship between the methodologies was explored during the project and aspects of both were related to each other through feedback and discussions with the dancers. The most important points of these are described below:

- Within the ***Enter*** phase of Crecis's work, the first part, ***Skill***, was found to relate to ***Movement Qualities***. By providing the dancers with the skills of verbalizing, compartmentalizing, and regaining control of their own movement qualities we were able to facilitate a foundation from which to build their own training towards peak performative experiences, and to study the emergence of emotion in their own experience. Further to this, discussing and becoming more aware of the movement qualities they were using seemed to help them also understand potential emergence of emotional import in the audience.

³ My research explores more the importance of combinations of these elements and the relationship between these Gestalt and the symbolic elements of performance. However, due to the limitations of time and the type of work we focused on in the project, it was not possible to cover all the elements there. I hence leave them out of my explanation here too.

The ***Collateral Training*** part of this phase could also be potentially related to movement qualities; however, this relationship was undefined at the end of the project: it seems that movement qualities are seen as key to the skill of a dancer, hence not classified as collateral.

- ***Enter – Demystification*** relationship to ***Movement Qualities***: Leading the “emotional” from outwards (and not as self-expression/from inside), from the body movement, helps demystify the art of performance. The same idea applies to providing sensorimotor pattern training for peak performative states. We do not wish to deny the “magic” of performance, but to simply accept that it cannot be discussed or explained seems a waste of resources. Demystification leads to more expertise and development of the form. In this project we found it in the way the dancers acquired languaging skills and categories for their different forms of moving.
- ***Sustain – Games*** relates to ***Music-Movement*** relationships: The playfulness was brought about for the performers from reacting/responding to music and encouraging their own decision making in real time. The performer also regains agency in this sense, which can be both playful and empowering.
- ***Sustain – Unitasking/Multitasking***: Concentrating on one task as an overall action allowed the performers to understand and process the three-task system of analysis: maintaining the three tasks (***Movement Qualities, Spatial Rhythm, Music-Movement relationships***) at the same time, but allowing them to become one task, not three separate things. This also lends more overall coherence to the performance, and, in our discussions, allowed the performers to observe interactions in their own processing of information across the different parts of the analysis.
- ***Sustain – The Doer*** related to ***Spatial-Rhythm*** especially in terms of the gaze of the dancer, focusing on which allowed the performers to recover confidence, being—and feeling—in control. The frames of Spatial Rhythm analysis also helped understand their own body and the positions and transitions in which they were, allowing for development of their personal possibilities in terms of movement reach and volume.

That was, then, our framework, which developed organically through the actual workshops, and which we put together not only through our own observation, but mainly the reflections of our participants. It is already possible to observe that, through giving the dancers tools of analysis and of language we were all able to understand, discuss, and develop aspects of performance which seem important factors towards performers’ training.

The next phase of the project was focused on the audience response to the works, which was explored both through the work of the research assistants and the audience invited to the final sharing. We asked them all to respond to a series of questions which dealt with aspects of the performance in relation to the perceived state of being of the dancers as well as the perceived embodiment and emotion. The following table reflects the questions asked:

	Question	Type of answer/explanation
1	<i>Could you describe in two/three words your perception of the performers' state before doing the material?</i>	Short answer
2	<i>Could you describe in two/three words your perception of the performers' experience whilst doing the material?</i>	Short answer
3	<i>Could you describe in two/three words your perception of the performers' state after doing the material?</i>	Short answer
4	<i>While doing the material the performers' attention seems focused entirely on what they are doing</i>	How much do you agree with the following sentences
5	<i>While doing the material the performers seem very aware of the people watching</i>	How much do you agree with the following sentences
6	<i>While doing the material the performers seem to dance automatically and without thinking</i>	How much do you agree with the following sentences
7	<i>Could you name a situation that you think matches the experience of the performers as you observed them?</i>	Short answer
8	<i>Which one of the three performances was more engaging?</i>	Short answer
9	<i>Can you describe your experience as audience?</i>	Short answer
10	<i>How happy are you with your description? Not at all happy (1) / I feel the experience is captured almost fully in my description (5)</i>	Likert scale
11	<i>This experience feel more like a... ... bodily engagement (1) / ... intellectual endeavour (5)</i>	Likert scale

12	<i>Did this short work give you, as audience, any impression of emotion?</i>	Short answer
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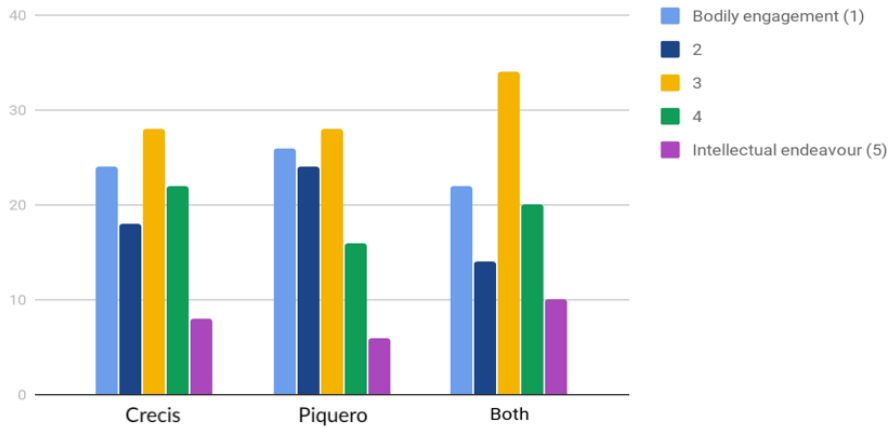
It is quite evident just by writing down these questions that we asked a lot from the audience, and in our final evaluation of the project we considered that a new format is needed to be able to assess certain aspects of the experience of the audience without them, like our audience, finishing exhausted. Their feedback and questionnaire replies were, nonetheless, invaluable.

3. Results and discussion

I now move on to discuss some of the results of the audience/observers questionnaires. We had two research assistants in the core team, who were filling in questionnaires throughout all sessions. Further to this, a group of audience members were invited to a sharing in which we presented the results of the week of work in the form of a short solo for each dancer and a short group piece. Each of these short pieces was presented to the audience three times: one with the performer using mostly Crecis’s methodology for her performance, one with the performer using mostly mine, and one trying to concentrate on both at the same time (although this might have meant a few elements of each, instead of both methodologies in full, depending on the performer). The question was not whether a methodology “worked better” than the other, but rather there was an intention to explore what the different foci provoked in the viewers. Below are some of the observations and the graphic representation of results which led to them.

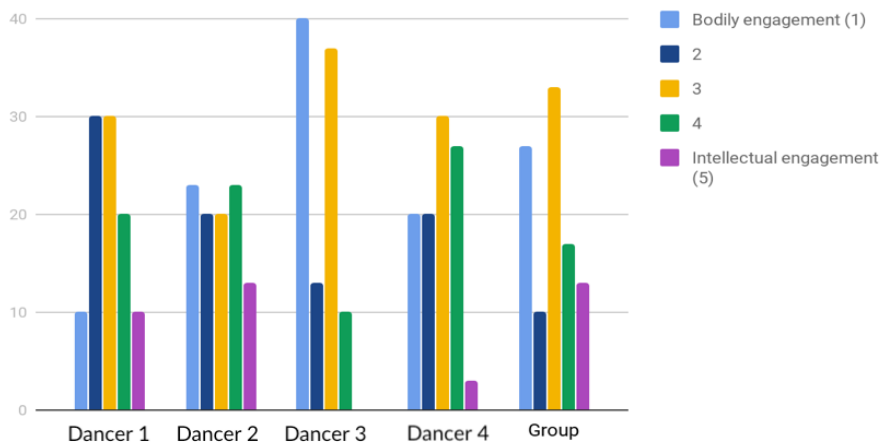
Our methodologies together do seem to produce a significantly higher perception of embodiment (which we understand as 3, in between bodily engagement and intellectual endeavor):

Audience Perception of Embodiment



But this depends heavily on the dancer:

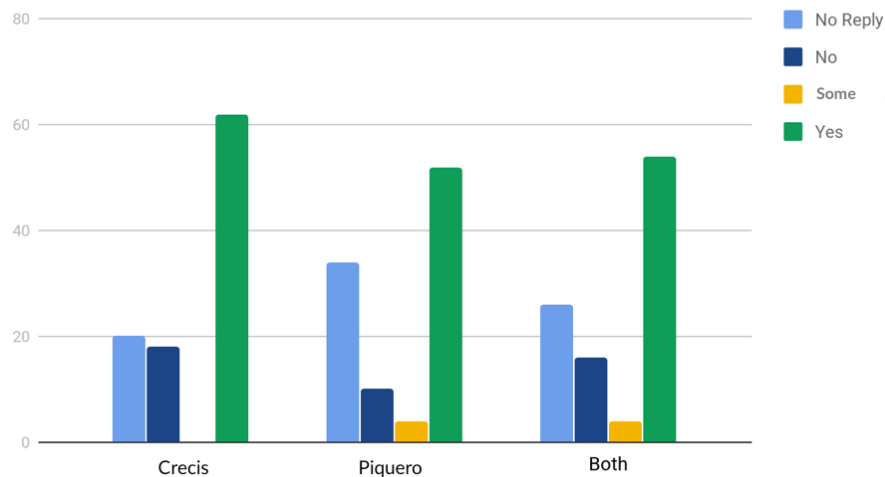
Audience Perception of Embodiment - Dancers



With some dancers clearly leaning towards bodily engagement (such as dancer 3), while others seem to be perceived as more embodied (dancers 1 and 4).

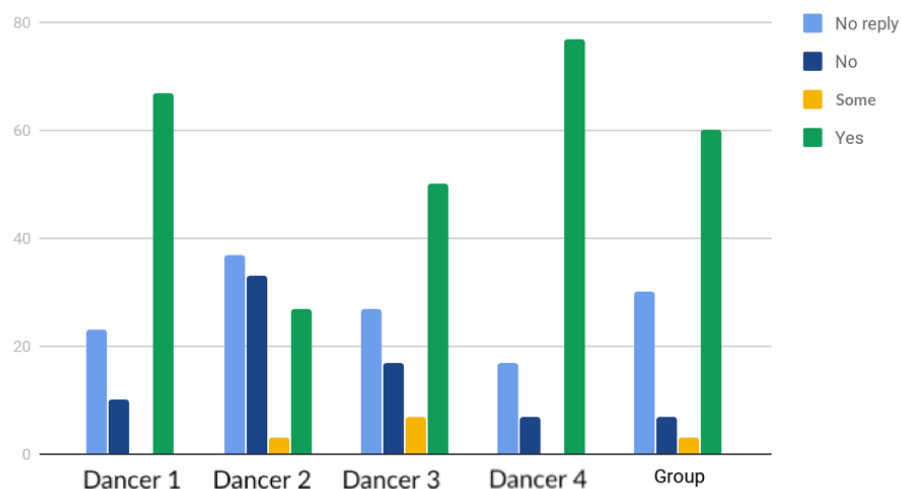
It is important to note, however, that in our results **embodiment and emotion do not correlate** in audience's perception (while both methodologies seem to produce more embodiment in these perceptions, they do not seem to provoke more emotion):

Audience perception of Emotion - Methodologies



Again, depending heavily on the dancer:

Audience Perception of Emotion - Dancers



At this point several questions emerge:

- Does this lack of correlation relate to the fact that audiences often want to “understand” the dance? And otherwise they do not feel “emotion”? Is the understanding of emotion seen as a more intellectual endeavor in the audience—the need for narrative—skewing the results? For example: Dancer 3 tends towards embodiment or bodily engagement, but people do not seem to perceive so much emotion in her case. Whereas Dancer 1 or the

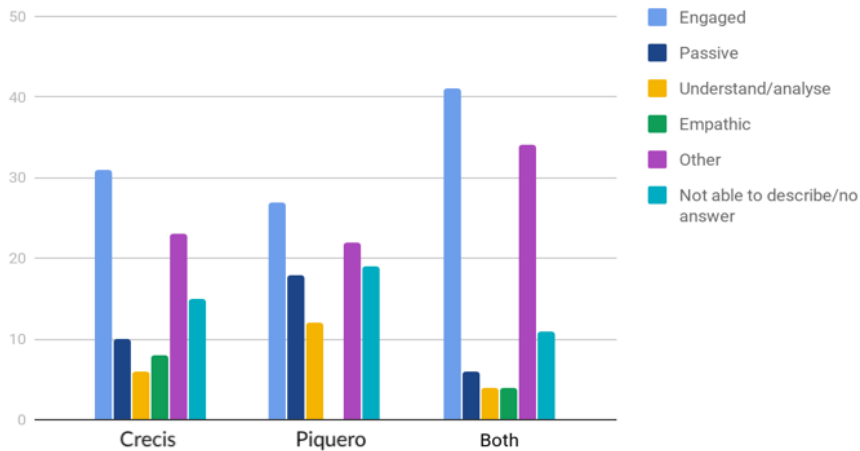
group tend to intellectual endeavor with a lot of emotion being perceived. That said, Dancer 4 is in the middle and she gets the most emotion perceived, so again the correlation fails.

- The audience seem to perceive more emotion with Crecis's methodology, which is focused on the performer, and hence considered more "internal". Is this affecting the audience's view?
- What is the role of the dancers' perception of their own interiority/exteriority on this? If the dancer assumes a more internally focused position, does this affect the perception of the audience? Judging her to be more "emotional" because she's more "internal"?

The body-mind-environment complex seems to encompass more clearly the experience of the various agents in dance in our results, but some elements of confusion seem to emerge when the practice engages with careful consideration of the language used in this respect. In our project, problems emerged when trying to refer to the—apparently—binary divisions between the internal and the external, as well as the individual and the social. Although the participants agreed in principle that both the body-mind and the body-mind-environment complexes explained their experience of dance, these forms of division continuously emerged in the practice, and they were difficult to bypass, even when participants agreed also that a continuum was a more accurate form to *language* their experience. Language, it would seem, was failing our participants. It seems something similar happens in the audience's case.

The way the audience articulate their responses to the final sharing, classified in groups according to the kind of responses, can be seen below according the methodologies.

Audience's description of their experiences - Methodologies

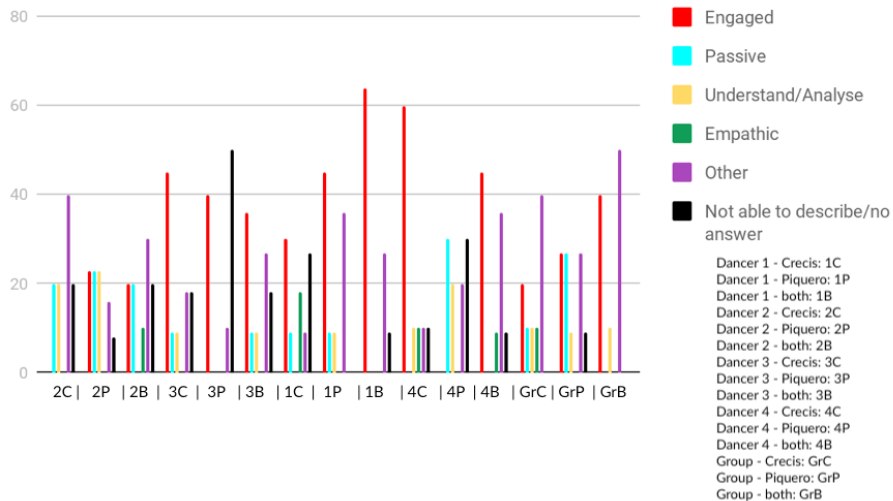


The finding reflected in the previous charts, which indicates that the audience perceives more embodiment through both methodologies together, also correlates with their perceiving themselves more engaged here when both methodologies are at work.

Again, questions emerge from these results...

- In this case, and responding to one of the questions above, the inversely proportional relationship between engagement and meaning/understanding does not hold. This indicates that the search for meaning or intellectual endeavor in the audience does not automatically separate them from a sense of engagement. It remains unclear whether it could perhaps facilitate it, a question that could be pursued in future research.
- “Other” replies often also involve emotion or emotion-related terms (“sad”, “mad”, “confused”, “relaxed”, “calm”), so that emotion could also be argued to increase through both methodologies, although in this case it would be part of the audience’s articulation of their own response to the work. It is not their first attribution to the work itself, but rather emotion seems to be perceived as related to their own state or the dancer’s (again, more akin to self-expression than to emotion perceived in the work).
- Empathic responses (“following her journey”, “smiling because she was enjoying herself”) are higher in Crecis’s methodology, so perceiving emotion and empathizing are not the same thing in our results. This makes perfect sense for us: the audience can perceive, recognize, or experience emotion without having to have an empathic reaction towards the performer.

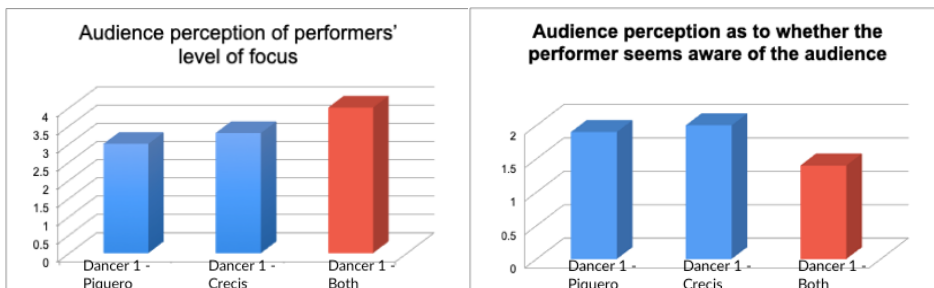
Audience descriptions of their experience - Dancers



The replies of the audience, nonetheless, are also heavily dependent on the dancer:

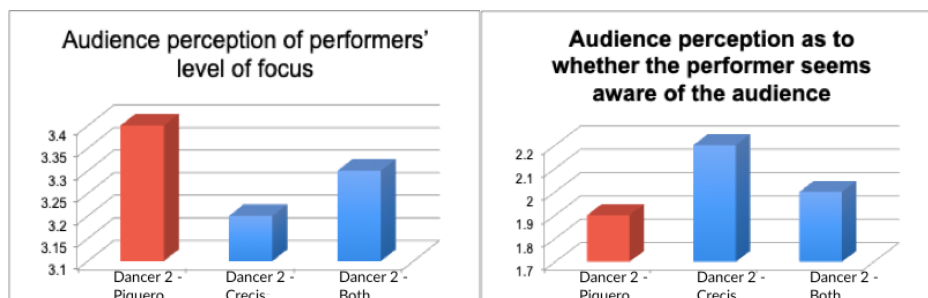
- Dancer 1's results, for example, clearly indicate that she has a higher capacity to engage the audience (she is also the most experienced of our participants). In her case, engagement is higher with both methodologies (64% of people responded being engaged or very engaged, absorbed, etc.), followed by my methodology (45%) and then Crecis's (30%).
- In the case of Dancer 4, on the other hand, the engagement of the audience shoots up with Crecis's methodology, but she has none with mine.

Finally, the audience seems to perceive the concentration, attention, or focus of the performer on what they are doing as opposed to their being aware of their surroundings, especially of the audience.



The more they perceive or judge a dancer to be focused on performance, the more they indicate the dancer is not aware of the audience.

Dancer 2’s results are even more polarized than Dancer 1’s:



We found this particularly thought-provoking as we consider that both peak performative states and emergence of emotion imply not only concentration and attention on one’s own actions, but also a high level of awareness of one’s surroundings including the audience.

Many more things can be discussed in relation to this research project than what I can discuss within the limits of one article, so I will focus only on certain aspects. Through our research there emerged several questions regarding terminology but also conceptual concerns, which I have introduced above through our results. At risk of taking a slight detour before concluding, I will refer to an aspect which seemed very important in our research: the apparently unsurmountable binaries of internal/external or individual/social divisions.

Throughout the discussions and reflections with the performers and observers it became evident that there is no way to really make a clear demarcation between what is internal and external within the individual, or even what is individual and what is social in our work and interactions. It would seem that, once perception is understood as enacted and cognition is embodied, these apparent divisions respond better to the idea of a continuum, than to that of a binary. This can also be linked with 4E cognition and with the idea of body-mind-world. However, and perhaps more enticingly, these problems of division and demarcation relate to the idea of self and current discussions on what the self is or how it is constructed. Our findings correlate to problematics of discussing the self as something in the head, when Cartesian divides creep up again.

Gergen targets the primary use of the term 'self' in psychological and mental discourse, suggesting many ways in which the sources of knowledge about the realm of the mental, for example, introspection, behavioral observation, are open to question (Gallagher, 2011, p. 23).

Hence even the ways we must look at the self, to speak about it, are already loaded with Cartesian problematics. However, this does not mean we have no form to overcome this, simply that there is need for research that steps away from the language which is commonly used in these considerations, as we found throughout our practice. Shaun Gallagher continues, still referring to Gergen's work, that 'alternative conceptions of the self, which acknowledge a certain primacy of the social over the individual, hold some promise' (Gallagher, 2011, p. 23), which links also to the distinction in our second problematic: that of individual/social. In fact, both binaries might not be so separate after all:

This theory [of the dialogical self] views the other not as external to self, but as part of the self and constitutive of it. The self is intrinsically social, a micro-society within the larger society to which it belongs (Gallagher, 2011, p. 23).

Although this project might not add much information to the debate, our discussions align with the questions which are being asked in the academic understandings of self at the moment. Further to this, in the same volume it is discussed how self-awareness (awareness of one's own self, rather than simply awareness of oneself) comes through practice, and indeed social practices and environments, so the potential of dance research projects such as ours to develop this kind of awareness and contribute to these discussions becomes even more evident.

Our main line of research acknowledged how dancers seem to have highly developed sensorimotor schemata, acquired through their training and in continuous evolution. The link between these and execution—the way through which they can arrive to peak performance—however, seems to be less conscious or at least less clear. Performers know what peak performance looks like, they have an idea of what they might feel in that case, but they do not know how peak performance feels enough to be able to replicate it. Their thought process seems to be occasionally closer to "I got pleasure out of it, so I am happy", or "I made mistakes, so I am not happy".

One of the ways in which we identified the development of awareness of sensorimotor patterns was what we called "function instead of imagery". Although the use of imagery is very common in performance, we argue that occasionally, and/or if misused, it can potentially lead to a negation of awareness of certain functionality of the body-mind-world complex. This is not to say that it should not be used. Perhaps, however, more attention given to which function each image emerges from would facilitate the work of the dancer. For example, a *pressing* quality can be given the image of moving in a dense fluid, like honey, but this should be done after the characteristics of use

of space, flow, time, and weight have been explained and worked on by the performers. This understanding of awareness allows the dancers to develop an understanding of their own sensorimotor patterns for peak performance and emotion work.

We also found that at times dancers seem to work by layering narrative “on top of” the material, or to dancing from “shape” instead of sensation. This is, thankfully, a more and more common discussion in the teaching of dance, perhaps especially of ballet technique: steps must be understood from the sensation of the body, rather than from what they are supposed to look like, or the work and the understanding of the form are not truly embodied. Attention to the sensation in the body, and not only to the shape the movement is supposed to make, also builds awareness towards sensorimotor patterns in the dancers.

In summary, these aspects of our discussion relate to the idea of developing self-awareness (awareness of oneself and one’s body here, as distinct to what was discussed in the previous section): the performer can develop more awareness of their own training, their own habits, their own understanding. We can then face the fact that we might have embodied beings who are not embodying certain aspects of their work, or even who are disembodying these aspects because of their training, or lack thereof, and give them tools to work towards more embodied performance. Indeed, joining the performer’s point of view/training, with an analytical audience view—which also corresponds to the choreographer’s, we can develop tools to train dancers and choreographers, and potentially we can also contribute to audience development.

To conclude, however, I would like to focus on the limitations of the project. Starting with the question of whether we can really understand how the view of the audience works. Or, for that matter, how any of the agents’ views (choreographer’s, dancers’, etc.) work? It would seem that we are implying a sort of “ideal agent” which could only be a subject of our own making (and in that sense, made as we ourselves are too). What happens then with the individual spectator, the performer, the choreographer? Are we in danger of generalizing too much? The foundation of our thinking on embodied cognition and enacted perception already implies that we are talking about individual experiences, but that these are complex and multi-layered themselves and can be discussed. This information, without reducing the experiences to something that can be completely prescribed or dissected, can inform the work of all the agents involved in the process of making, performing, and watching a work of dance.

Of course one of the main things that emerge from the results of this project is that we need larger samples and more time to develop this research so that it might produce more results (although we also believe, as discussed, that nothing final can ever emerge from this kind of research, in the sense that we

embrace Varela's *groundlessness* wholeheartedly (Varela, Thompson & Rosch, 1991/2016). In the end, the real question we would like to answer through our long-term project is not how we can understand dance better through these questions, but...

How can dance help illuminate some of the deepest questions regarding human consciousness through carefully designed interdisciplinary, collaborative research on embodied cognition? The potential of dance to question ourselves (as human beings, not "only" as dancers), and to explore certain essential questions, is enormous and deeply underused. The way forward, then, is for dance research, and specifically dance practice-as-research, to claim its place as a method to investigate issues such as cognition, self, embodiment, consciousness. Not only serving other disciplines as it has not done quite so clearly before, but also standing shoulder to shoulder with them.

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