

Exploring the Notion of Self in Creative Self-Expression

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Abstract

Creative self-expression is considered as central to any artistic activity. It is governed by an inherent need in a person to express *the self* through a creative or an artistic medium, e.g., visual art, poetry, music, drama, design, etc. In this paper, we explore and provide a classification of the *notion of self* from the various perspectives of philosophy, psychology, modern science, etc. This is done with a view to understand the self holistically and to frame a definition in the context of ‘creative self-expression’. We also aim to initiate a discussion on the relevance of the concept of self to the field of computational creativity.

Introduction

Perhaps best known for his painting ‘*The Scream*’, Edvard Munch (1863 to 1944) is considered by many as the most iconic figures in the modern art world after Leonardo Da Vinci (Friedlaender and Friedlaender 2018). Many of his works explore intense psychological themes. He suffered from deep depression during his lifetime and his art often reflected events that happened to him. Post his difficult childhood, Munch started channelising his inner turmoil to create art. He was clear about his mission; it was to explore the portrayal of extreme human emotion: “*Just as Leonardo da Vinci studied anatomy and dissected corpses so I try to dissect souls*”.

Explaining the context in which ‘The Scream’ was conceived, Munch wrote in his journal¹: “*I was walking along the road with two friends. The sun was setting. I felt a wave of sadness. The sky suddenly turned blood-red. I stopped, leaned against the fence tired to death, gazed over the flaming clouds like blood and swords, the blue-black fjord and city. My friends walked on. I stood there trembling with angst, and I felt as though a vast, endless scream passed through nature.*” Commenting on Munch’s writings, historian J Gill Holland remarks: “In his journal entries he was on the prowl for the unmediated transmission of mind to page” (Munch 2005).

We can say that Munch’s art was a reflection of the world that he experienced and a reflection of his self. In his art, he

endeavoured to bring his self to the fore. He stated: ‘*I do not believe in the art which is not the compulsive result of Man’s urge to open his heart.*’ Considering all this, we are led to believe that Edvard Munch’s work can be considered as an epitome of what we may call as *creative self-expression*.

Creative Self-Expression(CSE)

Self-expression is a pervasive phenomenon of everyday life of humans and many other species. Self-expression reveals our states of thought, feeling, and experience to others (Green and others 2007). It is fundamental to human society; it helps us understand, empathise and communicate with other fellow beings. It is achieved through facial expression, language, body language, speech acts, etc. *Creative self-expression* puts the additional requirement of ‘creativity’ in self-expression. It means an expression of one’s self - whether it be its ideas, feelings, or personality - creatively or through creative art forms. The form of expression would differ with the domain or the medium of expression - visual art, music, poetry, painting or anything similar.

In computational creativity (CC) research, we have so far emphasised the ‘*creative*’ part of the CSE concentrating mostly upon the generation of creative artefacts, the techniques of producing creative artefacts, or, more recently, the ‘intentions’ of producing creative artefacts. However, we feel that we have not paid adequate attention to the core part of CSE, viz., the ‘self’. The two most important questions that relate to self in this context are: (1) the *Who* question: Who is that ‘self’ that wants to express? (2) the *What* question: What is ‘of that self’ that needs to be expressed?

This paper motivates a discussion of that gap. As is evident from Munch’s example and the lives of many others: For an artist, *self-expression* forms the essence of a creative act. We believe that besides ‘creativity’, ‘self-expression’ should form a part of the core investigation in computational creativity research. Hence, the notion of ‘self’ should be recognised and designed as a first-class entity in a computational creativity system - particularly if that system also professes to be a self-expressing agent. In this paper, we dwell upon the ‘notion of self’ and draw upon the various views of self from the perspectives of philosophy, psychology, modern neuroscience, etc. We further discuss this in the context of research in Computational Creativity.

¹MM T 2760, Munch Museum. Date 1891-1892. Sketchbook (2019-05-31)

Notions of Self

When you play music you discover a part of your-self you never knew existed. - Bill Evans

The question, 'What exactly is self?', elicits many diverse answers. It has been the subject of philosophy, psychology, science and religious discourse over the human history. There is no one accepted answer (Olson 1999). Still, we have to find a definition that is universally understandable (if not universally accepted), and which can form the basis of our movement in the field of computational creativity. In this quest, we present a classification drawing upon various viewpoints from philosophy, psychology, neuroscience, etc.

Philosophy Views of Self This section summarises the prominent views on the nature of self postulated by various philosophers over the last few centuries.

Solitary Self / Dualism View: In modern philosophy, *Rene Descartes* is believed to have been the first one to establish the idea of solitary self. He introduced the idea of dualism stating that human beings consist of mind (soul) and body and it is the 'thinking' that becomes the defining characteristic of our self or our existence; 'Cogito, ergo sum', or, 'I think, therefore I am' (Descartes 1641).

Memory as Self-identity View: Philosopher *John Locke* differs from Descartes where he distinguishes between the substance (soul) and consciousness (Locke 1860). According to him, self-identity results from having the same memory (or consciousness). It is the memory that provides the definite link binding together different stages of a person. If we perceive that we are the same person from one time to another, it is not as a result of us having the same body or the same substance, but as a result of us having the same consciousness. Two often cited objections to Locke's view are: (1) our memories are not correct or precise all the time, and (2) we forget a large part of our conscious experience.

Bundle-Theory View: An alternative version of the self is based on the 'bundle theory' by the Scottish Enlightenment philosopher, *David Hume*. Hume believed that the idea of self is a fiction. Humans do not have an actual conception of self. There is only a bundle of sensations, perceptions and thoughts which are piled on top of each other. The self emerges only out of bundling together of these experiences (Hume 1739).

Transcendental Self and Empirical Ego View: *Immanuel Kant* is in agreement with Hume on that self-identity does not come from self-consciousness. Kant, however, opines that the 'enduring self' is transcendental and not just an object of experience (Kant 1781). By transcendental Kant implies the necessary condition for the possibility of any experience. He argues that if there is a separate self at each moment of experience, we will not be in a position to perceive anything. There has to be a unified consciousness that combines all these perceptions; that, according to him, is self. Unlike Descartes, Kant believes that the self is not an experience but rather it is one that is responsible for the experience. So he proposes two different conceptions of self: (1) *Empirical ego* - includes all those specific things that make us different people, and (2) *Transcendental self* - that which is essential to a unified empirical self-consciousness.

Ego-theory / Pearl View: This is the view that an average person on the street would most likely have about her self: Self is the individual that inhabits the body and body is something that is controlled by the self. Self is the essential entity at the core of our existence that holds steady throughout our life. The ego experiences life as a conscious, thinking person with a unique historical background and defines who we are. The philosopher Galen Strawson describes it as '*Pearl view*' of the self suggesting that many mental selves exist, one at a time and one after another, like 'pearls strung on a thread' (Strawson 1997).

Psychology Views of Self One of the earliest formulations brought out by the modern psychology is the distinction between two aspects of self: self as a subjective knower - *Self as I* - the one which is conscious and aware of experience, and self as the object that is known - *Self as Me* - the one which is understood as 'personal identity'. Here we present some predominant views in psychology on self.

Comprehensive Self View: *William James* (James 1890) puts forth that a man's self is a sum of all that he can call his: (1) *Material self* - his body, clothes, family, lands, possessions, work of his hands; (2) *Social self* - the recognition which he gets from his mates - "a man has as many social selves as there are individuals who recognise him and carry an image of him in their mind"; (3) *Spiritual self* - man's inner or subjective being, his psychic faculties or dispositions; includes the faculties and the entire stream of personal consciousness. It results from the reflective process of abandoning the outward-looking point of view; (4) *Pure ego* - the bare principle of personal unity. In short, according to James, our sense of self extends from the *immediacy of our experience to the contemplation of innermost thoughts*.

Looking-glass Self View: Building up from the work of W. James, *Charles H. Cooley* surmised that there is an indissoluble link between self and society. Our self does not exist independently but as a reflection of those around us. Outside perceptions have an impact on who we think we are. We not only learn from others but we also learn to become like others. This idea is sometimes called the looking-glass self (Cooley 1902). These influences work right from childhood. Even as adults we continually develop and elaborate our internal definition of self. This definition might also be multifaceted depending upon the roles that we take and the external world contexts that we handle - the work self, the home self, the parent self, the political self, the bigoted self, the emotional self, the sexual self, the creative self, the violent self, etc. (Hood 2012).

Self-Knowledge View: Another popular conception of self comes from *Ulric G. Neisser* (Neisser 1997). He formulates that there are five distinct levels of self-awareness and each of these establishes, in essence, a different self, viz., (1) *Ecological self* - based on perceptual cues - visual, auditory, and kinaesthetic; (2) *Interpersonal self* - based on social interactions; (3) *Extended self* - based on memory and anticipation; (4) *Private self* - based on processing of thoughts, feelings, intentions, etc. as an exclusive personal experience; (5) *self-concept* - based on abstract and symbolic representation of oneself like role, traits, identity, etc.

Contemporary Brain Science Views of Self Most neuroscientists reject the idea that self exists independently of body and brain. If the self is the sum of our thoughts and actions, then it is also true that these depend on the brain. Thoughts and actions are not exclusively of the brain; we also think about and act upon things in the world with our bodies. However, the brain is primarily responsible for coordinating these activities. These following views then take credence:

Self as an Illusion: There is no centre in the brain where the self is constructed. The brain has many distributed jobs: (1) it processes incoming information from the external world into meaningful patterns that are interpreted and stored for future reference; (2) it generates different levels and types of motivations, i.e., the human drives, emotions and feelings; (3) it produces all sorts of behaviours - some of them automatic while others are acquired through skill, practice and sheer effort.

The sense of self that most of us experience is not to be found in any one area. Rather it emerges out of the orchestra of different brain processes like a symphony of the self (Hood 2012): “Our brain creates the experience of our self as a model - a cohesive, integrated character - to make sense of the multitude of experiences that assault our senses throughout a lifetime and leave lasting impressions in our memory”. Our brain constructs models of the external world. It weaves experiences into a coherent story that enables us to interpret and predict our next recommended action. In short, our brain simulates the world to survive in it. Hence, modern neuroscience tends to support the bundle theory more as opposed to the ego theory of the self.

Self as a Centre of Narrative Gravity: Cognitive scientist *Daniel Dennett* thinks that who we are is a story of our self. This self is constructed out of narratives of our brain: “Our tales are spun, but for the most part, we don’t spin them; they spin us. There is no self at the core. Rather it emerges as the *centre of narrative gravity*” (Dennett 2014).

However, a hard problem that remains unsolved presently is that we do not know how a physical system like the brain can produce a non-physical experience like the conscious self. Some philosophers believe that an answer to this question might be elusive or the question might itself be misguided (Chalmers 1995).

Self in Self-Expression

In the previous sections, we presented the notion of self from various perspectives - philosophy, psychology, neuroscience, etc. As would be evident from the above discussion, these views are not always compatible. Nor are they mutually exclusive. Our purpose of presenting these various points of view was to give us a broader understanding of self. We would like to judiciously reflect upon the question: Which of these views (and under what circumstances) are most relevant to *creative self-expression (CSE)* in general, and *machine-driven CSE* in particular? While it is difficult to put out one single definition of self, we propose the following framing for self which we believe can harmonise these various views. For a person, involved in creative self-expression, the self can be considered to consist of:

(1) *The Actual Self:* What a person ‘actually is’ with respect to the person’s body, brain and mind, or even transcendence (assuming such a possibility can be accounted for).

(2) *The Acquired Self:* The experiences, learnings, reflections, action-reactions, and imaginations, etc., that a person would have had through the course of life.

(3) *The Personal Notion of Self:* The very notion or definition of self embedded in the person’s mind.

The third one is a *meta notion* - the notion that a self has about itself. The philosophical notions we carry about ‘our self’ may have a strong impact on our creative outputs. For instance, some early British women novelists (like Aphra Behn, Jane Barker, Eliza Haywood, and Mary Davys) were influenced by the debates about ‘self’ generated during the ‘scientific revolution’; and this shaped the narrative practices within the early novels of that period (Gevirtz 2014).

Notion of ‘Inner Point of View’

“I shut my eyes in order to see.” - Paul Gauguin

Here, we further explore and elaborate on the objective aspect of self with the question: “What exactly is expressed in a creative self-expression?” As humans we think, we feel, and we experience. The perceptions of the outer world are processed by (subjective) self’s faculties of aesthetics, imagination, introspection, reflection, etc. to create an inner world. This is understood as the ‘Me’ of the objective self - my thoughts, my feelings, my experiences. This created inner world, which we may refer to as the *‘inner point of view’*, is private to the individual. It remains so until and unless she chooses to share it with the rest of the world. There is no direct sharing though - I cannot think your thoughts, I cannot feel your feelings, I cannot experience your experience. But it can be made available to others as an ‘expression’. The receiver relates to it through the faculty of empathy - by interpreting it in the light of her own inner truths.

Each self has a unique moulding - individual differences in temperament, personality, intelligence, perception, personal background, and experiences. This accounts for the wide range of variations we see in artistic capacities, expressions and tastes (Shimamura and Palmer 2012). ‘Self-expression’ thus is presenting a part of the content of your unique self - personality, thoughts, feelings, experiences, opinions, stories, etc. - to the outer world. It is this inner point of view that constitutes: “What is that that is to be expressed?” Note that ‘what is to be expressed’ might be vague in the beginning and a clearer view of the content might unfold only during the process of expression (Hospers 1954).

Articulation of the inner point of view is always through a medium. The modality of expression, i.e., what can be effectively conveyed and how it can be conveyed, will differ from medium to medium. For example, in case of representational arts (such as painting, movies, and literature, etc.) one needs to understand what they are about (i.e., what the painting or movie depicts, and what the poem or the novel describes) (Robinson and Hatten 2012); while in the case of music, which lacks semantic or representational content (Davies 2006), people value it primarily because of the emotions that it evokes (Juslin 2013).

Discussion on Related CC Concepts and Work

Computational systems, including CC systems, presently do not explicitly support the notion of ‘self’ as underlined in this paper. Though the term ‘self-expression’ appears in Self-aware systems, it is used in a limited sense; it is used to describe self-adaptive behaviour that is based on the knowledge acquired through system self-awareness (Torresen, Plessl, and Yao 2015). Below, we consider some important and related points-of-view in the CC literature and discuss their relevance to the self in creative self-expression.

Creativity Tripod: Earlier efforts in CC were concerned more with the generation of a creative artefact, without the creative agent (e.g. a poem generator) having an appreciation of what it was doing or what it has produced (e.g. the semantics of the poem). (Colton 2008) argue that this amounts to having no creativity at all. The authors in (Charnley, Pease, and Colton 2012) hypothesise that a *creativity tripod* of skilful, appreciative and imaginative behaviours are the bare minimum required to support the perception of creativity in computational systems. It is similar to how one would assess the creativity in a human (e.g., a poet, a painter). We agree with the above, but feel that these are not sufficient conditions for CSE. Instead of ‘perception of creativity’, CSE puts a primary focus on the ‘expression of self’. Focus on ‘self’ implies that the agent is a live entity in an environment, builds an inner point of view and is capable of expressiveness.

Notion of Framing: The way artists explain their work - in terms of *motivation* (why did you do X?), *intention* (what did you mean when you did X?), and *processes* (how did you do X?) - has a very large influence on how the audience perceives them. Framing captures this information (Charnley, Pease, and Colton 2012). For example, Munch’s diary notes on ‘The Scream’ give further insight to the viewers on how to interpret his works. A work of art might even have a completely different interpretation if we change parts of the framing information. We feel that for a well-implemented CSE, framing information would be easily available and a natural consequence. This is because the agent, who is also self-aware (a requirement in our case), has to only speak out its truths and should be able to reflect upon and answer the questions on motivations, intentions and processes.

FACE Model: FACE descriptive model, put forth in (Colton, Charnley, and Pease 2011) and (Pease and Colton 2011), advocates describing a creative system in terms of the creative acts (tuples of generative acts) it performs. The generative acts produce four types of outputs: examples of concepts, concepts themselves, aesthetic measures which can evaluate concept/example pairs, and framing information. We believe that the FACE model, as applied to CC systems, should be easily amenable to extend to CSE systems. As mentioned earlier, framing information is a natural consequence in a CSE system. FACE model already carries the notion of ‘concept’ and it’s conversion to ‘expression’. In case of CSE, the emphasis would be on converting something that is a part of ‘the self’ (*idea, feeling, experience, etc.*) to something tangible in the external world (*musical piece, visual art, poem, design, etc.*). Extension of FACE model, as to be relevant to CSE, is a subject of future study.

4P Perspective in CC: The authors in (Jordanous 2016) argue that to consider creativity holistically - consideration of mere process and product is not enough; computational creativity research (as is creativity research (Rhodes 1961) (MacKinnon 1970)) should be considered and explored from four different perspectives, known as the *Four Ps: Person, Product, Process, Press*. Articulation of ‘person’ in (Jordanous 2016) is more of a ‘producer’ (authors propose in this paper: ‘the term Producer is more appropriate as it allows us to consider the Four Ps in the contexts of both human and computational creativity’). In our view, for CSE, the self is more than just a producer of the artefact - it is an experimenter of the world, an introspective reflector, imager, as well as a creative producer.

CC Continuum: The paper (y Pérez 2018) argues that the construction of creative systems is motivated by, what sometimes seems to be, diverse and even contradictory viewpoints and understandings about the goals of computational creativity. One pole is the *engineering-mathematical* approach and the opposite pole is the *cognitive-social* approach. Any creative agent is located along the *continuum* based on its main goals as a system. In our view, an agent capable of CSE and supporting the necessary notion of ‘self’ would more likely be built upon cognitive-social approaches and hence would fall onto this side of the spectrum.

Applications and Systems: A recent study (Loughran and O’Neill 2017) reviews the diverse range of applications (and systems) considered in CC. Some application systems, e.g. Painting Fool (Colton 2012) give a semblance of a quasi sense of self. For instance, it has demonstrated the capability to get into certain moods during its painting efforts. A model for meta-creativity based on self-awareness is presented in (Linkola et al. 2017). Here self-awareness is taken as the capacity to become the object of one’s attention with a potential to also change oneself. However, to our knowledge, presently no direct conceptualisation or implementation of ‘self’ for ‘creative self-expression’ has been formally considered or incorporated in any of the CC systems.

Conclusion

In this paper, we discussed how expressing *our self* creatively has been one of the principal motivations for any artistic endeavour in human history. We explored the *notion of self* from the various viewpoints of philosophy, psychology, and modern science and presented a classification of the same. We pointed out how these concepts are relevant to *creative self-expression (CSE)* and how CSE helps to explore, articulate, and even enhance the self. We strongly feel that the notion of *self* in *self-expression* should form the subject of core investigation in computational creativity research and hope that this paper initiates that discussion. We further believe that the systems supporting these notions would lead to better human-machine artistic and creative collaborations and a greater value being assigned to the machine created artefacts. A survey of the existing CC systems with a view on their capability for creative self-expression, and exploring the possible ways to incorporate the relevant notion(s) of self in CC systems are areas of future work.

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