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On “Problem Solving in Design and Music”

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On “Problem Solving in Design and Music”

Alessandro Bertinetto
(University of Turin)

In their paper Herriott and Mok discuss the relationship between music and design by highlighting the conceptual relationship between improvisation and creativity. Starting from the analysis of the notions of creativity and improvisation, they argue that there is a kind of mutual dependence between the two. Based on this dependence between improvisation and creativity, they then discuss the affinities and divergences between music and design. The affinity lies in the relevance that improvisation plays in the two areas. The divergence depends on the different way in which this role is played.

I am very sympathetic with the first thesis concerning the mutual dependence between improvisation and creativity. Yet, I have some doubts regarding the way in which this first thesis is applied to the relationship between music and design. In fact, I believe that the role that creative improvisation can play in the two areas is similar, despite what is argued in the paper.

My commentary has two parts. In the first I focus on the relationship between improvisation and creativity. In the second I discuss the application of creative improvisation to music and design.

§1 *Improvisation and creativity*

Basically, what Herriott and Mok argue is akin to what I have argued in my own work (see Bertinetto 2011, 2012, 2021). Improvisation is crucial for creativity, i.e. creativity is essentially improvisational. As I argued in reference to artistic creativity (but arguably this holds true also in fields other than the arts), “artistic improvisation is paradigmatic for artistic creativity”, i.e., artistic improvisation may be understood as *exemplification of artistic creativity* in the Goodmanian sense of exemplification, according to which what a symbol exemplifies must apply to it”, (Bertinetto 2012: 135-6). In fact,

creativity is improvisational, in the sense, that its outcomes are unforeseeable. They may take by surprise the beholders, but even the artist. For the artist is not simply following a ‘recipe’. The artist

modifies (or even rejects) the ‘recipe’, accordingly to the concrete situation and the concrete media that afford his/her reactions, in a more or less exploratory and experimental way and uses it, as it were, as one of the ‘ingredients’ of the artwork he is producing. Improvisers do the same in an explicit way. While reacting in real time to the concrete situation, they use – and, of course, they adapt and transform – ‘recipes’ of different kinds (sequence of chords, melodic formulas, songs, pattern of actions, dramatic plots, cultural conventions, aesthetic styles, performing tricks, etc.) as ‘ingredients’ of the improvised performance, (Bertinetto 2012, p. 136).

In which sense, however, are creative outcomes unforeseeable?

My point in this regard is that the determinate properties that are responsible for an action or an achievement being creative cannot be predicted in advance or generalized: they vary from case to case. Empirically, creative acts are accomplished in an indefinitely multitude of different ways: there is no mechanism, “no one set of action-guiding principles, responsible for all of them”, (Novitz 2003, p. 178). Hence, a creative outcome is something unexpected and unforeseen. Although it can result from a long and accurate preparation, it has something surprising. In spite of depending on routines and methodologies, creative activities make something new which cannot be traced back to rigid rules: it *emerges* on its pre-conditions in terms of knowledge and resources. And, as emerging on its pre-conditions, it is unforeseeable: *ex improviso* (it cannot be seen in advance). Of course, not all unpredictable things are creative though. Creativity is an *evaluative concept* that can only be applied to actions and products which have a positive value and which are the result of human agency and which are not completely independent of human control, (see Gaut 2009, 2012).

In short, Herriott & Mok are right to argue that creativity is in itself improvisational, since it is “rooted in the unexpected response to a situation”, (p. 76). There are obviously different forms and types of creativity. However, this improvisational quality seems to be an essential condition for something to be creative.

For this reason, when in the rest of the writing (p. 80) they think about the possibility of non-improvisational creativity, the right answer is that between “mere use” (or, as I would say, “habitual practices”) and creative acts there is no qualitative difference, but, as they seem to argue, a difference of degree. In this regard I would like to push a bit the authors on this point. As I have argued elsewhere (Bertinetto & Bertram, 2020; Bertinetto 2021) between habits and creativity there is no radical alternative. In fact, habits (or practices based on use and repetition) are plastic and

creative and pure creativity does not exist. Also for this reason, artistic improvisation is paradigmatic for improvisation, since without practice and habits the pre-conditions for creative performance are lacking. Conversely, however, skills and training habits are acquired through improvisational performance. In short, there is a reciprocal feed-back between creativity and habits.

So far, so good. How are things for improvisation, e.g. musical improvisation or other types of artistic improvisation, but also for improvisation in everyday life? Is improvisation, as such, essentially creative? In this regard, Herriott & Mok's answer does not seem univocal to me. They nicely and interestingly describe improvisation as “creativity in action”, (p. 79). More precisely, referring to Boden (2004) they claim that

Improvisation is the ability to adopt a variety of strategies and modalities through kinaesthetic and intellectual control, it is a type of creativity that has potential to be reflective as well as ephemeral and transformative in nature, (p. 79).

Yet, they also observe that artistically creative improvisation is different from “making-do”. A patched-up solution to a sudden emergency isn't always satisfactory. Maybe this solution solves a problem, but it is certainly not ideal. It's just a temporary way to get things running smoothly in situations where time, resources and preparation are lacking. In any case, the authors seem to think that between improvisation as making-do and a creatively satisfying improvisation there is a difference in degree and that, in hindsight, also a “making-do” solution to a sudden problem can be creatively very satisfying (on “making do” see Hamilton 2021). In improvisation studies this difference is usually articulated through the notions of *reactive* improvisation (or *impromptu*) and deliberate improvisation (*ex tempore*). There is a difference between the two notions (and between the two practices); yet reactive improvisation can be part of deliberate improvisation and can possibly enhance the rate of unpredictability and creativity of the performance, provided that improvisers react to the unexpected in an artistically felicitous way, (Goehr 2016; Bertinetto 2016; 2021).

Having said that, however, the authors seem importantly to think that improvisation is indeed essentially creative. They define improvisation as “the genesis of novelty in the assembly of materials, actions (as in musical actions) or ideas”, (p. 81). As such, improvisation seems necessarily creative. Still, the problem seems to be that improvisation doesn't always seem to be creative. Just think of how many boring musical improvisations

we have listened to. Improvisers often do nothing but resort to leaks or patterns learned and inscribed in the body memory, without really inventing something new.

I would solve the problem by stating that not only the creativity of improvisation is a question of degree, but that improvisation itself is, in fact, a question of degree. Improvisation often occurs in the way in which the performers are able to adapt their know-how to the specific concrete (and unrepeatable) situation of the performance, through the way they respond to what is happening. While nothing extraordinarily creative often occurs in this way, it can be argued that in this habitual practice there is something ordinarily creative. And to understand this idea, we can refer to the link between habits and creativity already mentioned above. In any case, this thesis seems consistent with what Gilbert Ryle argued in his famous seminal paper on improvisation, (Ryle, 1976).

To make a long story short, I agree with the authors: there is a very strong connection between improvisation and creativity. And this shows up, in particular, when improvisers felicitously respond to the unforeseen without previously knowing how to solve a problem which, in its specific concreteness, could not be predicted in advance. Still, habitual practice (based on skills and know-how) is not an impediment to improvisation, but its precondition which is brought into play in a specific situation. The specificity of the improvisation situation can subvert the ordinariness of the practice and creatively change it (this could be elaborated a bit resorting to Boden's three kinds of creativity: combinational, explorative and transformative: I did so in Bertinetto, 2011, 2012 and 2021). In these cases, the new is produced, also in terms of knowledge, through the realization of "new configurations of materials and ideas", (p. 84). It is not *creatio ex nihilo*, but the "renewal of what is already there", (Peters 2009).

§ 2 *The role of creative improvisation in music and design*. Let's move on to the second part of the topic of Herriott's and Mok's paper. Their key point in this regard is as follows. Creative improvisation is important in both music and design, despite what it may seem. However, given what they believe is an important difference between the two practices, the role played by improvisation is significantly different.

In both cases, they argue, improvisation is inevitable. Indeed, as argued by Ryle (1976) when a rule of action has to be applied to a particular circumstance, one cannot know in advance exactly what to do. As I have argued elsewhere, since the application of the rule – necessary to concretize the rule – reacts on the rule by modifying it, the rule of action is invented, in fact, by and while acting. In the words of Wittgenstein (1953), "We make up the rules as we go along". This is true at least in the sense that each

application to the single case, *signifies* on the rule, or on the resources, conventions and materials available (as the authors argue for example in reference to the songs of Brel and Bowie [31]), thereby reshaping them. This is an important feature of both music and design.

I have no objections against this, just as I have no objection to the fact that improvisation plays important roles in the different types of musical practice (not only the performance, but also the composition [cf. p. 89]: think for example of Giacinto Scelsi), as well as in the different types of designs developed in the course of history, (cf. p. 86f). Of course, as according to Herriott and Mok it happened also to the design practice, theoretical systematization has gradually hidden the role of improvisation in the organization of practice in terms of works, compositions, etc., and, as I argued in Bertinetto 2016, the philosophy of music also had to pay a considerable theoretical price for this neglect of improvisation, which is instead at the core of musical practice (see the third part of Bertinetto & Ruta 2021 for extensive discussions of historically and culturally different forms and kinds of musical improvisation). Fortunately, new directions of the theory, the philosophy, the aesthetics of music and design are, of course not without difficulty, showing the central importance of improvisation for both practices, (for design see Frye 2017, 2021). The central point is that the concreteness of any formative process, both in design and in music, requires creative improvisation to varying degrees.

In fact, the concreteness of the situation of music and design production elicit problems that cannot be solved by applying the known rules, but require instead the performative inventiveness that is typical of improvisation: the higher the rate of effectiveness (aesthetic and operational), the more the improvisation will move away from mere making-do and will approach creativity in an eminent sense. Moreover – this is an important aspect of Herriott and Mok’s argument – improvisation as a creative strategy in the practices of music and design is not “irrational”.

Both in the different kinds of music production and in design, functional strategies can be adopted to solve problems, such as the possibility of resorting to ready-made elements or solutions one can resort to in the concretely specific circumstances in which one finds herself operating, (p. 92: along these lines, see Preston, 2013 for a discussion of improvisation as an essential creative resource for production practices, with a central focus on music and design). Thus, taking up the distinction mentioned above between reactive and deliberate improvisation, it can be argued that improvisation is not only an inevitable aspect of acting and a crucial and essential aspect of creativity, but also a method that can be deliberately and consciously chosen and – odd as it may seem – even

planned in order to operate in the field of music and design (and, as I think, also in many other areas). Yet – I think that this can be inferred from the text I am commenting on – even the planning activity must be rethought by conceiving it as a process that involves an adaptive interaction with the specific circumstances of its development: an interaction that is eminently improvisational.

But, and herein lies the disagreement between what I think and what Herriott and Mok think, according to them there is a crucial difference between improvisation in design and in music. As they write, in music

one is *declaring* a parameter fixed whereas in design fixed parameters are *imposed*. Designers don't have to pretend to respect the givens of a case. They are required to. When a musician fixes a parameter, it is an act, acting —as-if and as such carries less force. It might be interesting to have a set of rules or a self-imposed dogma but that does not make it as compelling. Personally compelling perhaps, but less compelling than the necessities imposed by budgets, consumers and production processes that are the grist for the designer's mill, (p. 93).

I do not believe at all that this is the case. As has been shown for example by Howard Becker (1982; see also Becker, Faulkner, Kirshenblatt-Gimblett, 2006), even those who work in the field of music must submit to imposed and not freely chosen constraints. These constraints may concern the length of the pieces, the choice of performers, the type of audience, the economic needs, the social purpose of the performance, etc. The creativity of a musician, even of an improviser, is not unbridled. And also the freedom of *free improvisation* is a declared aesthetic ideal, not a material condition of production. Therefore, it is true that in a performance of musical improvisation some constraints depend, for example, on the stylistic choice of the artists or on the tradition of a cultural practice: that is, they are not imposed by the performance circumstance, but declared as fixed parameters of the practice at issue. For example, a musician who improvises on a standard has to respect the harmonic structure of the chords, but if he doesn't do it the result is not always disastrous, indeed it could be highly creative. However, even in the realm of design some choices of the designer seem to depend not only on the functional constraints of the specific production: they rather seem to ensue from the individual way (that is, from the personal *style*) of the author of the project.

In short, I do not accept, without further arguments, the view according to which “In design, art is used to solve problems. In music problems are solved to do art” (p. 90), which means that art is “used to solve

problems in design and problems” are “used to create art in music”, (p. 94). It seems to me that in both practices problems (and contingencies of different kinds) may be taken as *affordances* to creative solutions (on the notion of “affordance” see Gibson, 1979) as well as “art” (or creative and also aesthetically valuable ideas) may be adopted in order to overcome obstacles or technical difficulties of different kinds, depending on the specific practices at issue as well as on the specific situations in which both musicians and designers are operating. As it is showed by A. Frye (2017, 2021; see Bertinetto, 2021), in the design of objects the balance between aesthetic form and functionality can be negotiated by designers in every single situation, to the point that, in extreme cases, the designer limits herself to making possible a condition in which the user can improvise aesthetically with the function of the artifact. Even in design, therefore, the “weight” of imposing the constraint of function on the production process is not fixed once and for all. Therefore, both in the realm of music as well as in the domain of design, whether it is art that solves the problem or the problem solved that makes art possible (or desirable), is decided on a case by case basis. As I think, the rate of creative improvisation in both practices increases qualitatively not (only) thanks to the ability to solve given problems, but (especially) thanks to the ability of inventing new ones, since those who come across new, and unexpected, problems are forced, or at least invited, to invent, *ex improviso*, unexpected and possibly unprecedented and valuable (i.e. creative) solutions.

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On Ellen Moysan's Inner Song

Richard Herriott and Joni Mok

The subtitle of Moysan's "Improvisation: Performing the Inner Song" summarises the article's focus on the emergence of sound ideas from the sub-conscious to the conscious. The idea present is that the 'Inner song' exists in everyone. Moysan combines the philosophical aspects of Husserl's phenomenological framework with music performance from a cellist's perspective. In this response we look at some key points in the article and draw parallels with the way in which art or design ideas are brought forth into the conscious and "performed" on paper or in three-dimensions.

In the article, Moysan explains the difference between the ability to improvise as a musician and the ability to simply play perfectly from a score. As Moysan defines the concept of inner song, it is something that comes from within and is not affected by any external stimuli. She argues that the inner song is rather constituted in consciousness. It can be manifested through the process of writing it down as a score or simply playing it through a musical instrument or one's voice. This type of creative process in music can be seen as improvisation. Improvisation, as Moysan writes, is that we have "something unique to say and we say it". She emphasises intersubjectivity as something that is heard inside us and related to the process of realising what is heard within the outer environment. It is, hence an embodied experience that is grounded in physical reality. It is about perception and action – what we perceive, we interpret with our own consciousness or imaginations. We then act through our bodies, either by singing it out loud or playing it.

Moysan shares her point of view as a phenomenologist, she then discusses Husserl's 'Idea 1' about the natural attitude. The sub-ideas to this 'idea 1' are (1) apprehend itself and (2) grasp itself as comprehending 'mental processes'. Based on her interpretation of this 'idea 1' is that the natural attitude exists as a default within our consciousness. Moysan explains that once the phenomenologist understands what perceiving is from the external stimuli as a first-person experience, then the phenomenologist interprets the information mentally. Once steps (1) and (2) are completed, it is seen as an *epoché* and that appears in consciousness as phenomena. The process of accomplishing an *epoché* is that one has internally expanded his/her mental models, hence becoming conscious about an object. By this reading, we have a form of self-consciousness, where one actively monitors one's inner state. The state is analogous to the 'executive function' and is in all likelihood recursive. Moysan argues the musician has also an *epoché*. From a musician's point of view, she writes that musicians first silence their conscious registration and pay attention inwardly and then through the use of imagination (not perception), musicians express their inner songs through gestures. It is the manifestation through practical action. The notion of a practical *epoché* in Moysan's writing, we interpret as having an idea from the mind and manifest through the body. It is having one's mental process organised and finally turn it into music that can be heard by others.

The argument concludes that for fundamental reasons machines can not improvise. The responding authors endorse this argument and below, elaborate a little on it. We also draw some connections to other cognitive models and find that the Husserlian approach provides a dimension that "mathematical" models miss.

Having outlined Moysan's text, we now delve into details argued in the text.

The inner song is the pre-expressive and unarticulated impression of a musical non-verbal concept. It is relevant to composition, performance and also to improvisation. In the case of improvisation it is creation from scratch. *Question – chance favours the prepared mind so does previous mentation inform or guide the inner song at a pre-conscious level. When one articulates the inner song and it is in front of one, does it yield clues as to its inspiration? There is a tension in the statement that it is an “improvisation from something” and also “it is an improvisation from scratch”.* We might be a little more comfortable with this if implied the “sudden emergence of sound ideas” which allows for the way in which meditation, observation and research may prepare the performer to make best use of the inner voice's sound-ideas.

Ellen Moysan writes that the inner song “is given in the phenomenological consciousness, (2) of imagination in the sense that it is not a phenomenon of perception and also not an intuitive positing of past or future as true, (3) teleologically oriented toward a performance in the sense that it is given as a part of the act of performing, (4) constituted through an intention in the sense that chance plays a very little role in its constitution, (5) sonorous but not necessarily linguistic in the sense that it is made of sounds but language might or might not be involved”.

Question – the idea that (1) the inner song is intentional and (2) that chance plays very little role in its constitution would be hard to reconcile with the way in which the inner song arises pre-consciously. Once it is expressed it then becomes subject to scrutiny. The inner song, like other pre-intentional ideas is, we would contend, an amalgam of unconscious sound-notions that have a basis in something; the chance element is the way they are put together and also how they are then related to sound-notions in the consciousness. If I for example, bring forward an inner song, I am as it were rummaging in the unseeable part of my mind and will be somewhat surprised by what comes out; this author (RH) has experience of improvised acting where the equivalent of the inner song is the character being played (impromptu) and to a surprising extent I, as performer, am often surprised by what emerges through the character; yet I also can adapt the utterances and actions to the audience and the direction I want to go with the performance. Can we suggest the inner song is a sort of liminal mode between the surprise of what is brought forth and the conscious awareness of the purpose it is to be put to? This is suggested in the later text about the realization of the inner song. As Ellen Moysan writes “here is a sort of loop here: I can play because I have an idea of what I want to play, but

conversely, my inner song is enriched because I work on it through practice”.

Improvisation “is about having something unique to say and being able to say it through the instrument. Becoming able to say something through the instrument is a problem of training and the acquisition of a technique” and then Ellen Moysan asks “So, how is the inner song constituted in consciousness?” To address this point Ellen Moysan draws on Husserl’s idea of the distinction between the imagination and perception. “Thus, the distinction between the inner song and its realization is not a distinction between a psychological internal object and a physical external object, but a distinction between a phenomenon of imagination on the one hand and a phenomenon of perception on the other.” Both the imagination and perception are internal as in the self-awareness of a mental state. In the case of visual ideas, paper and pen can bring the two together externally and they get re-percieved and judged, e.g., I ask does this shape achieve what I might require of it? In the case of sound-ideas, the externalization is via the instrument or the voice. And again one can review the performance of the sound-idea and continue to develop and refine it or practice it to make it more “solid”. It becomes learned.

I would suggest that the phenomenological turn called the *epoché* corresponds to the intermediary state of self-awareness. It happens when I say to myself “I am enjoying this glass of water”; it happens when I am aware of what I am drawing and presumably when one is aware of what is one is playing even as the sounds seem to emerge without conscious thought. Speaking from experience, this is akin to improvising on a keyboard where one is both performer and audience (and one can be surprised by the result yet also guide it somewhat). The significance of the *epoché* is clear: self-awareness can direct creativity. We also ask how this is reconciled with the well-discussed concept of “flow” which is characterized as total immersion and explicitly about the seeming freedom from conscious thought or at least that sort of conscious thought associated with problem-solving of the difficult kind.

We like the parallel to improvisation in design which we have elucidated in our own paper. “In music practice I distinguish two objects: (1) the inner song given as an object of imagination and made of phantasms, and (2) the realization of the inner song given as an object of perception and made of sensations. The two objects appear separately in consciousness, however, as I will explain it later, the memory of the object of perception can break into the field of imagination and participate in the clarification of the inner song and in a modification of the object; that’s why performing the inner song actually helps the musician to better grasp the inner song”. This

correlates very agreeably with the way in which the vague idea of a shape materializes on paper or in a modelling material; from a phenomenological point of view when one is creating one is aware one is creating but also stepping back (instantaneous moments) to consider and then renew the work. Habits and processes can be deployed to freeze the creativity and then resume it. It is likely that improvisation in all its freedom also depends on frameworks of habit and easily accessed knowledge from experience.

Further parallels to design are found here: “The inner song is given under three forms of consciousness: (1) image-consciousness in the case of interpretation, (2) sign-consciousness in the case of interpretative improvisation, and (3) pure phantasy in the case of composition and compositional improvisation.” Taking them one at a time: interpretation corresponds to drawing an object in front of you; unlike in music the representation is fixed on the medium and can itself become an aesthetic object. Interpretative improvisation would seem most to correspond to drawing a class of object one is very familiar with such as a basic dining chair or coffee cup though without the object being present. Pure fantasy doesn’t have a direct correlation, we propose, unless one considers free-form abstraction which then remains as such or is a means to generate an image of a more representational kind. Here one might consider the concept of conceptual blending. “Conceptual blending proposes that novel concepts arise from a selective combination of previously known information” which was “introduced by Fauconnier and Turner (1998), which developed further the idea of bisociation introduced by the psychologist Koestler (1964)”.¹

This might chime with a later part of Ellen Moysan’s text: “As I start to perform, I have an unclear understanding of what I want to perform, i.e., of the inner song. Then, it develops as I play. This is true for interpretation or composition; it is even more obvious with improvisation. Indeed, the improviser does not have a full picture of what s/he wants to play from the beginning. Instead, there is a sort of kernel which is unfolded as it is performed”. And it it chimes with the way I (RH) draw either a design object or a fine art theme. “This happens through a temporal synthesis: the just-perceived presentation of the realization of the inner song breaks into the now of the phantasy presentation of the inner song, thus participating in its further enrichment”. What would be interesting to explore further is the detail of the perception (by which we mean the granularity of it). We are

¹ Hedblom, M.M., Kutz, O., & Neuhaus, F. ”Choosing the Right Path: Image Schema Theory as a Foundation for Concept Invention”, *J. Artif. Gen. Intell.* 6,1 (2015), pp. 21-54.

also interested to know how chunks of sound-ideas are reformed and modelled to fit with memories or remodeled to fit the desire to guide the inner song towards a goal. In our paper we discuss the way ready-made objects are fitted together with new elements or how objects are altered in an improvised synthesis. In music the corresponding process might be how one makes a melodic bridge from one “chunk” to the next (adding new material) or how one alters the content of the inner song such as changing key or tempo to allow continuity (if continuity is wanted). Let us imagine we have two distinct sound ideas and wish to make them into a seamless whole. One or both sound-ideas will be changed and perhaps a fresh chunk of inner song is inserted to make a bridge or link (segue?) between them. We are curious about the things that happen to the inner song, from a phenomenological perspective and this is where Ellen Moysan may wish to turn her attention, to see how it is for the inner song to evolve and become more concrete through the improvisation process. The paper though does provide a detailed analysis of something that may otherwise seem nebulous. Certainly mathematical explanations are in comparison remarkable clumsy and flat.

Turning to machine improvisation, Ellen Moysan correctly identifies that the lack of self-awareness must constitute a major barrier to the notion of machines doing anything more than pattern matching. If we assume human consciousness is real (though not explained), it seems *prima facie* that machines are only producing outputs based on the programme’s instructions. This conception could be mapped to the conceptual blending model too; phenomenology is needed to qualify it, the sense of “what it is like to improvise”. At best machine processing is a form of time-delayed human improvisation: one writes the programme and then puts in the data and there comes, later, a result. What is missing though must be the interactive element, the feedback between the thoughts and the meta-thoughts. In human improvisation the human performer is in a liminal state between bringing forth the new sound-idea and also guiding its emergence with other, essentially random, new sound-ideas influencing the result. It would seem to us that the phenomenological description better characterizes the way in which sound-ideas are imagined and played than the mathematical-type logic of conceptual blending. Further, the conceptual blending concept is missing notions of meaning and emotional content. We are thus satisfied with the conclusion “that machines cannot improvise, they only compute and program”.

“In the course of my argument, I have stressed the closely tied relation between the imagination of the inner song and its performance. I have insisted on the fact that it is particularly true for improvisation in which the inner song unfolds as it is performed”. And we also see how similar

arguments can be related to design and fine art. Perhaps it is strongest in relation to fine art with its high level of abstraction. But inasmuch as design exploits art methods in the origination of shapes, there is a good explanatory fit. Without delving very deep into design literature in particular, we can happily say Ellen Moysan has provided a usable analogy the way in which designers visualize concepts based on visual correlates to the inner song. Where we think there is more scope for investigation is in the melding and moulding of elements with examples from music to illustrate how a sound idea transforms as it is performed and perhaps transcribed.

Some questions from Ellen Moysan conclude her paper. “Given what improvisation is, is it teachable?” Ellen Moysan argues that through learning from tradition and masters but makes the distinction between interpretation and improvisation. We might argue that though two words are used here for two pure concepts, it is more likely that there is continuum from interpretation to improvisation. This depends on the amount of content carried over. Brad Mehldau’s interpretation of songs by bands such as Radiohead blur the boundary, even moment by moment as the theme becomes more and less apparent. In live performances the core theme may not even be detectable yet the music is, so to speak, circling the neighbourhood of the theme to which it returns (recalling guitarist Reeves Gabrels skill at playing any note so long as he returns to the right note during his improvised solos). We would suggest that the very core of improvisation isn’t teachable in itself but that one can direct performers to strategies where it becomes more likely. Design is different from music in that it has repertoires for discovery; but it also has a stock of forms and semantic content to which one can return, work with and modify. I would see these structures as analogous to, say, the tropes of classical music or the customs of popular music genres (e.g. the basic rhythms of blues or the devices of the guitar break, e.g., Mick Ronson improvising around the core structure of the song “I know it’s gonna happen some day” in David Bowie’s 1993 recording of that song). Improvisation depends though on reaching into the subconscious. Chance favours the prepared mind, as we have noted. Skill, practice, analytical capability are hooks upon which the haul from the deep sea of the subconscious are caught.

Bertinetto, Moysan, and Herriott & Mok on Improvisation

Anna-Lise Malmros

Bertinetto writes: The “Algorithm of improvisational creativity” includes creativity in an algorithm without discussion, a contention that certainly is worth a discussion.

Later comes a kind of explanation combining two criteria: “criteria to generate results” and on another (?) level “evaluate them”. How an algorithm can evaluate its own results is an enigma for me, but I do understand, that for Bertinetto improvisations are “elaborated on already available knowledge”.

To a very high extent jazz improvisations – “solos” as learned in Jazz Schools – are built on melodic/harmonic formulas that are common to most jazz musicians, even if the personality of the musician (sometimes) is still there only primarily expressed in details which are hard to pinpoint: the personal sound, the forming and shading of tune and rhythm not to mention the character of the instrument – these things are fundamental also to classical performance even if there is no improvisation, but in jazz, specifically, there is a fluid spectrum of melodic and other variations. It is for me hard to imagine how all this – even if it is “already available knowledge” – can be incorporated and evaluated (?) in an algorithm.

I must admit, I have heard some improvisations that sounded as though produced by an algorithm, a duplication of a good musician on a bad day, so yes, it is a possibility, but why? I can (I admit) see a public applaud because they hear something they already know and they like that.

If you insist on improvisation being new, inventive, never heard before, it is another thing. The saxophone player John Tchicai’s wife number three Kirsten explained to me what she learned from being married to him: she began to find it boring to hear a known tune again and again without anything new and only replaced by licks that were exactly as normal instead of a concert with her, at that time, husband: listening to him, she sat on the edge of her seat waiting to hear what would come next, and every time she was surprised. Tchicai called it “instant composition”.

Tchicai was able to survive as a musician partly because he was invited to arrange workshops mostly in Europe, young musicians loved them and often they returned two or perhaps three times – they were not finished with him after one lesson. He could push them towards a new horizon, because he would listen carefully and understand how far the young musician could be pushed and know – better than the young musician himself – what was reachable for him or her.

The music in the film *New York Eye and Ear Control* (1965) produced by the filmmaker Michael Snow stands out as an example of free

improvisation, because Snow insisted before the session: no tunes! And the musicians – Tchicai, Cherry, Ayler, Rudd, Peacock and Murray – could manage to capture us without inclusion of any previous familiar gestures or “tunes to remember”.

The battery of substantial defining weapons like timing, bending, blue notes, coloring (like words), accents, changing of speed and the exact combination of all these that signals one particular musician, all the things that grow in importance when you move from notes to real music, when works are not a sonata but instead releases like John Coltrane’s LP/CD’s.

(It would be easier for the computer to create a Mozart sonata than a Charlie Parker release, that is of course not because one is more original than the other, it is because the artwork we relate is either a written score or played performance).

The old “machine-murderer” Theodor Wiesengrund Adorno denies in *Minima Moralia* any chance of real art and creativity existing in “mass production” – color TV, Magazines for Millionaires and Toscanini – even if he in later years deeply admires Stockhausen’s electronic work, but that is another thing – a composer using machines for his own purpose.

Sonorous – Linguistic. Moysan writes “Sonorous but not necessarily linguistic in the sense that it is made of sounds but language might or might not be involved”.

The distinction between words and sounds/tones in – most clear-cut – jazz music is intriguing and extremely complicated.

It depends on the improvisations, but also on the simple, instrumental playing of a tune knowing what the words are when it is formed by a vocalist. The reference in jazz is very broad. Of course it can be happy or sad, but it can also be ironic like in Cole Porter’s “Every time we say goodbye” and a musician such as Coltrane can decide to play the tune without irony (even if he knows the text).

Or an expression of love: “Mad about the boy” can be mixed – “misery and joy” – without being said explicitly. The message is in the voice, the instruments, the whole arrangement.

Moysan tells us the story of the great musician who is an extraordinary interpreter but unable to improvise. John Tchicai had many workshops also for classical musicians, he said they would always try to avoid it when he asked them to improvise. He sometimes forced them, but a question is: should you do that? When I hear that kind of improvisation I think, they should have declined. However coherent, organic and expressive their interpretation may be, so disruptive, un-organic and stiff their improvisations are (sometimes). There is something like a contradiction

here, as if composition and improvisation are related, while interpretation is part of teaching, explaining, communicating.

Effectiveness. Herriott and Mok try to treat modern music like design by looking at the music as “problem-solving”. Their approach is really challenging, but at the same time it is funny and new. Of course, when we talk about music for films you often feel that the pictures would be nothing without the sound and vice versa. Is that a bad thing? Perhaps not, if together they produce (some kind of) artwork that again produces admiration and money, then why not.

Almost the same thing could be said of the next, provocative sentences: “... creativity and the linked concept of improvisation: What is the minimum standard of creativity?” And “Creativity requires effectiveness and originality”. When you come from a world where creativity expresses itself in, for example, extremely precise intonation, very fine bended/blue notes, minimalistic tempo-changes, breathing, changing of a single tone for a slightly different one, it is refreshing and thought-provoking, because in a world so infiltrated with improvisation as the jazz-world, the word “originality” – not to mention effectiveness – does (almost) not exist.

Gilliland’s Demystifying Musical Improvisation

René Mogensen

Rex Gilliland examines some ideas on ‘creativity’ and ‘improvisation’ with emphasis on the analytical views of Robert Weisberg and R. Keith Sawyer. Gilliland argues that music improvisation as a creative activity may be spontaneous while being ‘guided by earlier conscious thinking’. I am sympathetic to this argument. However, I want to point to some issues and questions arising from the arguments he presents that deserve attention and more discussion.

Intuition and random association. Gilliland distinguishes between two creativity conceptions: intuition and random association and proposes to ‘combine these noninferential models of creativity together’, (p. 160). Perhaps one can go further with this argument. Both of these creativity conceptions are taken to be internal and private for a given person; and in addition they are proposed as ‘unconscious noninferential abilit[ies] at the core of creativity’. Thus these ‘abilities’ are not visible, or fully knowable, to the person possessing them. If these two abilities, intuition and random

association, are entirely invisible, yet are postulated to have the same effect, in the form of a creative output, then is it not more reasonable to expect ‘intuition’ and ‘random association’ to be two names, or perhaps two parts or elements, of one ‘process’? If we apply *Occam’s razor*, perhaps it makes more sense to consider random association as a description of what ‘intuition’ is? The ‘randomness’ of associations may be modified through experience, in the sense of the Predictive Processing where human cognitive development includes gradually modifying expectations in order to minimise ‘prediction errors’.

The ‘conscious’ versus the ‘unconscious’. As discussed by Gilliland (p. 161f), Weisberg’s approach may bring creativity into a ‘conscious’ arena, but his proposed components such as ‘memory’, ‘talent’, ‘knowledge’, and ‘judgement’ are no less controversial and perhaps no less ‘mysterious’ concepts than is ‘intuition’. In the current fields of cognitive science and neuroscience these components are quite far from being clearly explained. What the concept of ‘consciousness’ means is a long and ongoing debate in the philosophy of mind. So an attempt to move the seat of creativity towards components that are postulated to reside in ‘consciousness’ rather than in ‘the unconsciousness’ seems to merely be shuffling around the postulates being discussed; and the postulates are all quite speculative and only vaguely defined. The postulated components in Weisberg’s approach seem no less questionable than those used in discussions of ‘intuition’-based creativity.

Audiences have access to ‘creativity products’, not ‘processes’. Gilliland makes the point that ‘the vast majority of [the improviser’s thinking] is done in advance [of performing]’ (p. 169), in other words the improvising musician *prepares* for the action of musical improvisation. At the same time, Gilliland also claims that ‘improvisation allows us to experience creativity happening before our eyes – creativity *in vivo* – in contrast with preformed creative works, whose process of generation is rarely recorded in any detail’, (p. 159).

Perhaps improvised music is not a recording of some process, rather it could be a *product* of some creative activity, or perhaps a *creative product*. It seems to be a mistake to think that the ‘process of generation’ is visible or ‘happening before our eyes’ during music improvisation. The audience does not hear a process, instead the audience hears what might be termed a creative *product*: in other words, the performed music. Whatever process there may be in generating the performed music is internal to those performing. The audience may observe/hear interactions between performers, and sense or identify patterns in the performed music; however, the processes that generate such interactions and/or musical patterns are

embodied in the performers and are not in the public forum. Only the music is in the public forum. Whatever processes may be ongoing during the performance of improvised music, the audience only has access to the effects, or products, of such processes.

Separation of the concepts of 'improvisation' and 'structure'. Sawyer is paraphrased as claiming that 'Free jazz performances negate jazz's traditional norms in the attempt to avoid structure and create a completely improvised performance', (p. 165). This may be a normative stance taken by some Free Jazz performers. However, it seems that this type of conceptual conflation of 'improvisation' with 'structure' is a category mistake. It would make more sense to say that music improvisation will *create* structure that may not have been planned before the performance. The human cognitive mechanisms (our senses together with our interpretations of sensory inputs) is a 'structure' generator: we hear structure in sound even if there are no intended structures from the sources of those sounds. On the other hand, an abstract structural idea may, or may not, serve as a 'structural referent' for music improvisation. The intention of imposing structure on performance may be a useful performance practice mechanism. While the intention of avoiding structure can also be a useful performance practice mechanism, it can only result in structure in the music which is not planned explicitly before the performance.

The act of music improvisation may be understood as having an engagement with structures of varying degrees of constraints on a scale ranging through at least three prototypical structure categories: 1. structurally 'referent' free – 2. improvisation plan (with structural 'referent') – 3. score interpretation. In structurally referent free performance, the improvisation will realise a musical structure; where there is an improvisation plan (sometimes known as a 'structured improvisation') the plan delivers some prepared constraints on the musical performance; while in score interpretation, performer improvisation is often restrained to musical nuances of tempo, articulation and phrasing, as well as interpreting dynamics and instrumental colours.

'Emergence' in group performances. The idea of 'emergence' in group performance is perhaps contentious, and Sawyer's use of the term may not be sufficiently well-defined, (p. 169). But we can take 'emergence' to signify the results of self-organisation by individuals in a performing group. This does not imply some mysterious 'group intuition' which Gilliland infers (p. 169); instead, 'emergent' properties of the musical performance (such as Sawyer's group 'flow') designates abstractions which signify an observer's interpretation of structure that results from the self-organising actions of the members of the group. The members of the group

themselves may also engage as observers (while continuing to perform) and contemplate such abstractions and thereby feel consciously engaged in something they might call the ‘flow’ of the group’s music performance.

Computational improvisation. The term ‘artificial improvisation’ (p. 170) is somewhat problematic and I should much prefer ‘computational improvisation’. Current digital computers are systems that perform computations. The computations that digital computers perform could in many cases also be performed by human ‘computers’, in other words by persons who perform computations, as the term was used in the early 20th Century. Digital computers are faster than human computers by many factors in some types of computations. But the computations themselves are based on mathematical systems, and so to say that a computation made by a digital system is ‘artificial’ compared to the same computation made by a human is to apply the terms ‘artificial’ and ‘not-artificial’ to the same process, a process of computation. If we accept in principle that digital computers could conceivably improvise, then they would do so *computationally* by necessity; but the *improvisation* would not necessarily be any more ‘artificial’ than an improvisation by a human.

Kinds of creativity? ‘Improvising music’ may be considered an expression of creativity and improvised music may be considered a product of creativity. But to assume that improvisation is a sub-category of creativity looks problematic. Most activity of living beings can be considered ‘improvisational’ in their interactions with the degree of ‘structure’ which they encounter in the world, and the interactions are perhaps driven by Predictive Processing (in theory a life-long process of minimizing ‘prediction errors’). Unless we want to claim that most activity of living beings is ‘creative’ then perhaps *creativity* should be considered a subcategory of *improvisation*, not the other way around? Music improvisation may be a sub-category of the more general improvisation category. If the term ‘creativity’ may cover a collection, or family, of concepts then a question arises: what particular *kind of creativity* is involved in music improvisation?

What kind of computational creativity can improvise? Gilliland refers to Margaret Boden (p. 171), who distinguishes between ‘exploratory’ creativity and ‘transformational’ creativity as well as between ‘personal’ and ‘historical’ levels of creative outputs. The ‘exploratory’ creativity aligns quite well with current Machine Learning techniques when the ‘latent space’ of an artificial neural network is conceptualised as a *possibility space*. Machine Learning is a collection of techniques that are very prominent in technologies that the current mainstream media tend to call Artificial Intelligence (AI). Many of these techniques, including Deep Learning and other Artificial Neural Network-based technologies are sub-symbolic,

connectionist, and include error-minimising processes. While such a system certainly has to be programmed, it is the input which such a system receives which shapes its ‘latent space’; this can be compared with human experiential learning – brain connections which are shaped by experiences. With this kind of technology a mapping of system output to sound is often determined by the programmers, but once established, these systems can generate music without ‘screening’ by the programmers.

Computational Creativity may be considered a sub-category of AI, and within the field of Computational Creativity some systems have been developed to specialise in improvised ‘musicking’. In this perspective there lies an assumption that computational creativity has the potential to improvise, at least in principle. The question then becomes what *kind* of creativity might such a computational creativity be, which could have the capacity for improvisation? Also, how should the ‘improvised’ output of such a computational creativity be evaluated?

I hope these questions and comments will be useful for further discussion of the arguments presented by Gilliland.

On Bertinetto “Improvising (with) machines?”

Ellen Moysan

I shall examine the key notion of “habits improviser” through the phenomenological analysis of the musician’s body and the process of the acquisition of the musical instrument being freely at one’s disposal.

In the present paper, Alessandro Bertinetto addresses the question of whether machines can improvise. His argument has two parts: first, “computers and robots can improvise only in a loose sense of the word” (p. 55), and second, “the interaction between human and computational performers may be improvisational in the proper sense of the term, thereby producing valuable artistic outcome”, (p. 55). His argument relies on the distinction between “loose” and “strict” senses of the word “improvisation”. In the first part of his paper, he considers machines alone, and in the second part, he considers machines in interaction with human beings, i.e., played like musical instruments. In this reply to his paper, my position will stress what Bertinetto says in the second part of his argument, namely, that improvisation is based on habits as “*embodied* dispositions” (my emphasis)

in order to explain how the term *embodied* makes the difference between humans and machines.

Bertinetto's argument starts with an analysis of improvisational creativity. First, Bertinetto dismisses three models: the "neo-lamarckian algorithm" understood as an "elaborated improvised outcome ensuing from already available knowledge", (p. 56); the "neo-darwinian" in which an "algorithm generates a new piece by randomly blending different pieces together and thus generating a large number of options", (p. 56); and the "mixed" model in which on "one level criteria are used to generate results and at a second level criteria are used to evaluate them", (p. 56). This allows him to refocus on the concreteness of musical practice, and argue that musicians "base their improvisation ... in habits and performative skills and they build the repertoire of their performative skills thanks to, and through, their performance", (p. 56-7). Bertinetto shows how musicians learn to improvise in the sense that they acquire the skills to react to unexpected events (play the musical instrument, improvise in a certain aesthetic style, etc., (p. 57)), and produce the unexpected, (p. 58). In other words, he explains how improvisation relies on an interaction between a capable musician and a favorable context. For this reason, improvisation is in constant evolution, and because of that, it differs from algorithms which are more fixed in their ways.

Bertinetto's argument continues with the investigation of the problem of the habits of improvisation that he evoked earlier, as being part of the training of musicians. Here, the key idea is that habits are "embodied dispositions". In order to define that notion, Bertinetto situates the concept between two misconceptions: the understanding of habits as "unreflective and uncreative" and the understanding of improvisation as "a spontaneous *creation ex nihilo*", (p. 61). This allows him to introduce the idea, already present in contemporary continental philosophy, that habits are essentially plastic and dynamic. As opposed to algorithms which are proper to machines, habits are not fixed in their ways but can be modified to adjust to a particular situation (Bertinetto calls that ability a "sensitivity to disturbance", (p. 61)). For this reason, habits are "dynamic", (p. 62). Paradoxically, they are learned by repetition, and it is through that repetition of the same that they become plastic enough within their context. As they are formed through the interaction with the environment, Bertinetto adds that they have a "social dimension", (p. 62). This explanation of the notion of "embodied dispositions" leads Bertinetto to conclude the second part of his argument by connecting habits with improvisation, explaining how habits are both "a result of improvisation and a precondition of it" (p. 63) in the sense that one needs to acquire them by repetition in order to be able to

then react spontaneously to a new situation. In the specific case of musical practice, “habits improvisers” are the skilled musicians who acquired habits making them able to answer plastically and dynamically to the unexpected, (p. 63).

The third part of Bertinetto’s argument focuses on the problem of improvising (with) machines, addressing two distinct situations: (a) when performers use machines to improvise together, and (b) when machines are used by a musician as a musical instrument to improvise. First, Bertinetto investigates (musical) improvisation produced by giving inputs to a machine or a network of machines like a group of laptops or other devices. He argues that the very definition of what improvisation is, is respected in this case, (p. 64). Indeed, the machines are basically used as a musical instrument by performers: the performers improvise *through* the machine, as one would improvise *through* a violin or a set of drums. In the second case, which is the case of interactions between human performers and computational machines, the musician improvises with the machine according to a certain autonomy of the latter. Here, Bertinetto underlines how the situation is trickier, but also more interesting. Indeed, the machines can respond to the human input and generate new variations. However, they don’t have this transformative capacity which characterizes improvisation: they cannot evolve “through variations, inheritance and selection”, (p. 67). As a result, even though they can definitely be a partner in improvisation thanks to an interaction with human beings, they did not acquire these embodied habits which give the power to encounter “alternative points of view” and “learn from other”, (p. 68). Consequently, Bertinetto concludes that it cannot be said that machines can improvise in the strict sense of the word.

This very convincing argument based on the notion of “*embodied disposition*” (my emphasis) makes me wonder what are these dispositions that Bertinetto mentions as the element which makes the difference between human and machines. If these dispositions are the key to conclude that machines cannot improvise as humans do, then it is necessary to give a clearer definition, and explain more precisely what they are. This is what I will attempt to do now by sketching a phenomenological analysis of these “embodied dispositions”, calling both on my first person experience as an amateur cellist, and on the experiences of some of the musicians I interviewed in the last ten years.¹ The analysis of “embodied disposition” will lead me to explain the role, in improvisation, of the inner song as an

¹The interviews are all available at: <http://www.ellenmoysan.com/>.

embodied fantasy, thus stressing Bertinetto's conclusion arguing that machine cannot strictly speaking improvise.

I left my cello in the USA in December 2019, not knowing that I would not be able to return there to pick it up because of a global pandemic. Afterward, I almost didn't play music at all.

When I came back to France a couple of weeks ago, I had the chance to pick up another cello which was at my parents' house, fix it, and restart playing. As soon as I started to play, I had this interesting experience: there were no calluses on my fingers anymore, my fingers could not press the strings with the same strength they used to have (especially the G-String and the C-String which are the lowest ones), my arms were so weak that I tired of playing very quickly, I was falling back into some bad postures that I used to have and then corrected recently, etc. In other words, all these months without playing made me lose my cellist 'body'. As I was restarting to play, I also had this other interesting experience: I was not sure of the placement of the notes on the musical instrument anymore, the intonation was more hesitant than before, I couldn't perform the moves that I used to perform well with the same ease, playing in the acute parts of the cello was not as easy as before, the sound was not coming out very easily. In other words, all these months without playing made me also lose my knowledge of the cello.

This made me realize that I needed both to rebuild my cellist's body, and reacquire my familiarity with the instrument. Fine. I would do that little by little. The next day, I played my cello again, a little bit at a time in order to avoid creating unnecessary tensions or pain in my body. I did the same the following days, and then every single day. Progressively, my fingers became stronger, my body remembered how to play the cello, I could once again play some melodies that I learned in the past, the moves were coming back, almost automatically, I knew where to go and what to do.

In order to help that music recovery, and as I couldn't play too much at one sitting because of the lack of strength, callous, etc., I tried to practice also away from the instrument. I had seen an old piano teacher "quasi"¹-practice his piano without keyboard, I heard H el ene

¹The *quasi* is the mode of the phantasy in the Husserlian phenomenology, more particularly in his *Experience and Judgement, Investigation of a Genealogy of Logic*, Trans. J.S. Churchill, K. Ameriks, Routledge and Kegan Paul 1973, §§39-42.

Grimaud explain how she was doing that in a music documentary too,¹ I saw musicians practice their music in the metro only by reading music scores. Imitating these masters, I started to sit on my chair too, imagine the feeling of the cello between my knees, the feeling of the bow in my right hand, the feeling of the strings under my fingers, play the distances to perform this or that piece in my imagination.

After some time, I felt back on track. My cellist body was there again, my fingers were moving well on the instrument, and I was able not only to perform pieces that I had learned in the past, but also to improvise, imagining new melodies and playing them almost simultaneously.

The experience that I just related using is a very common one. Indeed, several musicians relate it as well in interviews,² and if you are a musician, you have probably also experienced it, at least to a certain extent. I can identify three important elements here: first, as musical practice goes, a musician's body is constituted for the trained musician; second, the rehearsal process progressively leads the musician to have the instrument at their free disposal; and third, imagination can freely reproduce and modify this experience in order to create new patterns or, as I call them, new inner songs. When musicians improvise, they imagine the inner song as the playing goes, relying on these *bodily*, *instrumental*, and *embodied* imaginative dispositions.

The notion of musician's body can be understood thanks to Husserl's analysis of the body.³ In *Ideas 2*, Husserl describes the phenomenological

¹ This is what the pianist H el ene Grimaud says in the documentary on *Living with Wolves* (2002) when she says that she almost does not need her piano to prepare an interpretation, because "everything happens in the head": the moves had been integrated so well that she can work on improving an interpretation by rehearsing mostly in fantasy.

² For instance the saxophonist Camille Poupat (<http://www.ellenmoysan.com/entretien-avec-camille-poupat-saxophoniste/>), the bass player Joachim Govin (<http://www.ellenmoysan.com/entretien-avec-joachim-govin-contrebassiste/>), or the pianist and improviser Fran ois Moysan (<http://www.ellenmoysan.com/entretien-avec-francois-moysan-pianiste/>).

³More specifically, Husserl *Ideas Pertaining to a Pure Phenomenology and to a Phenomenological Philosophy, Second Book: Studies in the phenomenology of constitution* [1931], trans. R. Rojcewicz & A. Schuwer, Kluwer Academic 1989, §§35-42.

experience¹ of the body as a *living Body* [Leib]. An application of his analyses to the specific case of the trained musician practicing on an instrument² shows how, as the musician plays, there is the constitution of a dynamic schema of sensation thanks to a temporal process of sedimentation.³ In this schema, tactile sensations are foundational because they are localized *in* and *on* the body, but other sensations are given concurrently⁴ with them. During musical practice, the musician perceives the melody in a very specific way, as *his* or *hers*, produced by his or her movements on the instrument; for the musician, the sonorous is grounded in the tactile.⁵ For instance, I feel the cello between my knees and against my chest, the strings under my finger, I experience the weight of my shoulders, the tension of my muscles, the bowing movements, and these tactile sensations coincide with the tone-sensations of hearing the melody which is produced by my playing.⁶

As the practice goes, the musician experiences the body not only as a sensing body, but also as a moving body. In other words, he or she has the

¹ An experience performed *under the epoché*, which means, bracketing the thesis of the existence of the world on hand in order to analyze the lived experience in consciousness, cf. Husserl *Ideas Pertaining to a Pure Phenomenology and to a Phenomenological Philosophy, First Book: General introduction to a pure phenomenology*, trans. F. Kersten, Martinus Nijhoff 1982, §§27-32.

²This is what I do in my PhD dissertation much more extensively than here.

³ I explain that more in detail in my dissertation, referring to Husserl *Analyses Concerning Passive and Active Synthesis: Lecture on Transcendental Logic*, trans. A.J. Steinbock, Kluwer Academic 2001, and *On the Phenomenology of the Consciousness of Internal Time (1883-1917)*, trans. J.B. Brough, Kluwer Academic 1991.

⁴ There is obviously a temporal aspect here: the sensations coincide in the *now* of the impression. Husserl works that out in the two works quoted in footnote 8.

⁵ This experience is the one *of the performer*. Indeed, the audience eventually listening to the same exact melody which is being played experiences it in a totally different way, not grounded in tactuality (or only to a certain extent if the one listening is also performer and can grasp the moves by empathy).

⁶ To a certain extent, also the sensation of smelling the music instrument, and many other sensations given in the *horizon* of perception.

experience of an *I can*:¹ the musicians experience their body as capable of freely performing moves on the instrument, thus experiencing spatial and temporal modifications of the schema of sensations in their body. Thanks to this handling of the instrument, the musician perceptually uncovers the object (how it is made, how it looks like, how it feels, etc.). Among the perceptual aspects of this instrument, the musician uncovers² more particularly its sonorous aspect, its *sound* or *voice*³ (this sound is not related to the instrument itself; it is not related to the musician him- or herself; it is related to the *encounter* of a particular musician with a particular instrument).⁴ As the playing goes (namely, throughout a temporal process), and as the musician acquires a *technique* (understood as a reciprocal uncovering of the musician's possibilities through the instrument, and the instrument's possibilities through the musician, in order to serve the music),¹

¹ Described in the quoted paragraphs of *Ideas 2* but also in Hua 43, *Studien zur Struktur des Bewusstseins*.

² When the musician practices, there can be a specific work dedicated to the discovery of the variety of possible *voices* of the instrument. This research of the sound is entirely part of the relationship of the musician with the instrument (it is not the same if the cellist has long thin hands or short strong fingers), it is impacted by the *tradition* in which the musician is situated (Russian cello school, French cello school, etc.), but it is also related to the playing of the music itself (the same sound is not required in baroque improvisation, romantic interpretation, bebop, etc.).

³ I discuss the notion of *sound* much more with jazz musicians (<http://www.ellenmoysan.com/entretien-avec-luigi-grasso-15-02-2013-fait-a-paris-france/>, <http://www.ellenmoysan.com/entretien-avec-camille-poupat-saxophoniste/> for instance).

⁴ I discuss that in many interviews, but the more interesting maybe the one with the piano restorer Paul Gossart (<http://www.ellenmoysan.com/entretien-avec-paul-gossart-restaurateur-de-pianos-anciens-accordeur-chercheur-en-philosophie/>).

music),¹ the physical² and emotional³ abilities increase, the musician's body keeps being constituted, and the musician progressively acquires this or that specific musical instrument at their free disposal. For instance, as I practice my cello, I improve my technique, my cellist's body develops, I become more able to express emotions through my playing, and I become so comfortable with my cello that I feel I can play what I want to play with it; it is at my disposal.⁴

It is the *being* of this experience (the bodily schema of sensations along with the constitution of the musical object with its voice in perception) which is reproduced in the imagination when the musician imagines or 'hears' an inner song. In other words, when the musician imagines inner songs, the musician perceives in fantasy, what the performance should be or could be, not only by hearing a melody, but also

¹ I discussed that in many interviews, especially the first ones from 2010-2012. In the interview with Yan-Pascal Tortelier, we compare the ballet dancer and the gymnast precisely noticing how the distinction between the two lies in the fact that the ballet dancer serves art through the technique whereas the gymnast researches the technique first and the aesthetical comes afterward (<https://www.ellenmoysan.com/entretien-avec-yan-pascal-tortelier-chef-dorchester/>).

² The search for the right *posture* which is both a posture passed on by the intersubjective tradition, and adjusted to the specific *musician's Body* is essential here. I discuss that in several interviews, especially the earlier one (<http://www.ellenmoysan.com/entrevue-avec-claire-bernard-27-02-2012-paris/>), or <http://www.ellenmoysan.com/entretien-avec-jerome-pernoo-violoncelliste/>).

³ It is not enough to be able to *perform* the movement, the musician needs to be able to *express* something through it (cf. more particularly the discussion with the flautist Lorna McGhee: <http://www.ellenmoysan.com/interview-with-lorna-mcghee-en/>), or *create a world* through it (cf. <http://www.ellenmoysan.com/entretien-avec-yan-pascal-tortelier-chef-dorchester/>).

⁴ In the interview, the cellist Narek Hacknazaryan says how he feels lucky to be able to do what he wants with his cello, it is certainly a product of his own ability magnified by a wonderful training, (<http://www.ellenmoysan.com/narek-hacknazaryan-celliste/>).

by feeling the moves producing that melody.¹ For instance, if I imagine my performance of *Violets for your Furs*, I not only ‘hear’ the melody, but I can also feel and imagine how I would or even will play it with my cello, which part of my finger I would use to produce this full round sound, the distances on the instrument, the bow movements, etc.

The inner song is the re-presentation,² in the imagination, of a modified reproduction³ of the possible⁴ perception of the performance.⁵ The ability to ‘hear’ an inner song lies in the “embodied disposition” of this musician I just described, capable of playing a specific musical instrument, having it at his or her free disposal. Among the various possible performing practices of trained musicians,⁶ the specific ability to improvise relies on the capability of the musician to imagine an inner song, and realize it (make it *real* [*real*] in the Husserlian sense in which the real is what is given in the

¹ This is beautifully described by François Moysan (<http://www.ellenmoysan.com/entretien-avec-francois-moysan-pianiste/>) but the notion of *inner instrument* is broader than his personal experience and omnipresent in music practice. Cf. for instance, Dominique Hoppenot *Le violon intérieur*, Paris, Editions Van de Velde 1981.

² In fantasy, the object is not *presented*, but *re-presented* not given through a primary impression through sensations, but given through phantasms, cf. Husserl *Phantasy, Image consciousness, and Memory (1898-1925)* trans. J.B. Brough, Springer 2005.

³ The reproduction in fantasy cancels the existential value of the object so that the object is not apprehended as present but apprehended for its aesthetical qualities, cf. Husserl *Logical Investigations, Volume Two*, trans. J.N. Findlay, Routledge & Kegan Paul 1970, more particularly the Fifth and Sixth ones.

⁴ As the object is not presented, it is given *as if*, as a *possible* object.

⁵ I base my description of that specific object on Husserl’s description of the fantasy in his *On the Phenomenology of the Consciousness of Internal Time (1883-1917)*, trans. J.B. Brough, Kluwer Academic 1991, *Phantasy, Image consciousness, and Memory (1898-1925)*, trans. J.B. Brough, Springer 2005, and *Experience and Judgement, Investigation of a Genealogy of Logic*, trans. J.S. Churchill, K. Ameriks, Routledge and Kegan Paul 1973.

⁶ I identified three of them: interpreting a score, composing, and improvising.

objective world) as it is imagined, thus further developing the fantasy.¹ In this practice, the perception of the performance and the unfolding of the fantasy are so intertwined² that the two objects are experienced almost as one phenomenon.³ They develop together in consciousness: the performance unfolds as the fantasy is constituted, and the fantasy is created as the performance goes. As underlined by Bertinetto, this ability of the “habit improviser” is stimulated by a particular context, responds to the circumstances, and implies intersubjectivity, (I am not developing these points as I focused my response to his paper on the notion of “embodied dispositions”).⁴ As machines are not embodied in a *Leib*, as they cannot imagine an embodied inner song as they play, and as their playing does not realize an inner song, it cannot be said that they strictly speaking improvise, even if they can participate in an improvisation as a musical instrument.⁵

On Steinmetz on Jazz Improvisation and AI

¹ In several interviews we talk about the jazz pianist Keith Jarrett as an example of a musician playing what he is improvising in his fantasy while he is performing on his instrument (e.g., at: <http://www.ellenmoysan.com/entretien-avec-aarp-compositeur-de-musique-electronique/>).

² The description of that intertwining would require an analysis of the temporality of the constitution of these two objects in the specific case of improvisation that I cannot do in this paper.

³ In my dissertation, I speak about a consciousness oscillating between the perception and the fantasy.

⁴ Several improvisers speak about it in interviews (for instance the organist and composer Thierry Escaich: <http://www.ellenmoysan.com/entretien-avec-thierry-escaich-organiste/>, or the jazz pianist Yaron Herman: <http://www.ellenmoysan.com/entretien-avec-yaron-herman-pianiste/>).

⁵ I discuss how machines are partners in improvisations with electronic musicians (cf. these four very different interviews: <http://www.ellenmoysan.com/entretien-avec-armand-amar-compositeur/>; <http://www.ellenmoysan.com/entretien-avec-yan-wagner-compositeur-musiques-actuelles/>; <http://www.ellenmoysan.com/interview-with-jesse-stiles-en/>; <http://www.ellenmoysan.com/entretien-avec-aarp-compositeur-de-musique-electronique/>).

Philip Read

First, I thoroughly enjoyed reading the article by Mr. Steinmetz about Jazz improvisation and AI and it resonated with me as a visual artist on many levels. In my own artwork I often equate colour and images with music because I feel they all reverberate within our human brain and emotions at similar mental frequencies. Although there are many differences between jazz music and painting there are parallel processes that link us together.

I do enjoy listening to jazz in its many forms especially of Coltrane and Miles Davis to name a couple. It enables my creativity and is one of the many 'doors' into my own subconscious that I incorporate during my creative times in the studio. Although I must admit that I tend to enjoy the more conventional smooth jazz to which I do not have to pay as much attention when I am painting. The purer form of improvisational jazz requires me to think more about the sounds, scales and notes of which I am not acquainted since I am not a musician at all, just a lover of sound.

Equating improvisation to invention & creativity based on 'merely arranging already known things in a new and surprising way' is, I believe, a little oversimplifying the creative process. I would add imagination to the equation since I feel it falls outside of conventional skills and techniques and relies more on an active imaginative state beyond our conscious mind. Imagination cannot be taught but has to be developed independently and fermented in the artist's mind. Here I would agree that improvisation is based more on technique and scales than that of imagination but as a visual artist imagination has a prominent role in the creative process.

The discussion about the Free Form and conventional jazz improvisation was interesting to me because in visual art we have abstract, Dada, Surrealism (Free Form) and landscapes, portraits, realism (conventional or standard art). But one difference pointed out by Mr. Steinmetz is that in Jazz the emphasis is always on technique while minimizing the importance of the artistic individual creative aspect whereas in visual art the opposite is truer. Most artists (jazz musicians and painters) study the many techniques, skills and concepts required of our profession and no one would suggest that Salvador Dali, Pablo Picasso, or Claude Monet had no understanding of the skill sets required for painting.

Mr. Steinmetz talks of the study of technical aspects of jazz such as scales, chord progressions and idiomatic melodic jazz figurations similar to my own study of colour theory, linear perspective, and symmetry. It is also true in painting that many students can lose their ability to be creative

because they are constantly restrained by the formal compositional fundamentals. It takes many years after schooling to forget conventions, or at least not think about them too consciously. In my study of Asian Ink Painting I studied the conventional brush techniques for over 10 years after which it took me another 10 years to ‘forget’ them in order to create my own individual creative fusion style of Eastern and Western art. For me, this is similar to the free form improvisations of jazz artists Miles Davis and John Coltrane.

I don’t believe it is possible for us to ‘be absolutely free’ from techniques because it is a fundamental part of our conscious mind. However, we could achieve a mind state that allows us to be distanced from our conscious mind in order to maximize our creative and inventive powers. Much like the jazz musicians who use free style improvisation we as painters often use a collaboration of action painting where 2-5 artists will come together and alternately work on a large canvas or rice paper and intuitively respond to each other’s actions, sometimes accompanied by musicians. For painters, the action painting is special because of its process of working with friends and no professional critique follows the actions. In fact, often the painting is celebrated and then destroyed with delight. This is different from a jazz improvisation where a team collaboration is required at the same time during a performance.

For me, I don’t feel that improvisation is taking a great chance at all since there is no expectations placed on the outcome. It is a pure joy of process with my fellow friends and artists, and I welcome all opportunities to participate in action painting gatherings.

One problem we have to avoid as ‘learned professional artists’ (jazz musicians or visual painters) is to not always look conventionally at other artists’ work with a critical eye for technique. I know this is difficult and I do see it often in music and ceramics pottery where technique is a very important critical element of assessing ‘good or bad’ to an artistic creation. For example, my wife is an amazing ceramic artist, but she will always first be looking at technique (throwing, finishing, pure form) and checking the bottom of a bowl, plate or cup before commenting on it’s beauty. In western contemporary visual arts, we currently have the luxury of having the general public’s critical eye focused more on beauty and emotional feeling than on technical skills. For me, good or bad does not exist in art because it is a personal subjective interpretation that does not always apply to others. Not everybody likes the Rolling Stones, Picasso, Dali, Davis or Coltrane and I am thankful for this diversity of opinions because art is not a singular convention of understanding although many museums, art galleries and critics would want you to believe otherwise.

I agree with Mr. Steinmetz's discussion of free jazz especially in reference to a state of the transcendental mind where there is a 'total rejection of melody, harmony and fixed rhythm' and apply it to my own practice as an individual artist or in a group of action painters. As I have said before, I believe that visual artists paint with colour and musicians paint with sound and both are visual experiences. As such, a telepathic connection can exist between all artists regardless of sound, words or colour.

Mr. Steinmetz's discussion of what is 'good and bad improvisation' was an interesting read especially relating to jazz where melody and rhythmic patterns are important. But I do not apply the same terms of good and bad art in my vocabulary because I feel that all art is a personal subjective evaluation based on our own views, education, and culture. Just because someone doesn't enjoy listening to free jazz or watch an action painting does not mean it is bad art. I don't like to put parameters on what makes good jazz or what makes a good painting because, to me, that only limits opportunities and growth experiences. Often a new sound or new style of painting takes time to mature in our minds and it is not always an immediate spark. And for this reason, I do agree that there is an aspect of our 'inheritance from ancient times, that is, our DNA' that affects our developing mind-scape swirling in our subconscious. It is sometimes said that there is no 'new art' because we are continuously inspired by many pre-existing thoughts and experiences that lead to a perpetual evolution of the creative processes. I feel that music is the same.

The process of 'spontaneous compositions' is evident in both music and painting. It is a mental process of minimizing the noise of our conscious mind and accessing our subconscious mind in order to create a composition that is intuitive and spontaneous. This process is not easy and often takes years and years of practice and developing techniques such as 'doors', I call them, for access to a greater mental power.

So now this brings me to the discussion of the possibility of AI making musicians and artists redundant because of its great processing potential. AI is just a super machine that is unable to process thoughts of 'the inner song' or 'ancient and ancestral pasts'. It has imprints not DNA. Human creativity such as musical and pictorial compositions connect all these human powers and no amount of algorithms or logical circuits can replace or even replicate them.

I am not fearful of AI and I do not feel that they are dangerous, but they do expose our human frailty and challenge our confidence in the face of a perceived imperilment.

Read Read

Lars Aagaard-Mogensen

When curious about something, good advice is: go directly to the source. What makes a brook? The spring. It's then expected artists should be able to enlighten us about improvisation and creation, since these two concepts are practically stock terms in their field.

Mr. Read's wellspring, as I read it, pours pivotal emphasis on the notion of 'imagination', indeed takes it for a given. It no doubt is of the kind normally classified as a mental term, belonging in the repertory of mental terms, no surprise there. Yet it's far from a primitive term and there seems to be a wealth of imaginations, it figures profusely in the literature (Scruton wrote a book about it, so did Sartre, Al Levi, and many many others) – in incredibly many different senses. Therefore it's less clear to me what exactly weight it can carry.

Unfortunately I deem it to be spreading weakness in his account. For starters, permit me to just remind of the obvious that imagination contains image, which in common parlance also designate picture. You may hold, that one should not indulge in details. Yet I see problems in some of Read's details and will attempt to bring them out now.

Second blunt starter, it is very clear that there are no pictures in the brain – no one, nor anatomists have ever reported finding any. Same goes for 'visions', the term Read uses as cognate term for images. Even when, say, I remember a particular picture (painting, photo, print, etc.) there is no picture 'in there'. Why then use that terminology about mind content? Is it, pleonastically, a figurative use of 'image'? Pushing these terms into the figurative merely pushes them further out in obscurity including further diffuse versions of the same problems. Common parlance has many statements seemingly of the sort, such as 'I can see myself in that suit over there in the store window, in that advertisement, car, place, situation', etc. – what on earth am I seeing? Is it a mere wanting that thing? a strange convoluted idiom for expressing that wish? like a postcard in place of a handshake or greeting voice? I can't say besides request explanations.

Read also writes a piece 'mirroring the thought', so we're to suppose imaginary pictures look like, resemble, the paintings. On that prompt, I did look in the mirror, indeed scrutinized the image, (although the mirror image did look something like me (whom I've never seen), namely "similar" to

other times' mirror images as far as I recall), I didn't detect any thought. Thoughts don't show in mirrors, so Read must mean something else than he says. The sea, lake or pond may (on occasions) look like a mirror – and don't forget what Narcissus saw in it.¹ It's funny, the truth is, no one have seen themselves, well, everyone has seen their hands, feet, legs, and so on, but never face to face (nor their neck and back). If you think you look a particular way, in the wonderful world of images, go to the Hall of mirrors. Everything is pictures in today's brave world. I bet throngs of people can't imagine a world without television, as if that is 'vision' – but really only picture gorging, shadows on the walls of 2-4 room caves, in this, not fictive, but pictive world. Famously, each and everyone now has a face, a mask, an image, a front, made-up, poses, that is to say, every picture is a blurred image – much like all portraits in any medium are.

Invocation of intuition is generally suspect, it doesn't require many milligram skepticism, relegated to a gift out of and of nowhere – implying a weird kind of rightness – one hour or day I think intuitively piece x is good, the next hour or day I think intuitively that piece x is not, never mind Mrs. Smith's and Mr. Wesson's intuitions. Even dictionaries are circular on these meanings (imagination, visions, intuitions), a sure sign of muddled semantics, hence useless.

Read doesn't, apart from a general statement of 'important to artists', say why imagination is more important to artists than to the rest of us, nor indicate why it is especially important to artists or that artists have a special use of imagination – are there kinds of imaginations? – I don't know that one can improve one's imagination, pay special attention to imaginations, form or acquire a special dependency on imagination, have a particular nag for getting something out of one's own imaginations – and therefore wish Read would have said more about importance, perhaps he will tell us today.

While Read describes a few ways in which he works, which seems very much like many others work on their various projects and tasks, those

¹ Cf. an 1845 children's song (in my rushed and rough translation): "A little elf traveled / with extra mail from land to land / his mind it was to greet / the world's greatest man. – He came to the great mogul / and where the giant cabbage grows / but among all the giants / to him no one seemed great. – Then he went down to the sea / and stared in the clear water / he smiled, for now had / he had seen the greatest man". The new humans are fixed up with, implanted this 'idea' at an early age.

are mere ways of doing things.¹ Yet when comparing artistic work with computer functioning Mr. Read is either flirting with self-contradiction or giving the game away: he insists that computers cannot improvise or create, because all they can do is ‘process’, and at the same time continually describes his activity as a ‘process’ – that is, it only remains to translate his process into a computer process (a program medley). Well, at first it seems that is not a significant difference – only his argument rests on the extra postulate that human imagination, the main drive in artists’ work, makes a difference, because it is unbound, unlimited, and therefore is untranslatable, due to what he calls the static or fixed ‘reasoning’ of programs, (he sometimes says ‘logic’, deductive at that, let that be). In that respect he is partly wrong: computer processing is loaded with probabilities, randomizations, the bounds or limits are so vague as to include uncertainties. But correctly, in some sense, the computers are just like the rest of us and of the universe, subject to the same natural laws (if such there are and are as they ‘currently’ are, true – about which there are hot debates, replete with imagination and images!) while not all of them are exploited in computers. Computer outputs are calculated, but probably still not entirely sporadic or arbitrary, nor therefore boundless – nor are artists’ “outputs”.

In which sense is imagination in fact unbound, unlimited? Read also flirts with another inconsistency, in as much as he also claims the imagination is determined by journey, culture, DNA, etc. That sounds to me exactly like a pile of boundaries. (‘I didn’t do it! – my DNA did it’ – when are you growing up, I ask). You can always blame it on the past, a most obliging scoundrel, since it’s neither here nor there and can’t object (maybe you think you can offend or disgrace it by sneering ‘barbaric’, ‘feudal’, ‘out of date’ and the likes, well, amen, ave maria, hurray – to cheers for historicism). Remaining is however: Can one tell whether one’s ‘vision’ last week is the same as the ‘vision’ one has today? Is today’s a copy, both the original and that in view today? Or do your inner eyes see double? – indeed how does one determine whether a work manifests a vision? Whether an idea, and it’s internal vision, is full or not? the same image problem once over, I think. How does it differ from ‘changing one’s mind’? We would probably say, the boundless imagination gets itself out of bounds in, e.g., pseudoscience, “altered states”, psychopathies, madness, absurd ideologies and utopias – all very artsy – does art activity belong in that company? I hope not. The madness of Venus de Milo.

¹ You find the same story, e.g., in Toby Demarco “Improvisation and Stand-Up Comedy”, *JAAC* 78 (2020).

Read is right, however, in dividing his account of his artistic activity into two distinct categories, namely first in preparing and making a piece and then in deciding whether that piece is actually a piece, (the alternative, he says, is deleting or discarding, and perhaps start anew). Read is right when he says AI cannot determine whether an art work is successful or not, by which I think he means whether it is good (or bad), success being a quite different story, but that is because AI can't determine anything, neither whether its own results are good or bad. Comps deliver outputs, you may reward with interpretations. But can he? Because he says he does this by comparing the piece with his imagined piece – how can he tell how the imagined piece is? He mentions 'being satisfied', or his approval of artisans' workmanship, one keeps modifying until satisfied, but it is an odd comparison, since one of them, the imagined piece, his idea (incidentally, do ideas have images?), his vision, isn't available for the comparison, he may even have forgotten it, touched it up, enhanced it, etc. Can one restore such images? zoom in on them? Which kind of precision is involved, is relevant, or even possible to apply to this decision? When he chooses no. 15 out of the series of 25 distorted copier versions, none of which he had imagined, (he couldn't have imagined, since he let the copier "artisan" make them), so what's the imagination's place here? – think of the medieval copyist of a manuscript known to include his mistakes, his habitual spellings and vocabulary, his grasp of the original text, etc.). The contention that errors matter, can give attractive results (a typo makes a sentence interesting, stand out, valuable – faith in accidents, "nothing is so bad it ain't good for something") arbitrariness is an asset, luck a gold nugget, who knows, I may pick a lucky number. A gift at Sct. Fortuna's whim – can that be an artist's accomplishment?

A similar or related peculiarity I find in Read's claim that "Recognizing the existence and value of the imagination is an important step to understanding our true self. It is not separate from us but an important part of our true selves" – implying some sort of false selves (sweet selves, likeable selves, better selves, etc.). Even with the so-called "diagnosis" of split or dual personalities (MPD), the "parties" don't talk to each other, silently or loudly. Dr. Jekyll and Mr. Hyde comedy. It is all well and nice to pose that one throws one's whole personality (body and soul) into things one does, says or makes, like Read quotes as Possati contending for the programmer and Read himself says he does in his studio work, – a more demanding job is to show there's anything substantial about it (a mere assertion of such belief or conviction won't do). A tad of common sense might do well here. Many an action, eating dinner, cleaning ears, tie shoe laces, answer the phone, etc., it would be most peculiar to throw one's

personality into (perhaps the vain man combs his hair that way). How does one know or decide on what, or when, whether or not one has to do so? Only when you can't help it? Now, don't answer 'naturally' – an empty gesture (stand-in for intuition). More should probably be said about this, but suffice it for present purposes, that I'm thoroughly rattled by mind compartmentalization. It may have started with phrenology (Gall's 1798 treatise) and is now kept up by orthodox "cognitive neuroscientists", the brain slicers and their pictorials – nearly everyone speaks about the left and right brain, the little more impressed go on with cerebellum, various lobes, ganglia, trillions of synapses, and what have you, and is now intensely mimicked by AI constructors, they know where the 'memory', 'learning', 'timing', etc., sit in computers – latterday footnoters to La Mettrie (*L'Homme machine* 1747). The common sense comment or contrast is: all this may be fine for them, but the brain is not the mind, and the piecemeal mind broken into elements is absurd – echoes of Kant's faculties (1781). The brain has no imagination, it is no more imaginative than other organs like gall bladder, sphincter, thumb (however green), etc., the mind is. The mind doesn't have a core or center and some neighbouring auxiliaries, farming out to these underlings in various places, call on them for certain kinds of minding or on occasions for minding some particular thing. Were minds spacy, no wonder they could wander. The spaciness of mind, a mere remnant of venerable scientism's space-and-time hayday. What you can do, is turn or direct your attention to this, that, and what you please – but that wouldn't count as touring scraps of your mind.

Are artists especially prone to shroud their *metier* in cloudy vocabulary, misleading them and us into labyrinthine dead ends. It seems they are, a jargon that goes with the territory. That is, they may use any number of terms, otherwise vernacular, their preferred, habitual or traditional ways, they haven't or won't condescend to use plain language (or straight thinking). These terms have not changed their meaning, merely getting used in special contexts. Taken out of or borrowed from straight talk and deployed in discourse among themselves. The way commoners borrow musicians' notion tone and speak of tone of voice, often associated with anger, conceit, insult, disdain, or poisoned with politeness or admiration, etc., besides use it about colours and tastebud impressions (has a tone, no longer fresh), and a host of other thing – all far from 'tonernes verden' (tonality). I don't know whether we really want to get out of these circles, and I shan't insist that we do, but I do think we want to realize they are mere circles, no real help for the inquisitive mind.

So, you may say, Read has thrown his meat into the dragon's jaws, but the chewing raises questions, answers to which Read probably have

ready answers or perhaps, I hope, find some use for in his further thinking and our discussions of these matters, in that spirit they're offered.



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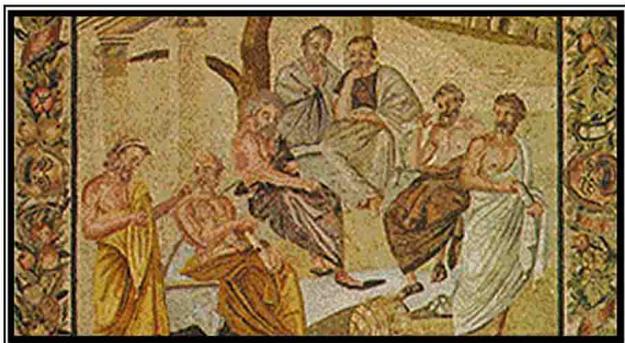
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Cilento is a protected area of outstanding natural beauty with historical architecture and important archaeological findings. Ascea (Elea) is the site of the Eleatic school of philosophy, home to Parmenides and Zeno.

There is no application form or deadline for applying: a prerequisite is a genuine engagement in the arts, humanities and sciences. Interested individuals are encouraged to write with an outline of the project they wish to carry out during their stay. Inquiries about availability and cost are welcome. For detailed information, contact Prof. Lars Aagaard-Mogensen, Via La Chiazzetta 27, I-84046 Ascea (Sa), Italy. E-mail: wassardelea@gmail.com. Ph.: +39 366 36 16 543.

Wassardelea.blogspot.com