Synesthaesia

– a term used by scholars in various fields, refers to a whole range of related phenomena whose common underlying principle is the interaction of the senses. Generally speaking, it describes a creative "dialogue of the senses," in which the diverse sensory channels become joined, entangled, and mutually contami-

nated. The word "synaesthesia" comes from the Greek roots syn, meaning "together," and *aesthesis*, meaning "perception, feeling," so in effect it means combined perception; it also denotes an artistic device, in which "certain sensory experiences are presented within the categories proper to other senses,"¹ and a taxonomic category in medicine; synaesthesia is a type of linguistic metaphor, but also a specific creative method. The term refers to a complex of phenomena that feature the interfusion of the senses – understood, depending on the scholarly approach, as cerebral nerve centers, cognitive domains, semantic fields in language, or physical channels of communication.

Before the modern era, interest in the phenomenon of synaesthesia among philosophers such as Locke, Leibniz, and Newton led them to undertake a number of fascinating intersensory projects, the most famous of which is the idea of colored music.² However, the nineteenth century witnessed the development of the first truly scientific studies of synaesthesia and marked the beginning of synaesthesia's great career in the areas of both science and art.³ Research in the second half of the century, during the emergence of psychology as a new discipline in the social sciences, gradually awakened interest in intersensory perception. This was aided by the simultaneous expansion of the **aesthetics of synaesthesia** – neo-Romanticism was the age in which synaesthesia-driven metaphors triumphed, and were increasingly conceived as not only a means of expression, but also a significant part of the artist's **worldview**.

Research into the phenomenon of synaesthesia went out of favor in the early decades of the twentieth century as behaviorism grew to dominate science and "banished reference to mental states from scientific language. As synaesthesia could only be defined by self-report and reference to mental states, it was not considered amenable to scientific investigation."⁴ The 1980s finally brought a renaissance of studies in clinical synaesthesia. New research perspectives were offered by such young disciplines as cognitive science and neuropsychology. The use of new diagnostic technologies and, in particular, innovative brain-imaging methods, made it

² S.A. Day, A Brief History of Synaesthesia and Music, 2002, <u>http://www.thereminvox.com/article/</u>

¹ Słownik terminów literackich (Dictionary of Literary Terms), ed. J. Sławiński, Wrocław 2008, p. 551.

articleview/33/1/5, [accessed: 12.05.2014]; A. Rogowska, "Związki synestezji z muzyką" (Synaesthesia's Links with Music), in *Muzyka. Kwartalnik Instytutu Sztuki PAN* (Music. Quarterly of the Art Institute of the Polish Academy of Sciences) 2002, XLVII, 1 (184).

³ One such work is George Sachs's 1812 academic dissertation, in which the German physician described his own experience of clinical synaesthesia.

⁴ Synaesthesia. Classic and Contemporary Readings, ed. S. Baron-Cohen and J.E. Harrison, Oxford 1997, p. 4.

possible to scientifically investigate the subjective phenomenon of synaesthesia. Since then accepted as an authentic neurophysiological phenomenon, synaesthesia has transformed the traditionally dominant, axiomatic understanding of the modularity of human perception,⁵ understood (since Aristotle) as the sum of several independent sensory streams. Important figures who made breakthroughs in research on synaesthesia in the 1980s were Lawrence E. Marks and Richard E. Cytowic in the US, and in England, Simon Baron-Cohen and Jeffrey Gray. Contemporary studies of synaesthesia have attracted a great deal of interest in scholarly circles; scholars in the humanities are increasingly looking at synaesthesia as a topic of literary, linguistic and cultural analysis.

Clinical synaesthesia is an anomalous interpretation of a sensory stimulus: where standard sensory reception matches a single impulse with an appropriate representation in the corresponding sensory modality, synaesthetic perception engages other sensory centers in the process of its interpretation as well, doubling or otherwise multiplying the representation of the stimulus. This unusual perceptual aberration, recognized as, depending on one's point of view, a **disorder**, a mental **state**, or an **ability**, is an immeasurably rare feature–it is estimated that about 3% of the population experiences clinical synaesthesia.⁶ Secondary induction of the neurological pattern of synaesthesia is possible through taking hallucinogenics⁷; intersensory perception may also accompany epileptic attacks⁸ or occur as a result of brain damage or sensory deprivation.⁹ Furthermore, recent studies have shown that intersensual perception can also be achieved by means of meditative practices.¹⁰ Successful cognitive attempts to acquire synaesthesia have also taken place as a result of "synaesthetic training."¹¹ Secondary synaesthesia sometimes develops as a compensatory mechanism in blind and visually impaired or challenged persons.¹²

Over 63 subtypes of clinical synaesthesia have been identified¹³-among the most frequent are finding associations between letters or numbers and colors, seeing units of time, colored

⁵ S. Shimojo, L. Shams, "Sensory Modalities are not Separate Modalities. Plasticity and Interactions," in *Current Opinion in Neurobiology* 2001, 11, pp. 505-509.

⁶ 3.7% according to S.A. Day – see http://www.daysyn.com, [accessed: 01.06.2014].

⁷ Synaesthesia. Classic and Contemporary Readings, p. 4.

⁸ According to Richarda Cytowic, epileptic discharge in the hippocampus causes temporary synaesthesia in 4% of cases.

⁹ D. Brang, V.S. Ramachandran, "Survival of the Synesthesia Gene. Why do People Hear Colors and Taste Words?" in *PloS Biology*, 2011, vol. 9(11), p. 1.

¹⁰R. Walsh, "Can Synaesthesia Be Cultivated? Indications from Surveys of Meditators," in *Journal of Consciousness Studies*, 2005, 12, pp. 5-17.

¹¹O. Colizoli, J.M.J. Murre, R. Rouw, "Pseudo–Synesthesia through Reading Books with Colored Letters," 2012, <u>http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0039799,</u> [accessed: 01.06.2014]. See also: N. Rothen, B. Meier, *Acquiring Synaesthesia. Insights from Training Studies*, 2014, http://journal. frontiersin.org/Journal, [accessed: 10.05.2014].

¹²Consider the following synaesthetic mechanism of sensory compensation: the "electronic eye" – a device that converts the frequency of light waves into sounds for colorblind people. See Neil Harbisson, "I Listen to Color," 2012, <u>http://www.ted.com/talks/neil harbisson i listen to color/transcript</u>, [accessed: 06.05.2015].

¹³The most recent statistics (on the number and frequency of synaestehsia subtypes) are available at S.A. Day's website – <u>http://www.daysyn.com/index.html</u>, [accessed: 10.01.2015]. This website is the source of the statistical data cited above.

hearing (chromesthesia)¹⁴ and visual music; personification of graphemes¹⁵ (when letters of the alphabet, numbers, days of the week or months acquire both personality and gender) and tasting words also occur fairly frequently. The most intriguing subtypes of synaesthesia are those connected with how people experience emotions (the most common variation is feeling emotions as colors; emotions may also be associated with certain properties of taste, smell, and even hearing) and colored pain. Another curious subtype is ticker-tape synaesthesia, involving the visual transmutation of human speech, perceived simultaneously as auditory and graphic stimuli-a kind of transcription in real time (analogous with subtitles in a foreign film). Recent research has uncovered mirroring tactile synaesthesia¹⁶-those who possess this capacity experience tactile sensations on their own body while observing touch; these individuals also display above-average emotional empathy,¹⁷ indicating possible connections between empathy and touch. Another curious version of synaesthesia, observed in 2011, links different swimming strokes with particular colors¹⁸-in this case, the basis for synaesthetic perception of color is motor proprioception, the sense of the body's movement and position (and the relative positions of body parts).¹⁹ For those with synaesthesia, the union between two sensory modalities is permanent and the supplementary reaction to stimuli unchanging; it is also idiosyncratic in nature (the system of synaesthetic reactions to stimuli is idiomatic to and unique in each person). Reciprocal linkages (occurring in both directions between two senses)²⁰ are rare, as are multi-modal linkages joining more than two senses in perceptual synchrony. A handful of scholars who define intersensory perception as a cognition-based phenomenon²¹ have introduced the alternative concept of "ideaesthesia" (idea with aisthesis-perception of a concept)²². A category related to both syn- and ideasthesia is anaesthesia (insensibilization, from the Greek an-meaning "without," plus aisthesis).²³

¹⁴According to other sources, this particular subtype of synaesthesia is the most common (see *Synaesthesia*. *Classic and Contemporary Readings*, p. 3).

¹⁵See R.E. Cytowic, Synesthesia: A Union of the Senses, Cambridge 2002, p. 298.

¹⁶See M.J. Banissy, R. Cohen Kadosh, W.G. Maus, V. Walsh, J. Ward, "Prevalence, Characteristics and a Neurological Model of Mirror-Touch Synaesthesia," Experimental Brain Research 2009, 198, pp. 261-272; M.B. Fitzgibbon, P.G. Enticott, A.N. Rich, Melita J. Giummarra, N. Georgiou-Karistianis, J.L. Bradshaw, "Mirror-Sensory Synaesthesia. Exploring 'Shared' Sensory Experiences as Synaesthesia," *Neuroscience and Behavioral Reviews* 2001, 2012, vol. 36/1, pp. 645-657.

¹⁷See M.J. Banissy, J. Ward, "Mirror–Touch Synaesthesia is Linked with Empathy," *Nature Neuroscience* 2007, http://www.daysyn.com/Banissy_Wardpublished.pdf, [accessed: 01.06.2014].

¹⁸See A. Mroczko–Wąsowicz, M. Werning, "Synesthesia, Sensory–Motor Contingency, and Semantic Emulation. How Swimming Style–Color Synesthesia Challenges the Traditional View of Synesthesia," *Frontiers in Psychology*, 2012, 3, p. 279.

¹⁹This type is not covered in S. A. Day's list.

²⁰See P.G. Grossenbacher, C.T. Lovelace, "Mechanisms of Synesthesia. Cognitive and Physiological Constraints," *Trends Cogn Sci.* 2001, 5, pp. 36-41; A.N. Rich, J.B. Mattingley, "Anomalous Perception in Synaesthesia. A Cognitive Neuroscience Perspective," *Nature Reviews Neuroscience* 2002, 1, pp. 43-52.

²¹Those who consider synaesthesia a perceptual phenomenon include Vilayanur S. Ramachandran; Aleksandra Mroczko and Danko Nikolic have studied the cognitive foundations of synaesthesia.

²²Other researchers treat the perceptivity or cognitivity of synaesthesia as a variational feature, distinguishing perceptual synaesthesia, activated automatically by a sensory stimulus, from cognitive synaesthesia, which is activated by imagining the stimulus (see the studies by P.G. Grossenbacher and Ch.T. Lovelace).

²³K.O. Eliassen, "The Anaesthesia of Charles Baudelaire's 'Le goût de néant'" in: *Sensual Reading. New Approaches* to Reading in Its Relations to Senses, ed. M. Syrotinsky and I. MacLachlan, London 2001.

R.E. Cytowic regards the perceptually involuntary character of synaesthesia²⁴ to be one of five diagnostic criteria²⁵ that demarcate a clear line between metaphorical intellectual constructs and associations, on the one hand, and a neurological anomaly of perception on the other. According to Cytowic, synaesthetic perception also differs from cognitive processes in its spatial character-synaesthetic impressions are in most cases projected onto the environment being perceived; they are physically visible, tangible, palpable, and audible. In view of this fact, additive synaesthetic perception is closer to **hallucination**²⁶ than to association. A third factor that clarifies the contrast between clinical synaesthesia and intersensory metaphor is, Cytowic claims, the invariability and extreme generality of synaesthetic impressions. Whereas metaphoric language feeds on novelty, surpise, and uncommon comparisons, synaesthetic impressions always follow the same typical patterns, unchanging over time. A fourth criterion is that synaesthetic experiences **stay in the memory**²⁷–people with synaesthesia show above-average mnemonic gifts.²⁸ The fifth determinant of synaesthesia is its inherently affective nature. Tests have further revealed that clinical synaesthesia is correlated with creativity and a high level of intelligence, together with lower mathematical and spatial aptitude.²⁹ Autism, dyslexia and Attention deficit Disorder (ADD) are often noted among synaesthetes.

The etiology of clinical synaesthesia has not been clearly established. At the current moment, two concepts are dominant: *cross-activation theory*, also called *adjacency theory*,³⁰ and *disinhib-ited feedback theory*. The role of genetics in synaesthesia is seen as very probably significant; scientists indicate that the trait may be localized in the human genome,³¹ while still underscoring the polymorphousness of synaesthesia and the complexity of its inheritance pattern. The formerly held assumption about one-gender (feminine) transmission of the synaesthesia gene, which was thought to be connected with the X chromosome, has been refuted.³² Higher incidence of synaesthesia among women (it was generally accepted that the ratio of women to men among those with synaesthesia may be as high as $6:1^{33}$), the basis for the inference

- ²⁹R.E. Cytowic, "Synesthesia: Phenomenology And Neuropsychology," p. 15.
- ³⁰S.A. Day, "The Human Sensoria and a Synaesthetic Approach to Cooking," *Collapse* 2011, VII, p. 14.

²⁴See V.S. Ramachandran, E.M. Hubbard, "Synaesthesia – A Window into Perception, Thought and Language," *Journal of Consciousness Studies* 2001, 8/12, pp. 3-34: perception operating with a second, competing modality is activated by even a subliminal stimulus (or a "paraliminal" one – barely perceptible, peripheral), and thus is unconscious, transformed without the participation of attention or will.

²⁵R.E. Cytowic, "Synesthesia: Phenomenology And Neuropsychology," *Psyche* 1995, 10.

²⁶In view of its perceptual nature, synaesthesia is not a hallucination, because it is caused by a particular external stimulus, while hallucinations do not have external sensory motivation.

²⁷R.E. Cytowic, "Synesthesia: Phenomenology And Neuropsychology," p. 8.

²⁸See also: A. Łuria, *O pamięci, która nie miała granic* (On the Memory That Had No Borders), Warszawa 1970.

³¹In 2009 four segments of the genome were designated as possibly responsible for the synaesthesia trait: J.E. Asher, J.A. Lamb, D. Brocklebank, J.-B. Cazier, E. Maestrini, L. Addis, M. Sen, S. Baron-Cohen, A.P. Monaco, "A Whole-Genome Scan and Fine-Mapping Linkage Study of Auditory-Visual Synesthesia Reveals Evidence of Linkage to Chromosomes 2q24, 5q33, 6p12, and 12p12," *American Journal of Human Genetics* 2009, 84, pp. 279-285; see also: S.N. Tomson, N. Avidan, K. Lee, A.K. Sarma, R. Tushe, D.M. Milewicz, M. Bray, S.M. Leal, D.M. Eagleman, "The Genetics of Colored Sequence Synesthesia. Suggestive Evidence of Linkage to 16q and Genetic Heterogeneity for the Condition," *Behavioural Brain Research* 2011, 223, pp. 48-52.

³²J.E. Asher, J.A. Lamb, D. Brocklebank, J.-B. Cazier, E. Maestrini, L. Addis, M. Sen, S. Baron-Cohen, A.P. Monaco, op. cit, p. 279: "No support was found for linkage to the X chromosome in either analysis (...) Furthermore, two families demonstrating what are to our knowledge the first confirmed cases of male-to-male transmission of synesthesia, with paternity verified through the genome scan, have been identified as part of this study."

³³D. Brang, V.S. Ramachandran, "Survival of the Synesthesia Gene," p. 2.

of a one-chromosome disorder, has been revealed to be a myth that resulted from methodological errors and biases.³⁴ According to V.S. Ramachandran and E.M. Hubbard the cortical cross-activation typical in synaesthesia, resulting from excessive neuronal cohesion between adjoining areas of the brain, is probably caused by genetic mutation, modifying the course of apoptosis ("programmed cell death"³⁵), the process by which neuronal connections are cut off in early childhood.³⁶ This theory is based on a hypothesis of **childhood syneasthesia**³⁷ which claims that the "dramatic" synaesthetic view of the world³⁸ constitutes a standard feature of babies' perception, while clinical synaesthesia is a result of incomplete apoptosis. Some scientists associate the disappearance of childhood intersensory perception with the process of language activation.³⁹. The synaesthetic *sensorium* of childhood, seen as a medium of fluid and holistic experience is aestheticized and poeticized in literature, particularly of the Romantic period.

R.E. Cytowic, convinced of the crucial role of the limbic system in the neurological mechanism of intersensory perception, considers synaesthesia to be "the premature display of a normal cognitive process."⁴⁰ Synaesthesia is, in his view, an enhanced process of perception, because "we are all synesthetic" but "only a handful of people are consciously aware of the holistic nature of perception."⁴¹ Clinical synaesthesia results in experiences which the standard mode of perception would subject to further "neural transformation and mental mediation."⁴² Cytowic's theory fits with Reuven Tsur's theory of rapid vs. delayed categorization,⁴³ applied to synaesthesia as a literary phenomenon. Delayed categorization corresponds to Cytowica's idea of synaesthetic perception as enhanced: it is a pre-linguistic, and even pre-cognitive, strictly sensory and bodily form of perception.

In the realm of language, synaesthesia functions as a description of a sensory experience by means of reference to another of the senses. Linguistic synaesthesia may take the form of an epithet, a comparison, a metaphor, personification, or more complex poetic devices.⁴⁴ This mechanism forms the basis of many lexicalized metaphors, such as the following (ideaesthetic) sensualized ab-

³⁴Ibid.

³⁸R. Carter, *Mapping the Mind*, p. 22.

³⁹See J.M. Barker, "Out of Sync, Out of Sight: Synaesthesia and Film Spectacle," Paragraph 2008, 31/2, p. 243.

⁴⁰R E. Cytowic, "Synesthesia. Phenomenology and Neuropsychology," p. 10.

⁴¹Ibid.

⁴²Ibid., p. 20.

⁴³R. Tsur, "Issues in Literary Synaesthesia," Style 2007, 41, pp. 38–39.

⁴⁴Słownik terminów literackich, p. 551.

³⁵R. Carter, *Mapping the Mind*, Berkeley 1998, p. 21.

³⁶V.S. Ramachandran, E.M. Hubbard, "Synesthesia," p. 3.

³⁷On synaesthesia as a phase of development, see S. Baron-Cohen, "Is There a Normal Phase of Synaesthesia in Development?" in *Psyche* 1996, 2; A.O. Holcombe, E.L. Altschuler, H.J. Over, "A Developmental Theory of Synesthesia with Long Historical Roots. A Comment on Hochel and Milan," *Cognitive Neuropsychology* 2009, 26, pp. 227-229; see also the recent article criticizing the theory of childhood synaesthesia: O. Deroy, C. Spence, "Are We All Born Synaesthetic? Examining the Neonatal Synaesthesia Hypothesis," *Neurosci Biobehav Rev.* 2013, 37/7, pp. 1240-1253; see also research conducted by: Maurer (2012); Ludwiga (2011); Cohena Kadosha (2009); Rouw and Scholte (2007); Maurer and Mondlach (2005).

stract concepts: "white fear, black despair, burning love."45 Stephen Ullmann's statistical research⁴⁶ is one key contribution to the "semantics of synaesthesia," as well as later continuations, revisions, and developments,⁴⁷ verifications,⁴⁸ and functional reorganizations⁴⁹ of Ullmann's model of how synaesthetic metaphors work and what they reveal. Linguists are working on the problem of the multifaceted representation of each of the senses in language, describing the phenomenon of interchangeability and (synaesthetic) interference between and among separate sensory categories⁵⁰ in the context of linguistic compensation in domains that are "less clearly delineated in our conceptual framework."⁵¹ The linguistic and psychological aspects of synaesthesia are being explored by the field of psycholinguistics.⁵² In our age of interdisciplinary scholarship, the hypothesis has arisen that "synaesthesia research can bring new insights into our understanding of the neurological bases of metaphor and language."53 V.S. Ramachandran and E.M. Hubbard claim that studies of synaesthetic perception as the foundation of **phonetic symbolism** may make it possible to examine the neurological mechanisms of the formation of language itself.⁵⁴ According to their approach, metaphors, like synaesthesia, involve the joining of two media – in synaesthesia, two separate sensory channels, in a metaphor two interwoven ways of thinking, two concepts. Synaesthesia generates a network of permanent, involuntary and repeatable connections; metaphor, on the contrary, is a bounded encounter between two thought components.

Synaesthesia is a formal procedure used in various types of art: painting,⁵⁵ music, theater,⁵⁶ and literature. Literary synaesthesia is marked by its specific potential, its capacity for

- ⁴⁵A. Legeżyńska, "Płeć synestezji" (The Gender of Synaesthesia), in: Legeżyńska, Od kochanki do psalmistki. Sylwetki, tematy i konwencje liryki kobiecej (From Lover to Psalmist. Profiles, Subjects, and Conventions of Women's Lyric Poetry), Poznań 2009, p. 187.
- ⁴⁶S. Ullmann, "Panchronistic Tendecies in Synaesthesia," in: Ullmann, *The Principles of Semantics*, Blackwell 1957.
- ⁴⁷See the detailed development of Ullmann's model in: J.M. Williams, "Synesthetic Adjectives. A possible Law of Semantic Change," *Language* 1976, 52, pp. 461-478.
- ⁴⁸M. Zawilińska–Janas, "Metafory synestezyjne z dźwiękiem jako domeną docelową w językach angielskim i polskim. Kierunkowość i struktura w recenzjach muzycznych i poezji" (Synaesthetic Metaphors as a Target Domain in English and Polish. Directionality and Structure in Music and Poetry Reviews) 2012, https://repozytorium.amu.edu.pl/jspui/handle/10593/3526, [accessed: 01.06.2014].
- ⁴⁹See Tsur, "Issues in Literary Synaesthesia," p. 44.
- ⁵⁰See S. Żurowski, "Przymiotniki określające cechy dźwięków" (Adjectives Defining Sound Traits), 2012, http:// sensualnosc.ibl.waw.pl/pl/articles/przymiotniki–okreslajace–cechy–dzwiekow–181/ oraz http://sensualnosc. ibl.waw.pl/pl/articles/przyslowki–okreslajace–cechy–dzwiekow–186/, [access: 01.06.2014].
- ⁵¹R. Bronikowska, "Kierunki przesunięć metaforycznych przymiotników percepcji dotykowej," 2011, http:// sensualnosc.ibl.waw.pl/pl/articles/kierunki-przesuniec-metaforycznych-przymiotnikow-percepcjidotykowej-131/, [access: 01.06.2014]; see also D. Legallois, Synesthésie adjectivale, sémantique et psychologie de la forme: la transposition au coeur du lexique, Caen 2004.
- ⁵²See J. Simner, "Beyond Perception. Synaesthesia as a Psycholingual Phenomenon," *Trends in Cognitive Sciences* 2006, vol. 11.1; see also I. Kurcz, *Psycholingwistyka. Przegląd problemów badawczych* (Psycholinguistics. A Survey of Research Problems), Warszawa 1976.
- ⁵³M. Hochel, E.G. Milán, "Synaesthesia. The Existing State of Affairs," *Cognitive Neuropsychology* 2008, 25, p. 113.
 ⁵⁴According to Ramachandran and Hubbard's "synesthesia" thesis, language is the result of the production inside the brain a network of synesthetic connections, that made it possible for the human being, in the first stages of the development of natural language, to connect articulate sounds with the sensory phenomena of the world around him.
- ⁵⁵Consider the synaesthetic paintings of Wassily Kandinsky (A. Ione, "Kandinsky and Klee. Chromatic Chords, Polyphonic Painting and Synesthesia," *Journal of Consciousness Studies* 2004, 11, pp. 148-158), as well as sound effects in Monet's Impressionist paintings or the intentional introduction of noise into Futurist images. It is also worth considering the work of painters who experience synaesthesia, such as Carol Steen and Anne Saltz.
- ⁵⁶For example the German group of artists Der Blaue Reiter, who in the early twentieth century undertook a number of intersensory artistic projects in a collective effort to create a Wagnerian "total work of art" in a vein similar to Kandinsky's theories. Kandinsky's play *The Yellow Sound* is also of interest here.

effectively representing conflicting, even mutually exclusive creative aims. The paradoxical duality of synaesthesia, lending itself both to the creation of an artistic sense of unity, and to producing a refined effect of particularized experience (as for example in baroque metaphysical poetry, in which intersensory transfers take place through description of visual or auditory phenomena with analytical "differentiation"⁵⁷ from experiences of touch, taste and smell, in a certain way illuminating and mannerizing their lack of linguistic definition), shaping its poetic vitality. I. H. Hassan, citing Svend Johansen's work, calls attention to this bipolar nature of synaesthesia, to its simultaneous "primitiveness and sophistication."⁵⁸ In Johnsens's words, "On the one hand synaesthesia allows one to reach the highest degree of refinement, ... on the other hand, it originates in what is most primitive and most original in poetry, the need to convey a complete and concentrated impression."59 According to R. Tsur's work using S. Ullmann's statistical model, most of the "upwardly directed" or sublimating intersensory transfers (such as *taste* \rightarrow *music*⁶⁰) are closer to the pole of primitiveness, unity, and unification, whereas "downwardly directed" or desublimating ones (such as *sound* \rightarrow *smell*⁶¹) aim toward the quality of sophistication, mannerism, fragmentation of experience.⁶² This particular aspect of literary synaesthesia is the reason for the protean forms of its inscription in various systems of poetics throughout history, among which it occupied a particularly conspicuous place in baroque,⁶³ Romantic (in the context of the idea of correspondences among the arts)⁶⁴ Symbolist⁶⁵ and avant-garde poetics. In the Polish cultural context, the heyday of literary synaesthesia came during the Young Poland period-modernist synaesthetic metaphors were used chiefly by Stanisław Wyspiański, Stanisław Przybyszewski,⁶⁶ and Tadeusz Miciński.67

While synaesthesia historically became an instrument of projects aiming at a "total" art, it simultaneously enables the mediatization of utterly subjective, individual experiences of per-

⁵⁹S. Johansen, *Le Symbolisme*, quoted in: I.H. Hassan, pp. 439-440.

- ⁶⁰The synaesthetic metaphor "taste the music of that vision pale"comes from Keats's poem *Isabella or the Pot of Basil*.
- ⁶¹The synaesthetic metaphor "a loud perfume" appears in John Donne's *Elegy IV* Johna Donne.
- ⁶²See Tsur, "Issues in Literary Synaesthesia."

⁶³See I. Matyjaszkiewicz, "Barokowa haptyczność wizji" (Prophetic Hapticity of Vision), http://sensualnosc.ibl. waw.pl/pl/articles/barokowa-haptycznosc-wizji-670/, [accessed: 16.06.2014].

⁶⁴On Romantic synaesthesia, see P. Śniedziewski, "Wzrok a inne zmysły w romantyzmie" (Sight and Other Senses in Romanticism), 2011, http://sensualnosc.ibl.waw.pl/pl/articles/wzrok-a-inne-zmysly-wromantyzmie-132/, [accessed: 01.06.2014]; D. Pniewski, "Norwid – synestezja," 2012, http://sensualnosc. ibl.waw.pl/pl/articles/norwid-synestezja-269/, [accessed: 01.06.2014]; Pniewski, "Relacja wzrok – słuch a poznanie nieskończoności (romantyzm)," http://sensualnosc.ibl.waw.pl/pl/articles/relacja-wzrok-sluch-apoznanie-nieskonczoności-romantyzm-616/, [accessed: 01.06.2014]. See also: J. Starzyński, O romantycznej syntezie sztuk: Delacroix, Chopin, Baudelaire (On the Romantic Synthesis of the Arts: Delacroix, Chopin, Baudelaire), Warszawa 1965.

⁶⁵See M. Podraza–Kwiatkowska, *Symbolizm i symbolika w poezji Młodej Polski* (Symbolism and Symbols in the Poetry of Young Poland), Kraków 1994.

- ⁶⁶See. P. Kierzek–Trzeciak, "Przybyszewski synestezja" (Synaesthesia in Przybyszewski), 2012, http://sensualnosc.ibl.waw.pl/pl/articles/przybyszewski–synestezja–169/, [accessed: 01.06.2014].
- ⁶⁷See A. Kluba, Synestezja (Synaesthesia), 2011, http://sensualnosc.ibl.waw.pl/pl/articles/synestezja-114/, [accessed: 01.06.2014].

⁵⁷As opposed to the much more frequent panchronic, ecstatic synaesthesia which enacts a de-differentiation (and hence unification) of experience (see Tsur, "Issues in Literary Synaesthesia.")

⁵⁸I.H. Hassan, "Baudelaire's Correspondances. The Dialectic of a Poetic Affinity," *The French Review* 1954, 27/6 , pp. 439-440.

ception, of the body, of ideas. Whereas Symbolist efforts to bring together sensual matter and the extrasensory *au-delà* placed literary synaesthesia at the very heart of a poetics imbued with intense mysticism and dualism inherited from Plato, the avant-garde, essentially an anti-Symbolist project, redefines the value of synaesthesia, tilting its ideological pendant toward materiality, physicality, and the bodily. In Futurist poetry, synaesthesia becomes an instrument of the **embodiment** and physicalization (anchored in time and space) of a segment of reality. In postulating the everyday character, immediacy, and universality⁶⁸ of poetry, the Futurists defined a poem as a synthetic (and synaesthetic) "extract"⁶⁹ of modernity. Avant-garde synaesthesia is revealed through its application in the Futurists' process (aimed at dethroning the visual) of re-embodying the subject, as a figure of **corporeality**. J. Grądziel-Wójcik writes that "the futurist turning point in aesthetics was… part of broader turn toward the sensory,"⁷⁰ that simultaneously situates synaesthesia, as Anna Łebkowska argues, at the "intersection" of the discourse of poetics and corporeality⁷¹–as a point of connection between the body and what is inexpressible.

- ⁷⁰See J. Grądziel-Wójcik, ""Jesteśmy czuli". Polisensoryczność jako strategia poetycka polskich futurystów" ("We Are Tender." Polysensorality as a Poetic Strategy of Polish Futurists), in: W kręgu literatury i języka (In the Realm of Literature and Language), 3, ed. M. Michalska-Suchanek, Gliwice 2012, p. 95.
- ⁷¹A. Łebkowska, "Jak ucieleśnić ciało. O jednym z dylematów somatopoetyki" (How to Embody the Body. On One Dilemma of Somapoetics), *Teksty Drugie* (Alternate Texts) 2011, 4, pp. 11-27.

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⁶⁸B. Jasieński, "MAŃIFEST W SPRAWIE POEZJI FUTURYSTYCZNEJ, Futuryzm. Formiści. Nowa sztuka (Wybór tekstów)" (Manifesto in the Matter of Futurist Poetry. Futurism. Formists. The New Art [Selected Texts]), in: Antologia polskiego futuryzmu i nowej sztuki (Anthology of Polish Futurism and New Art), introduction and commentary by Z. Jarosiński, edited by H. Zaworska, Wrocław 1978, p. 10.

⁶⁹Ibid., p. 9.

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Sensual metaphor



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NOTE ON THE AUTHOR: