

## **Synaesthesia: A Richer Experience of Reality**

An Overlook at the Neuroaesthetics Study of Synaesthesia and its Implications in Art

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### 1. What Synaesthesia Is

A man walks into a bar and orders a coffee. As he is tasting it, he suddenly exclaims "Ugh! It's too blue!" and spits it out.

Now you may be wondering if the man meant to say "black," you may be mistaken. Actually, the protagonist of this 'joke' may simply be a synaesthete. This means that he may be one of those few individuals who are affected by the particular neurological ability that is synaesthesia. "It denotes the rare capacity to hear colors, taste shapes, or experience other equally startling sensory blendings whose quality seems difficult for most of us to imagine."<sup>1</sup> In the case of the anecdote, the act of tasting something evokes in the man a visual, coloured sensation.

Common definitions of synaesthesia state that it is a "joined sensation" (from its Greek etymology: *syn* - union, *aisthaesis* - sensation)<sup>2</sup>, a "union of the senses,"<sup>3</sup> a "multisensory joining."<sup>4</sup> Shortly, it consists in a blended and polymodal perception which can concern both senses and feelings. Generally speaking, "synesthesia occurs when an individual receives a stimulus in one sense modality and experiences a sensation in another."<sup>5</sup> Nonetheless, considering merely its sensory aspect seems quite unsatisfactory. If it is true that the most common forms of synaesthesia regards cross-sensory and bodily experience (e.g. number forms/spatial sequence, coloured graphemes, coloured hearing, etc.)<sup>6</sup>, we have to remember that "a variety of nonsensory cognitive traits (such as personality) can couple with various aspects of sensation."<sup>7</sup> What is more, "synesthetic associations are idiosyncratic." No two synesthetes

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<sup>1</sup> Richard E. Cytowic, "Synesthesia: Phenomenology and Psychology. A Review of Current Knowledge," *PSYCHE*, 2(10) (July 1995), p. 2. <http://www.theassc.org/files/assc/2346.pdf> (04/04/2015).

<sup>2</sup> Richard E. Cytowic, David M. Eagleman, *Wednesday Is Indigo Blue: Discovering the Brain of Synesthesia* (2009) (Cambridge, Massachusetts/London, England: The MIT Press, 2011), p. 1.

<sup>3</sup> See Richard E. Cytowic, *Synesthesia: A Union of the Senses* (1989) (Cambridge, Massachusetts/London, England: The MIT Press, 2002).

<sup>4</sup> Cytowic, "Synesthesia: Phenomenology and Psychology. A Review of Current Knowledge," *op. cit.*, p. 1.

<sup>5</sup> Amy Ione, Christopher Tyler, "Neuroscience, History and the Arts. Synesthesia: Is F-Sharp Colored Violet?," *The Journal of the History of the Neuroscience*, 2004, Vol. 13, No. 1, pp. 58-65, p. 58. [https://ski.org/CWTyler\\_lab/CWTyler/Art%20Investigations/ART%20PDFs/IoneTylerSynesthJHNS2004.pdf](https://ski.org/CWTyler_lab/CWTyler/Art%20Investigations/ART%20PDFs/IoneTylerSynesthJHNS2004.pdf) (04/04/2015).

<sup>6</sup> For a more detailed list, see Cytowic, Eagleman, *op. cit.*, pp. 26-47.

<sup>7</sup> *Ibidem*, p. 25.

experience the same percept, even if the same stimulus is given.<sup>8</sup> This fact entails that an endless list of combinations occurs.

Even if for an 'ordinary' perceiver this kind of experience seems abnormal<sup>9</sup> and strange, on the contrary for an 'extra-ordinary' perceiver as a synaesthete it is her/his everyday reality. However, it is just accidentally that these people come to acknowledge that they have synaesthesia, since it effectively represents their normal experience of the world. It is only when a casual confrontation with other people, non-synaesthetes, that synaesthesia becomes conscious.<sup>10</sup>

Although the history of the study about this neural feature dates back at the end of the eighteenth century,<sup>11</sup> a deeper interest in this issue occurred at the end of the twentieth century, that is "in the 1990s when the Decade of the Brain was ushered in."<sup>12</sup> Actually, scientific progress has allowed neurological investigation that has proven new discoveries about the functioning of this phenomenon. "In the last two decades the ability to probe intersensory relationships has been given a boost by new technologies of brain imaging."<sup>13</sup> What seems important is the fact that, thanks to the furnished evidences, synaesthesia has been finally considered as something concrete, and not a bizarre manifestation of fantasy. "Brain scans of synesthetes have finally removed the doubts of the skeptics.[...] Experiments that compared the brain activity of synesthetes with that of nonsynesthetes reveal that there are neurological differences in their responses to the same stimulus."<sup>14</sup> Nevertheless, since this focus on the neurological basis of synaesthesia is so recent and since scientists have explained only partially the complexity of the nervous system's mechanisms, synaesthesia has to be considered still a mysterious device of human brain. This uncertainty is showed by the numerous theories put forward in these years – but I will briefly refer to them further in my dissertation.

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<sup>8</sup> *Ibidem*, p. 4.

<sup>9</sup> "Synesthesia is 'abnormal' only in being statistically rare." Cytowic, *Synesthesia: A Union of the Senses*, *op. cit.*, p. 2.

<sup>10</sup> See Cytowic, Eagleman, *op. cit.*, pp. 2-3.

<sup>11</sup> For a further reading about the history of synaesthesia, the reader should refer to: Cytowic, *Synesthesia: A Union of the Senses*, *op. cit.*, pp. 3-7; Kevin T. Dann, *Bright Colors Falsely Seen: Synaesthesia and the Search for Transcendental Knowledge* (New Haven/London: Yale University Press, 1998), pp. 18-22; Julia Simner's entry "Synesthesia," in V. S. Ramachandran et al. (ed.), *Encyclopedia of Human Behaviour* Vol. 3 (Amsterdam: Elsevier, 2012), pp. 571-577, here pp. 573-574.

<sup>12</sup> Cytowic, Eagleman, *op. cit.*, p. 16.

<sup>13</sup> Ione, Tyler, *op. cit.*, p. 60.

For a list of these technologies, see Chiara Cappelletto, *Neuroestetica. L'arte del cervello* (Roma/Bari: Editori Laterza, 2009), pp. 118-120.

<sup>14</sup> Cretien van Campen, *The Hidden Sense: Synesthesia in Art and Science* (Cambridge, Massachusetts/London, England: The MIT Press, 2007), p. 5.

Richard E. Cytowic is one of the most influent scholars who deal with this issue, the "original synesthesia guru," as he calls himself on his Twitter profile.<sup>15</sup> According to his researches, synaesthesia can be diagnosed only if the analysed phenomenon has five mandatory features, he presents in his volume *Synesthesia: A Union of the Senses*.<sup>16</sup> First, synaesthesia is an involuntary but elicited device, for it "cannot be conjured up at will. It happens to someone, automatically, in response to a discrete stimulus."<sup>17</sup> Second, synaesthesia is experienced as spatially extended, meaning that "it has a sense of spatial location" in proximity with the body of the perceiver.<sup>18</sup> Third, "[t]he associations for an individual synesthete are consistent over his or her lifetime," and they are elementary, specific and discrete too.<sup>19</sup> This would implicate that this kind of experiences are not figments of one's imagination (for they do not betray anything of pictorial or contrived), but a natural form of perception.<sup>20</sup> Fourth, synesthetic percepts are highly memorable, "[p]erhaps because of their semantic vacuity."<sup>21</sup> And fifth, synaesthesia is emotional, which means that these experienced are loaded with affect by those who live them.<sup>22</sup>

Furthermore, synaesthesia is unidirectional (e.g. sound → taste, and not the other way round)<sup>23</sup>. Cytowic states that it is often inherited, and suggests that, since the "strong-overrepresentation-of-females bias among synesthetes," its genetic basis "would be associated with the X chromosome."<sup>24</sup> In any case, this statement is just a conjecture, for no exact scientific evidences have been given.

Synaesthesia is a phenomenon that appears at an early age, during childhood or puberty. In opposition with it, it happens sometimes that this ability is lost with the

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<sup>15</sup> <https://twitter.com/cytowic> (08/04/2015).

<sup>16</sup> Cytowic, *Synesthesia: A Union of the Senses*, *op. cit.*, pp. 67-70.

<sup>17</sup> *Ibidem*, p. 67.

<sup>18</sup> Cytowic, Eagleman, *op. cit.*, p. 50.

<sup>19</sup> Cytowic, *Synesthesia: A Union of the Senses*, *op. cit.*, p. 68.

<sup>20</sup> "This indelible quality of synesthesia is, in fact, the basis for Baron-Cohen's test of genuineness (Baron-Cohen et al. 1993). In this test, subjects are asked to describe the color sensation experienced on hearing items from a list of 130 words, phrases, and letters. The experimental group was not informed of any retest, which took place without warning more than 1 year later. A control group (n = 9) matched for IQ, memory, age, and sex were read the same list and asked to associate a color with each list item. They were forewarned at the time of testing that they would be retested on a sample of items from the list a week later. When retested 1 year later, 92.3% of the responses of the experimental group were identical to those originally given compared with only 37.6% of control subjects' responses (retested 1 week later). This confirmed the genuineness of these nine cases." *Ibidem*.

<sup>21</sup> *Ibidem*, p. 69.

<sup>22</sup> See Cytowic, Eagleman, *op. cit.*, p. 54.

<sup>23</sup> *Ibidem*, pp. 23-25.

However, cases of bidirectionality can occur. See *ibidem*, p. 102.

<sup>24</sup> *Ibidem*, p. 9. See also *ibidem*, pp. 224-226.

pubescent age.<sup>25</sup> These contrasting cases can be considered as proofs in support of the idea according to which synaesthesia may be a consequence of some hormonal influence, which is a factor particularly relevant during those period of human life.<sup>26</sup> However, "hormonal influence on synesthesia has not yet been studied systematically by anyone,"<sup>27</sup> so that it represents a point which should be developed. What is more, the fact that "[t]he immature brain has substantially more connections between and within areas than the adult brain has"<sup>28</sup> may be a further explanation of the development of synaesthesia at a young age, when the neural system is still in the making.

In his work *The Hidden Sense: Synesthesia in Art and Science*, Cretien van Campen concisely presents a summary of the principal theories about synaesthesia<sup>29</sup>:

- The *miswiring* theory: a wrong connection within the various cerebral part happens, so that a mixed perception occurs when an external stimulus activate different brain areas simultaneously.
- The *leakage* theory: information somehow 'pours out' among adjacent brain parts, and consequently the subject experiences blended percepts.
- The *wrong feedback* theory: the neural outcome of a certain stimulus is not the one it would be expected, but another one.
- The *limbic system* theory: in the limbic area, sensory pathways are mingled, and because of this mixed perceptions can occur.
- The *neonatal-pruning* theory: some nerve connections between sensory areas are not pruned, for the various connections between them are mantained in a way that allows synaesthetes to perceive in an multisensory, intertwined modality.<sup>30</sup>
- The *brain-plasticity* theory: synaesthesia is deemed as an adaptation of the brain to the environmental demands, according to the evolutionary process.
- The *neural disinhibition* theory: nervous connections between the sensory brain parts are freely connected, producing synaesthesia.<sup>31</sup>

The key concept is that somehow "synaesthesia reflects an increased degree of cross talk between normally separated brain areas and the networks of which they are

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<sup>25</sup> See *ibidem*, pp. 9-12.

<sup>26</sup> See Cytowic, *Synesthesia: A Union of the Senses*, *op. cit.*, p. 67.

<sup>27</sup> *Ibidem*, p. 58.

<sup>28</sup> Cytowic, Eagleman, *op. cit.*, p. 204.

<sup>29</sup> See van Campen, *The Hidden Sense*, *op. cit.*, pp. 120-123.

<sup>30</sup> See also Cytowic, Eagleman, *op. cit.*, pp. 204-205; 214-215.

<sup>31</sup> See also *ibidem*, pp. 215-216.

parts."<sup>32</sup> The nerve stimulus elicits a reaction not only in the directly addressed cerebral zone, instead it overcomes its threshold and activates another one. This means that there is no 'synaesthesia area,' but rather it has to be seen as the result of a neural connection.

However, synaesthesia is a way of perception that can also be 'artificially' gained, even if not in its natural state. Acquired synaesthesia's inducers include "LSD, hallucinations resulting from sensory deprivation, meditative states, closed head trauma, and temporal lobe epilepsy (TLE)."<sup>33</sup> Nevertheless, this kind of percepts are temporary and non-consistent.

In particular, drug-induced synaesthesia has been exalted since the nineteenth century, for it allows the overcoming of the boundaries of the five senses and the possibility of experiencing an unconventional world. This kind of synaesthesia has been regarded as a great instrument to profess the glorification of the senses, to enact the tendency towards the transcendence of reality as we 'normally' live it, to expand one's consciousness and perception. These are the reasons why synaesthesia, as a figure of speech, has gained always more success and popularity in the artistic domain, from Romanticism to Symbolism to the '60s psychedelic culture.<sup>34</sup> In this sense, synaesthesia, "as a new and expanded form of wholeness,"<sup>35</sup> can be considered a powerful support to artistic creation.

In any case, if nonsynaesthetes use synaesthesia as a mere typology of metaphor,<sup>36</sup> for real synaesthetes it represents a routine approach towards the world. "We can consider a synesthetic metaphor as a way of speaking that matches a feeling for a nonsynesthete, and that might be a true perception for a synesthete."<sup>37</sup> Synaesthetic equivalences informs art because they are conceived as alternative forms of expression for the artist to produce a discourse on her/his own. In this way, being the meaning of her/his creation deeper than what the surface may betray, the reader is forced to concentrate more intensely on it, in order to try to grasp what the synaesthetic imagine may reveal. "In other words, the ability to form intersensory associations allows the subsequent development of speech, which frees us from the tyranny of the senses and he

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<sup>32</sup> *Ibidem*, p. 205.

<sup>33</sup> *Ibidem*, p. 217.

<sup>34</sup> See Dann, *op. cit.*, p. 13.

<sup>35</sup> *Ibidem*, p.

<sup>36</sup> "In semantics and cognitive linguistics, a metaphorical process by which one sense modality is described or characterized in terms of another." <http://grammar.about.com/od/rs/g/synesthesiaterm.htm> (13/04/2015).

<sup>37</sup> Van Campen, *The Hidden Sense*, *op. cit.*, p. 92.

immediate pleasure-pain principle of the limbic system."<sup>38</sup> This original kind of speech opens up a renewed universe of expression that may broaden human conception of reality.

In spite of the popularity that synaesthesia has gained within the artistic domain, it does not imply that everyone who exploits it is necessarily a synaesthete. "[W]e must take care to separate pseudo-synaesthetes [...] who intellectually applied ideas of sensory correspondence to their art, from artists who truly had the perceptual variety."<sup>39</sup>

This point will be discussed in the second part of my work, since I will shortly investigate two examples of synaesthesia applied in arts. The first case is that of the Russian painter Wassily Kandinsky (1866-1944)<sup>40</sup>, who, in spite of the lack of concrete scientific proofs, is generally deemed a synaesthete, and whose work will give me the chance to analyse how synaesthesia can be applied to figurative art. Additionally, but centrally, I will focus on his theoretical work for it may be a demonstration of his synaesthesia. The second artist I am going to deal with is the Austrian poet Georg Trakl (1887-1914)<sup>41</sup>, who exploited synaesthetic metaphor in order to convey a different vision of the world as he experienced it and to powerfully communicate the deepness of his visions.

## 2. On Synaesthesia in Art

Wassily Kandinsky is considered an innovator in the field of twentieth-century visual art, for he is the inventor – or better, the theorist – of Abstract art.

The 'Pioneer' did not just produce a body of work whose sensuous magnificence and rich inventiveness eclipse even the most remarkable of his contemporaries. He also provided an explicit theory of abstract painting, exposing its principles with the utmost precision and clarity.<sup>42</sup>

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<sup>38</sup> Cytowic, Eagleman, *op. cit.*, p. 197.

<sup>39</sup> *Ibidem*, p. 187.

<sup>40</sup> For a detailed biography, see Oleg Ku's (2008) at <http://www.wassilykandinsky.net/> (13/04/2015), and Roy Donald McMullen (2014) at <http://www.britannica.com/EBchecked/topic/310922/Wassily-Kandinsky> (13/04/2015).

<sup>41</sup> For his biography, see <http://www.kulturvereinigung.com/en/georg-trakl/brief-biography/> (13/04/2015).

<sup>42</sup> Michel Henry, *Seeing the Invisible: On Kandinsky* (London: Continuum, 2009) (trans. by Scott Davidson, from the original French edition *Voir l'invisible*, Paris: Éditions François Bourin, 1988), p. 2.

In this sense, I will analyse an essay included in the collection of writings *On the Spiritual in Art* (1911): "The Language of Form and Colour" (VI).<sup>43</sup> In point of fact, in this short piece we can find an expression of those synaesthetic percepts which induce one to believe that Kandinsky was truly 'affected' by this neural condition.

In any case, there are previous reports which testify this 'affection.' The main one is that according to which Kandinsky discovered his synaesthesia in 1896 at a performance of Wagner's *Lohengrin* in Moscow.<sup>44</sup> He stated: "I saw all my colours in spirit, before my eyes. Wild, almost crazy lines were sketched in front of me."<sup>45</sup> This would imply that the Russian painter experienced a music/sound → colour synaesthesia, spatially extended. Nonetheless, better explanations about his sensations regarding music and painting are furnished in his 1911 *manifesto*.

Kandinsky believed in the unity of the senses, which he thought as the conducts which allows human beings to experience reality through the body.<sup>46</sup> In the moment of perception, this unity is achieved thanks to the subjectivity of the perceiver. "Because our true body is a subjective body, it is the unity of all the powers and all the senses comprising it. Because all these senses that offer the world are one, the world, in turn, is only one and the same world."<sup>47</sup> This means that the inner space of human consciousness shapes our relation to the world and our way of feeling it.

The issue of interiority is central in Kandinsky, for he believed in the centrality of the principle of the *inner necessity*.<sup>48</sup> According to him, the artist has to be governed by her/his interiority in pursuing her/his artistic goal: "the artist wishes to express himself and chooses only those forms which are sympathetic to his soul."<sup>49</sup> Accordingly, his poetics professes a clear rejection of the principle of *mimesis*, and an affirmation of that of *poiesis*. The goal of the artist has not to be the faithful reproduction of reality as it is, rather it has to be presented as it is perceived subjectively by the artist her/himself. "It is impossible absolutely to reproduce a material object. For better or worse, the artist

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<sup>43</sup> Wassily Kandinsky, *On the Spiritual in Art* (The Solomon G. Guggenheim Foundation/The Gallery Press: New York, 1946) (ed. and trans. Hilla Rebay, from the original German edition *Über das Geistige in der Kunst: Insbesondere in der Malerei*, Munich: Piper & Co. Verlag, 1911).

Available text  
<https://ia700605.us.archive.org/33/items/onspiritualinart00kand/onspiritualinart00kand.pdf> (14/04/2015).

<sup>44</sup> <http://www.tate.org.uk/whats-on/tate-modern/exhibition/kandinsky-path-abstractation/kandinsky-path-abstractation-room-guide> (14/04/2015).

<sup>45</sup> Quoted in Ossian Ward, "The man who heard his paintbox hiss" (10/06/2006) <http://www.telegraph.co.uk/culture/art/3653012/The-man-who-heard-his-paintbox-hiss.html> (14/04/2015).

<sup>46</sup> See Henry, *op. cit.*, p. 112.

<sup>47</sup> *Ibidem*.

<sup>48</sup> See Kandinsky, *op. cit.*, pp. 54-55.

<sup>49</sup> *Ibidem*, p. 56.

succumbs to his eye; his hands, more artistic than his soul, aim beyond photographic objectives.”<sup>50</sup> In this sense, Kandinsky proposed the foundation of the modern art as abstract art, for “[i]n any case of translation into the abstract or the employment of non-objective forms, the artist’s sole judge, guide, and principal consideration should be his feeling.”<sup>51</sup> This means that the potentiality of the abstract art is exactly that of allowing the artist to follow her/his inner truth and create something that a pure transposition of her/his perception of nature.

As a painter, Kandinsky believed that his artistic domain had to be influenced by music, for “[w]ith few exceptions and deviations, music has, for centuries, been the art which has used this means, not so much to represent natural phenomena but rather, as an expression of the artist’s spiritual life and to the creation of a unique life of musical sounds.”<sup>52</sup> He hoped for a synthesis of the arts, in order to establish the so-called *monumental* art, that is a multi-medial art which exploits and mingles the strengths and the methods of several artistic disciplines. “Deeply concentric, each art is separated from the other, but on the other hand, they are combined in their innermost tendencies,”<sup>53</sup> so that it can be said that monumental art is already inscribed in the interiority of humanity, but it still has to be lead to the surface. In a broad sense, monumental art can be seen as a form of synaesthesia, for it aspire to an artistic crossing and encroachment towards an unique, but multifaceted, creation.

Behind this was the assumption that the most abstract expression was the most universal one, as with primary colors, geometric shapes and mathematical concepts. Once the elements of every field were revealed in their utmost simplicity, one would see their essential agreement, and thence the basic syntax underlying all of art, and indeed, all of reality.<sup>54</sup>

Kandinsky tried to put into practice this ideal not only in his paintings, but also with the establishment of *Der Blaue Reiter* (1911)<sup>55</sup>, an association of artists who practiced art in its various domains, but wanted to cooperate, influence each other and learn from each other, in order to give birth to a richer possibility of artistic realization.

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<sup>50</sup> *Ibidem*, p. 48.

<sup>51</sup> *Ibidem*, p. 52.

<sup>52</sup> *Ibidem*, p. 35.

<sup>53</sup> *Ibidem*, p. 36.

<sup>54</sup> Yakov Rabinovich, “Kandinsky: Master of the Mystic Arts” <http://www.invisiblebooks.com/Kandinsky.htm> (17/04/2015).

<sup>55</sup> See <http://www.wassilykandinsky.net/blauereiter.php> (17/04/2015).



"The Blue Rider group was all about opening up boundaries."<sup>56</sup> In this way, fancy would allow to reach the inner truth. Consequently, Kandinsky (and his group) believed in the freedom of the artist and of her/his inner necessity, i.e. the only driving force behind her/his works. "There is no 'must' in art which is eternally free. From this 'must' art flees as day shuns the night."<sup>57</sup> This new art does not try to portray nature, but human interiority, and it represents that flickering light which will awaken and save humanity from the nightmare of materialism it has been dreadfully experiencing for ages.<sup>58</sup>

Back to the central issue of this paper, I will now concisely focus on the chapter of *On the Spiritual in Art* I have already mentioned, trying to track down those statements and theories which concern synaesthesia.

In "The Language of Form and Colour," Kandinsky explains the main elements of abstract art: form and colour. It is in particular the harmony given by their union and interaction that renders a painting striking. The fact that the author uses the word "composition" with regards to pictorial works suggests his musical conception of painting, that is his synaesthetic attitude to art.

Apart from presenting his theory and his conception about abstract painting, Kandinsky lingers on his ideas about colour and on his way of perceiving it. "Let us concentrate on isolated colour, that is letting individual colour work on us."<sup>59</sup>

The author writes that colours can be classified depending on the 'temperature' of their tonality, being warm or cold, which is an important characteristic with regard to the affection of the colour on the observer. Moreover, colours can be divided considering their evaluation of dark and light.

I will schematically show Kandinsky's description of various colours and their qualities.

- Black and white: They are the opposite and complementary poles of light (or of its absence), and are important especially for the influence they exercise towards the other hue. "They possess the same movement, to and from the spectator, although not in dynamic but static rigid form."<sup>60</sup> They are both

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<sup>56</sup> "The Blue Rider Group. Eye Music" (25/05/2013) <http://www.economist.com/news/books-and-arts/21578368-reopened-lenbachhaus-munich-certainly-worth-detour-eye-music> (17/04/2015).

<sup>57</sup> Kandinsky, *op. cit.*, p. 52.

<sup>58</sup> See *ibidem*, p. 10.

<sup>59</sup> *Ibidem*, p. 60.

<sup>60</sup> *Ibidem*.

representation of a void, of lack of material quality and substance.<sup>61</sup> They correspond to silence, although in different ways. On the one hand, white "is not a dead silence but one full of possibilities. The white has the appeal of silence which has suddenly become comprehensible. It is a 'blank,' infinitely young, a 'blank' which emphasizes the Beginning, as yet unborn."<sup>62</sup> On the other hand, black stands for a silence which is hopelessness and death. "Black is something extinguished like a burned pyre, something immobile, corpse-like, which has no connection with any occurrences, and accessible to all things."<sup>63</sup> Consequently, Kandinsky attributes them a certain inner quality, for white corresponds to pure joy and infinite purity, whereas black to the greatest, deepest sorrow.<sup>64</sup>

- Yellow: It is a typically warm, earthly colour,<sup>65</sup> which has a tendency towards a certain acuteness.<sup>66</sup> Additionally, in a sense, it possesses a personality, for it is the colourist "representation of madness – not melancholy or hypochondriacal mania but rather an attack of violent, raving lunacy."<sup>67</sup> At the same time, "[a] picture painted in yellow will always exhale a spiritual warmth."<sup>68</sup>
- Blue: It is a heavenly colour,<sup>69</sup> which arouses an inclination towards reflection, "a longing for purity and the supersensuous."<sup>70</sup> However, it can change according to the nuance it assumes. "When very dark, blue develops an element of repose. When it sinks into black, it echoes a grief that is hardly human."<sup>71</sup> On the contrary, the lighter the calmer it is.<sup>72</sup> Furthermore, blue is musically described: "light blue is like a flute, dark blue like a cello, and when still darker, it becomes a wonderful double bass. The deepest and most serene form of blue may be compared to the deep notes of an organ."<sup>73</sup>

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<sup>61</sup> See *ibidem*, p. 68.

<sup>62</sup> *Ibidem*.

<sup>63</sup> *Ibidem*.

<sup>64</sup> See *ibidem*.

<sup>65</sup> See *ibidem*, pp. 62, 63.

<sup>66</sup> See *ibidem*, p. 65.

<sup>67</sup> *Ibidem*, p. 64.

<sup>68</sup> *Ibidem*, p. 65.

<sup>69</sup> See *ibidem*, p. 64.

<sup>70</sup> *Ibidem*,

<sup>71</sup> *Ibidem*.

<sup>72</sup> See *ibidem*, p. 65.

<sup>73</sup> *Ibidem*.

- Green: It is the outcome of the fusion between yellow and blue. It is perceived as restful, wearisome, passive, as demonstrated by the fact that it shows no movement.<sup>74</sup> In any case, when one of its constituent colours prevails, a change occurs. "When absolute green is brought out of balance, it rises to yellow and becomes alive, youthful, and gay."<sup>75</sup> It gains an active personality. "In the case of the dominance of blue, the green sinks deep and acquires an entirely different appeal by becoming grave, still, and contemplative."<sup>76</sup> Green contains within itself these two forces that, since contrasting, are paralysed, but can be reactivated by making one of them predominate. Furthermore, it is said that this colour too has a musical correspondence, that of the "placid, long-drawn middle notes of a violin."<sup>77</sup>
- Grey: It is a colour similar to green because of their absence of movement. Nonetheless, whereas green has a potential activity, grey is hopelessly passive.<sup>78</sup> "It is so lacking because gray is formed of colours that have no purely active (moving) forces, as they consist, on the one hand, of motionless resistance and, on the other, of an immobility void of any power of resistance."<sup>79</sup>
- Red: It is a warm, energetic colour, which "has an inner, highly vivid, lively, restless appeal,"<sup>80</sup> and communicates a peculiar substantiality.<sup>81</sup> In any case, according to its different nuances, it assumes a different character too. For instance, "[t]he light, warm red (saturn) [...] arouses the feeling of strength, energy, ambition, determination, joy, triumph (louder)." Musically speaking, it is experienced like a strong tone, like that of a trumpet accompanied by a tuba.<sup>82</sup>
- Orange: It is the result of a blend of warm red and yellow, where the first chromatic element plays the major role, rendering it energetic too. "It is like a human being, aware of his own power and emanating happiness and

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<sup>74</sup> See *ibidem*.

<sup>75</sup> *Ibidem*, p. 66.

<sup>76</sup> *Ibidem*.

<sup>77</sup> *Ibidem*.

<sup>78</sup> See *ibidem*, pp. 62-63, 68-69.

<sup>79</sup> *Ibidem*, p. 63.

<sup>80</sup> *Ibidem*, p. 69.

<sup>81</sup> See *ibidem*, p. 70.

<sup>82</sup> See *ibidem*, p. 69.

health.”<sup>83</sup> Its musical associated perception is that of “a medium-sized church bell reminding one of a strong alto voice or the singing of alto violins.”<sup>84</sup>

- Violet: It is a cooled-red which “possesses an element of frailty, expiring sadness.”<sup>85</sup> It reminds of “the sound of an English horn, the shepherds flute, or the deep, low tone of wood instruments (for example, a bassoon).”<sup>86</sup>

From these descriptions, Kandinsky’s synaesthetic approach towards colours, which seems to elicit in him musical reactions too. In his writing, when he compares, for instance, a black sign to a definite pause,<sup>87</sup> or a white one to a momentary pause,<sup>88</sup> he seems to suggest the possibility of reading his paintings as sheet music. This fact, as well as his habit of entitling his paintings as if they were musical pieces (e.g. his several *compositions*<sup>89</sup>; *Improvisation 27, Garden of Love II*, 1912<sup>90</sup>; *Colourful Ensemble*, 1938<sup>91</sup>; etc.) and to his theatrical works<sup>92</sup> inspired by the ideal of the *Gesamtkunstwerk* (‘total work of art’)<sup>93</sup>, appear as a demonstration of his synaesthesia.<sup>94</sup>

However, one can argue that, these writings being simply personal first-person-reports, they cannot be considered concrete and reliable demonstration that Kandinsky was a synaesthete. As a matter of fact, even if great part of the studies concerning Kandinsky and synaesthesia regards the painter a real synaesthete, some scholar does not agree. For instance, Kevin T. Dann asserts that, “[I]ike Rimbaud and Baudelaire before him, Kandinsky became an “invented” synaesthete, owing to his own and art

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<sup>83</sup> *Ibidem*, p. 71.

<sup>84</sup> *Ibidem*.

<sup>85</sup> *Ibidem*.

<sup>86</sup> *Ibidem*.

<sup>87</sup> See Kandinsky, *op. cit.* p. 68.

<sup>88</sup> “[W]hite affects us with the absoluteness of a great silence. It sounds inwardly and corresponds to some pauses in music, which, though temporarily interrupting the development of a melody, do not represent a definite end of the musical sequence.” Kandinsky, *op. cit.*, p. 68.

<sup>89</sup> E.g. *Composition VII*, 1913 <http://www.wassilykandinsky.net/work-36.php> (18/04/2015); *Composition VIII*, 1923 <http://www.wassilykandinsky.net/work-50.php> (18/04/2015).

<sup>90</sup> [http://en.wikipedia.org/wiki/File:Vassily\\_Kandinsky,\\_1912\\_-\\_Improvisation\\_27,\\_Garden\\_of\\_Love\\_II.jpg](http://en.wikipedia.org/wiki/File:Vassily_Kandinsky,_1912_-_Improvisation_27,_Garden_of_Love_II.jpg) (18/04/2015).

<sup>91</sup> <http://www.wassilykandinsky.net/work-61.php> (18/04/2015).

<sup>92</sup> “Between 1909 and 1914 in Murnau Kandinsky produced several stage compositions and texts expounding the ideas of a ‘synthesis of arts,’ such as *The Violet Curtain*, *The Green Sound*, *Black and White* and *The Yellow Sound*.” “Wassily Kandinsky. Synthesis of Arts. The Yellow Sound.” (20/11/2011) <http://modernartconsulting.ru/en/2011/11/wassily-kandinsky-synthesis-of-arts-the-yellow-sound/> (18/04/2015).

<sup>93</sup> See <http://en.wikipedia.org/wiki/Gesamtkunstwerk> (18/04/2015).

<sup>94</sup>

historians' misconceptions about the nature of synaesthetic perception."<sup>95</sup> Nevertheless, there are many researchers who believe in the authenticity of the painter's synaesthetic perception.<sup>96</sup> In any case, what seems clear is that "[t]he artist *believed* that one could 'hear' colors and that color, like music, has the power to move the soul."<sup>97</sup> What really is important is the fact that Kandinsky showed how to mingle music and painting up, testifying an aspiration at the union of both the senses and the artistic domains, towards that "whole work, called art, [which] knows no borders or nations, only humanity."<sup>98</sup>

### 1. Synaesthesia as an Antidote against the Silence in Trakl's lyrics

Georg Trakl's lyrics mirror their author's restlessness and his attempts at interpreting the world around him, in order to convey his readers his perception of it. Citizen of an empire on the edge of its collapse, the Austrian poet perfectly embodies the *mal de vivre*, the melancholy, the dissatisfaction and the exasperation, which are the central features of his time. A forlorn atmosphere prevails in his poetry, as he is used to describe nightmarish visions and infectious squalor. "There is something obscure, claustrophobic in Trakl's verses, deriving from a detached perception of evil."<sup>99</sup> A psychotic and suffering shadow hunts his poems, as his insistence upon annihilation, decay, somberness and dissolution testifies. In any case, "[e]ven if death and corruption, transience and pain, are dominant themes in this poetry, the very lyricism itself constitutes a harmonizing and assuaging counter-force."<sup>100</sup>

As a matter of fact, Trakl was able to renovate poetic language, as his techniques consists in an intensified employ of metaphors, an obsessive repetitiveness of certain expressions, an unusual and frenzied exploitation of chromatic adjectives, and lastly an accurate focalization of the object that stands as the center of the poem. In this way, "what may distract, divert from the image is removed. [...] The poet aims at condensing

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<sup>95</sup> Dann, *op. cit.*, p. 47.

<sup>96</sup> See Cytowic, Eagleman, *op. cit.*, p. 187; Richard Cytowic, *The Man Who Tasted Shapes* (1993) (Cambridge, Massachusetts/London, England: The MIT Press, 1998), pp. 55-56; Ione, Tyler, *op. cit.*, pp. 62-63; van Campen, *The Hidden Sense, op. cit.*, pp. 55-58; Cretien van Campen, "Synesthesia and Artistic Experimentation," *PSYCHE*, 3(6) (November 1997) <http://www.theassc.org/files/assc/2290.pdf> (18/04/2015).

<sup>97</sup> Brenda Lynne Leach, *Looking and Listening: Conversations between Modern Art and Music* (Lanham, MD: Rowman & Littlefield Publishers, 2014), p. 53 (my italics).

<sup>98</sup> Wassily Kandinsky, Franz Marc, "Preface" (1911) intended for the first edition of *The Blue Rider Almanac*, ultimately not included in the publication. <http://www.mariabuszek.com/kcai/Expressionism/Readings/BlueRider.pdf> (18/04/2015).

<sup>99</sup> Carolina Fucci, "Un blu germanico. Sulla lirica di Trakl" (my translation) [http://www.bibliomanie.it/blu\\_germanico\\_lirica\\_trakl\\_fucci.htm](http://www.bibliomanie.it/blu_germanico_lirica_trakl_fucci.htm) (22/04/2015).

<sup>100</sup> Alexander Stillmark, "Introduction" to Georg Trakl, *Poems and Prose* (trans. and ed. Alexander Stillmark) (Evanstone, Illinois: Northwestern University Press, 2005), pp. xi-xx; p. xii.

and abstracting meanings in order to render them absolute, that is freed from the ground they are rooted in."<sup>101</sup>

Additionally, Trakl's poetry develops in a period when a form of aphasia, that is an impossibility to utter and communicate one's ideas and feelings.<sup>102</sup> In art, it constituted a huge obstacle on the one hand, but a galvanizing incentive to find new expressive solutions on the other. Thus, traklian synaesthesias function as an escape from a sterile world of unutterable abjection, from a comatose imagination; they are an intense symphony, only the soul can hear.<sup>103</sup>

Actually, Trakl depicts uncommon images, thanks to a new, powerful language, and especially thanks to synaesthetic (colour → sound) metaphors. However, these synaesthesias are personal percepts of a reality, which seems to have lost its long-established meaning and which consequently needs to be re-read. Accordingly, it is impossible to attribute an unequivocal explanation to the images he evokes. An intrinsic ambiguity is proper of his poetry, but this multiplicity of meanings is not indeterminate. On the contrary, Trakl's polyphonic and polichromatic poetry springs from a unifying origin, a monody, which is unspeakable *per sé*, i.e. his interiority.<sup>104</sup>

In order to portray this inner landscape, the chromatic element assumes an essential role, because it indelibly impresses the reader. What is more, by combining colours with sounds, i.e. visual perceptions with acoustic ones, Trakl is able to struck one's imagination deeper and to arouse more vivid reactions. Effectively, the conjured-

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<sup>101</sup> Ida Porena, *La verità dell'immagine. Una lettura di Georg Trakl* (Roma: Donzelli Editore, 1998), p. 16 (my translation).

<sup>102</sup> See Martin Heidegger, *In cammino verso il linguaggio* (Alberto Caracciolo ed.) (Milano: Mursia Edizioni, 1973) (Italian trans. Alberto Caracciolo, Maria Caracciolo Perotti, from the original German *Unterwegs zur Sprache*, 1959); Claudio Magris, "Introduzione" a Hugo von Hofmannstahl, *Lettera di Lord Chandos* (Italian trans. Marga Vidusso Feriani) (Milano: BUR, 1995).

A great example of this incapability and of the lack of faith in language is Hugo von Hofmannstahl's *The Letter of Lord Chandos (Ein Brief)*, 1902). The author of this fictive epistle is Lord Chandos, a man of letters who cannot express himself in writing anymore. He has "lost from [his] inner inscrutable self all traces and scars of this creation of [his] most intensive thinking." He seems affected by a "disease of [his] mind" which makes his world crumble, with its ideals and certainties. In a linguistic reality as the one we live in, he perceives "[s]ingle words [floating] round [him]; they [congeal] into eyes which [stare] at [him] and into which [he is] forced to stare back-whirlpools which [give him] vertigo and, reeling incessantly, [lead] into the void." He has fell into an abyss of silence, "vacuity" and "inner stagnation." This condition is disheartening and appears the sign of a doom of nothingness. Chandos concludes the letter stating: "[N]either in the coming year nor in the following nor in all the years of this my life shall I write a book, whether in English or in Latin." He thus seems to exclude the possibility of using those worn-out languages, but suggests the hope in a new system of expression (in art?).

For the whole text of Hugo von Hofmannstahl, *Letter*, see [http://depts.washington.edu/vienna/documents/Hofmannsthal/Hofmannsthal\\_Chandos.htm](http://depts.washington.edu/vienna/documents/Hofmannsthal/Hofmannsthal_Chandos.htm) (23/04/2015).

<sup>103</sup> Stella Sara Gencarelli, "Colori e parole. Kandinsky e Trakl." [http://www.clarissa.it/editoriale\\_int.php?id=210](http://www.clarissa.it/editoriale_int.php?id=210) (23/04/2015).

<sup>104</sup> See Heidegger, *op. cit.*, pp. 74-75.

up image is thus endowed with a certain charge of dynamism, which somehow compels the reader to analyse further and more accurately the message of the poet.

Through synaesthesia, Trakl renders the description of the object unreal. His poems are crowded by everyday objects and events, especially the gloomier and bleaker, which are transfigured by Trakl's personal perspective and thus assume unexpected meanings. In this way, he attempts at making the meanings they communicate absolute, freeing them from the binding mimetic principles.<sup>105</sup> It can be stated in fact that, in his poetics, "the inner vision, the image-making faculty, [takes] precedence over the mimetic."<sup>106</sup> The fusion of notes and pigments is thus a way to depict external reality through an inner – synaesthetic – lens. As a consequence, it appears clearly that his work is the external objectivation of an interior, psychic necessity.<sup>107</sup> Such an unusual and personal reading of experience opens up new possibilities of expression, and may lead to yet-undisclosed truths.<sup>108</sup>

Now I will give an overlook to his poetic oeuvre, focusing on those synaesthesia I believe as the most symbolically signifying.

All his verses are 'colourfully patched,' and each one of these chromatic specifications can assume different meanings. Green may signify decomposition as well as blossoming; white, paleness as well as purity; black, a concealing darkness as well as an enshrining one; red, energy in its vermilion shade as well as frailty and elegance in its pink hue; silver, deadly pallor as well as the twinkling of the stars; golden, real splendor as well as "the horrible laughter of gold."<sup>109</sup>

However, these colours becomes even more semantically relevant when they are matched with a certain sound. The most recurring auditory element are: silence (*Schweigen* and *Stille*: the lack of sound itself, which seems the doom of the poet in his time, but is overcome and defeated thanks to the poetic force of expression); lament (*Klage*: the dominant mood of the lyrics and of the epoch); harmony and song (*Wohllaut* and *Gesang*: nevertheless they do not have a positive connotation, instead they are beared of anguish); and lastly, voice (*Stimme*: a neutral term which assumes a certain semantic force especially thanks to the hue it is attributed to).

Synaesthetic description of the silence combine it with the following colours:

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<sup>105</sup> See Porena, *op. cit.*, p. 16.

<sup>106</sup> Stillmark, *op. cit.*, p. xi.

<sup>107</sup> See Porena, *op. cit.*, pp. 43-44.

<sup>108</sup> See Fucci, *op. cit.*

<sup>109</sup> See Heidegger, *op. cit.*, p. 74. The quoted poem is *To Those Grown Silent (An die Verstummen)*, in Trakl, *op. cit.*, p. 82 (83).

- brown (*Sebastian in a Dream; The Ravens*)<sup>110</sup>;
- grey (*Springtime of the Soul*, where Trakl intensifies the synaesthetic charge by specifying a tactile sensation, that is "grey stony silence," in order to convey the harshness, inflexibility and emotive aridity of such refusal of expression)<sup>111</sup>;
- blue (*Sonja; Childhood*, "in sacred blueness shining steps ring on"; *Transfiguration*, "blue flower/which quietly rings in the yellowing rocks." This colour is here evidently connected to the Romantic philosophical principle of the Absolute, communicating an idea of infinite and spirituality)<sup>112</sup>;
- black (*Autumn Soul*, where it is employed to translate visually and acoustically a sense of death, terror and hopelessness, for "a black silence lurks in fear")<sup>113</sup>.

Then, the lament is synaesthetically present as:

- dark (*Kaspar Hauser Song; Sevenfold Song of Death; Revelation and Perdition*. It is the sound of the desperation of miserable individuals whose abjection seems incurable)<sup>114</sup>;
- blue (*Limbo; In Hellbrunn*. Being blue the colour of the interiority, this lament is that which directly and inexorably springs up from the cockles of one's heart)<sup>115</sup>.

With regard to the voice, it is often silver-coloured, for instance "the silver voices of stars" and "the angel's silver voice" in *Sebastian in a Dream*, and furthermore "the silver voice of the wind" in *Hohenburg*.<sup>116</sup> This hue is linked by Trakl to natural elements or to the supernatural, so that it may symbolise the divine and the uncorrupted, beyond the mortal matter of the world and humanity. Moreover, "white voices/wandering" are depicted, communicating a sense of anonymity and lack of concreteness of the alienated crowd of modernity (*The Thunderstorm*).<sup>117</sup>

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<sup>110</sup> See Trakl, *op. cit.*, pp. 48-51 (*Sebastian im Traum*); 2-3 (*Die Raben*).

<sup>111</sup> *Ibidem*, pp. 98-101 (*Frühling der Seele II*).

<sup>112</sup> *Ibidem*, pp. 64-65 (*Sonja*); 38-39 (*Kindheit*); 78-79 (*Verklärung*).

The connection between the blue and the Absolute dates back, in particular, to Novalis' novel *Heinrich von Ofterdingen* (1800). See [http://en.wikipedia.org/wiki/Blue\\_flower](http://en.wikipedia.org/wiki/Blue_flower) (24/04/2015).

Moreover, it is the colour of the sacred itself (See Heidegger, *op. cit.*, pp. 50-51). Nonetheless, blue is also the colour of death and decomposition, of the corpse (See Porena, *op. cit.*, pp. 33; 37).

<sup>113</sup> *Ibidem*, pp. 66-67 (*Herbsteetele*).

<sup>114</sup> *Ibidem*, pp. 54-55 (*Kaspar Hauser Lied*); 84-87 (*Siebengesang des Todes*); 126-131 (*Offenbarung und Untergang*).

<sup>115</sup> *Ibidem*, pp. 88-91 (*Vorhölle*); 110-111 (*In Hellbrunn*).

<sup>116</sup> *Ibidem*, pp. pp. 48-51 (*Sebastian im Traum*); 46-47 (*Hohenburg*).

<sup>117</sup> *Ibidem*, pp. 114-117 (*Das Gewitter*).



Further traktian synaesthesias of the colour→sound typology are present in his verses (e.g. "crimson laughter" in *Evening in Lans*, "blue organ droning" in *Along*, "the dark calls of the blackbird" in *Springtime of the Soul*).<sup>118</sup>

However, Trakl combines colours not only to sounds but also to certain moods and emotions. Sadness is characterized as "ivory" (*Amen*), peace as "golden" and the patience of the end as "dark" (*Year*).<sup>119</sup> Some movements too are described as coloured, such as "black striding" (*Transformation of Evil*) and "darksome wandering" (*Autumn Soul*).<sup>120</sup>

Also, colours are protagonists of his poems also because they 'comes alive.' Effectively, they are personified, as in *The Accursed* where "redness laughs" and "a blueness hovers."<sup>121</sup>

What may be implied by this analysis is the fact that in Trakl's lyricism the sensuous and the concrete are the subjects of the verses, although they are someone distorted, aspiring at an abstract, metaphysical level. Such process is possible employing synaesthetic specifications to the object depicted, which make the image more striking and fascinating. "The deepest sources of this poet's creative imagination appear always to spring from the sensuous self and to be intrinsically bound to a palpable world."<sup>122</sup>

In spite of the massive use of synaesthesia, it appears that Trakl was not a real synaesthete, but an extremely talented and sensitive artist who, in order to overcome the linguistic impasse which seemed to condemn him to an overwhelming poetic silence, exploited this figure of speech to release his inner tension and give them voice. These juxtapositions are spontaneous expressions – often culturally and historically influenced – of the troubled perspective of the Salzburger poet, his way to contrast the slovenliness and the aridity of his world. "Colours in particular are conspicuous throughout his poems and they are employed not naturalistically but rather with emotive and connotative force,"<sup>123</sup> especially when matched with an acoustic element. In any case, he had never made any allusion to synaesthesia as his actual way of perception, but it seems it represented for him a way of personal observation and interpretation of life and its categories.

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<sup>118</sup> *Ibidem*, pp. 52-55 (*Abend in lans*); 64-66 (*Entlang*); 98-101 (*Frühling der Seele II*).

<sup>119</sup> *Ibidem*, pp. 20-23 (*Amen*); 94-95 (*Jahr*).

<sup>120</sup> *Ibidem*, pp. 56-59 (*Verwandlung des Bösen*); 66-67 (*Herbstseele*).

<sup>121</sup> *Ibidem*, pp. 62-64 (*Die Verfluchten*).

<sup>122</sup> Stillmark, *op. cit.*, p. xvi.

<sup>123</sup> *Ibidem*, p. xviii.

### 3. Conclusion

As we have seen, synaesthesia allows the disruption of the limiting boundaries of perception, so that some lucky individuals have the possibility to experience life differently, in a fully sensuous way. This is the principal reason why this innate cognitive modality of approach towards reality has always been deemed as a forceful poetic tool, as the range of potential images it can conceive is infinite and astonishing. Furthermore, it is a great resource for those who, although not real synaesthete, are not satisfied with common instruments of expression, aim at employing original solution.

In the field of art, Kandinsky and Trakl employed synaesthesia to communicate their perception of the world, although with different outcomes. On the one hand, Kandinsky's paintings appear like tributes to life and its enjoyment: they are a defense against the obscurity of his historical reality. On the other hand, Trakl's poems are a harsh and tormented becoming conscious of the desolation around him: they sing the *horror vacui* of a world going through a dreary moment. The wild imagination, the courage to artistically dare and the revolutionary talent, testified by the use of synaesthesia, render possible to these artists to overcome the void which seems to have eliminated any possibility of artistic expression.

Synaesthesia is thus a potential and relevant approach towards unexplored zones of human interiority. Furthermore, its scientific manifestation and the investigation of this phenomenon can reveal something more about brain functioning and of its structure.

[I]t is a window looking out on a broad swath of the mind, the brain, and our highly individualized view of what constitutes reality. [...] Synesthesia, in its dozens of varieties, highlights the amazing differences in how individuals subjectively see the world, reminding us that each brain uniquely filters what it perceives in the first place.<sup>124</sup>

In this perspective, in the realm of synaesthesia and its mysteries, science and art mingle with each other and cooperate in order to reach a better comprehension of humanity in its totality.

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<sup>124</sup> Cytowic, Eagleman, *op. cit.*, pp. 246-247.

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