

The Sensational Past and Present: How we use our Senses Today

Review of *The Sensational Past*

How the Enlightenment Changed the Way we use our Senses, by Carolyn Purnell

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This review is a comparison of the main ideas of the Enlightenment about the senses with the current way in which we understand and use the senses. The exciting and intriguing book by Carolyn Purnell, *The Sensational Past: How the Enlightenment Changed the Way we use our Senses*, raises many interesting issues for modern people to consider. Many Enlightenment concepts have evolved during the last centuries, while there are still many unanswered questions. The conclusion is that we need much more interdisciplinary research related to the senses. Purnell's book may be the first step to starting a discussion on current knowledge about the senses, and may be the perfect inspiration for future study.

The Sensational Past presents various ideas about the senses and sensory experience in the broader context of culture, philosophy, medicine, politics, and social life in the 18th century (between 1690 and 1830). The book consists of ten chapters, each devoted to a distinct aspect of life in the Enlightenment in the context of the senses, the effects of sensory experience, and links between the mind and body. Carolyn Purnell demonstrates how sensation, ideas about the senses, and the way that we use our senses, have changed over time, due to shifting social structures, economic, education, politics, culture, and science. For example, eyesight was not considered to be as dominant and objective a source of truth about the world as in the ocularcentrism of modern life. In the 18th century, using candles was expensive, so common people, who worked at night, often had to rely on the sense of touch and hearing. Purnell shows how "transformations in sensory environments can reveal a great deal about the daily life of people in the past and about the role that experience plays in the formation of identity" (p. 22).

The book offers many expressive examples of how theories and philosophies about being human can affect the ways of sensing, or how needs, longings, and cravings may affect our preferences for specific colors, sounds, smells, and tastes and attitudes toward extreme touch experiences. However, it would be very detrimental to this book if the reader only

remembered the fad for wearing "prince poo," Grimond's funerary dinner, the tobacco enema, blindfolding children, Carême's pièces montées, the cat piano or perfume organ, the passion for eating rotten panther, a dinner party in the belly of an Iguanodon, the blind orchestra, Casanova's or Sade's conceptions about sexual sensations of pleasure and pain, or drinking fruit liqueurs, chocolate, and coffee as a medicine of the mind. These and many more surprising, shocking, or bizarre descriptions included in the book are important when considering differences between current and past understandings of human beings and the world around them. But Purnell requires from the reader much deeper reflection on the condition of modern humankind and the state of current science, in comparison to the age of the Enlightenment. This review will take up a few of the challenges in the domain of psychology, although I would like to point out that researchers from various fields of science can find here a mine of inspiration and many more interesting questions to think about, consider, and resolve.

Although the book seems to be a comprehensive view of the Enlightenment culture in the meaning of social life, the lack of reference to the mainstream of fine arts, music, and architecture of the 18th century is somewhat disappointing. It seems impossible to fully resolve the issue of how knowledge about the senses affects the perception of reality without an insight into the main assumptions of the Enlightenment epoch on the creation of pictures, sculptures, musical compositions, and buildings. In contrast to the revolutionary spirit of the age, the artists of the 18th century were looking for "ideal balance," "peace," "harmony," "beauty," "lightness," and "grace." All the artistic assumptions taken from ancient Greece and Rome and developed during the Renaissance and Baroque had fully ripened into strict classic rules during the 18th century.

The development of musical instruments (e.g., piano, clarinet, trombone, piccolo flute) allowed musicians almost unlimited technical skills and unbelievable virtuosity. A preference

for exciting shows was reflected in the solo performances of virtuosos such as Mozart or Paganini. Musical instruments of different cultures, brought back from travels to colonies around the world, extended the set of sounds and timbres of the symphony orchestra. The striving for multi-sensory experiences perfectly fit opera and vaudeville. Besides sacred art, classical music and painting focused on mythological and historical topics. Admiration for nature was reflected in landscape painting in the open air. Sophisticated and subtle, rococo was most fully implemented in small architectural forms and in the architecture of palatial and salon interiors: in elegant ornamentation, in lightness and decorative decor, in porcelain trinkets, in painting miniatures and in love-themed pictures by French masters.

Even if the art of the 18th century was elitist, it had a huge impact on perceptions the Western world, shaping the cultural preferences of the era. However, it must be noted that art became more and more egalitarian in the second half of the century, according to the social revolution of the Enlightenment. The British Museum was opened in 1759 to ordinary people. Likewise, the European royal palaces (Denmark, Sweden, Germany, France) made their collections available to all visitors, regardless of social class. Music also came to the masses in the public opera houses, concert halls and philharmonics.

The Sensational Past proves that the senses were an important part of human nature in the Enlightenment. As Purnell states, “sensory history can teach us how to question long-standing assumptions and how our mental concepts of the world connect to the ways that we behave in it” (p. 19). Purnell shows how people experienced and celebrated their senses in everyday life. In comparison, we can ask how we experience and rely on our senses today. I would like to develop this issue somewhat in the next part of the review, in regard to the main ideas of the Enlightenment.

The ancient idea that rationality was superior to emotionality, and that logic was in opposition to feelings, prevailed until the 18th century. Unlike, the enlightened sentimentalists

argued that truth might be a property of one's feelings and intuition, and that such feelings were truer than reason (Reddy, 2001). The philosophy of mixing up emotion with reason seems to find a current reflection in the theory of emotional intelligence, understood as "the ability to reason about and use emotions to enhance thought more effectively than others" (Mayer, Salovey, & Caruso, 2008, p. 503). According to this concept, "people can reason about emotions and use emotions to assist reasoning" (Mayer, Roberts, & Barsade, 2008, p. 508). More specifically, in the ability-based approach (Mayer, Caruso, & Salovey, 1999), emotional intelligence "refers to an ability to recognize the meanings of emotions and their relationships, and to reason and problem-solve" and "is involved in the capacity to perceive emotions, assimilate emotion-related feelings, understand the information of those emotions, and manage them" (p. 267). In the mixed models (Bar-On & Parker, 2000; Goleman, 1995), emotional intelligence may also include motivation, various dispositions and traits (e.g., empathy, happiness, self-esteem, optimism, and self-management), and global personal and social functioning, besides an ability with perceiving, assimilating, understanding, and managing emotions.

The Enlightenment conception of mind-body mutuality seems to have resonated in Freud's theory of the unconscious reasons of somatic disorders (e.g., conversion neurosis, hysteria, hypochondria), in the psychosomatic medicine, or the current psychology of health. The definition of health formulated by the World Health Organization (WHO) in 1948, as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity," started the debate on the holistic vision of mind-body unity. The influence of stress on somatic and mental health can show us the extent to which the mind and body are interrelated. On the other hand, relaxation and meditation, or a positive attitude toward medications and treatment, can heighten our well-being and health (e.g., Benson, 1997; Howick et al., 2013; Kabat-Zinn, Lipworth, & Burney, 1985). Purnell suggests we "pay

attention to the small, physical moments in our lives” (p. 239). The utility of mindfulness techniques and placebo effects are also proofs in this matter (e.g., Schaub, 2011). The theory of multiple intelligences (Gardner, 1983) seems to perfectly fit with the idea of body-mind unity, especially in regard to bodily-kinesthetic intelligence, which is defined as the control of one's bodily motions and the capacity to handle objects skillfully, which also includes a sense of timing, a clear sense of the goal of a physical action, along with the capacity to train the responses. The concept of body intelligence, which refers to how aware you are of your body (awareness), what you know (knowledge), and what you actually do for and with your body (engagement) is currently being developed in a broader context of well-being and somatic and mental health (Gavin & Moore, 2010; Sumner, 2009).

Diderot and D’Alembert compiled their *Encyclopédie* with the idea that it would benefit generations to come. Currently, this idea flourishes through Wikipedia and other Internet sources of information with open access for everyone who wants to share knowledge, passion and daily life experiences in the form of articles, books, photos, movies, music, etc., on social media or various websites. The digital revolution of the late 20th century, relating to the Internet and the other mass media, seems to fully realize 18th century ideas about the access of the common people to information and education, as well as to entertainment.

We also may find in a modern life reminiscences of Castel's theory of color-sound correspondences, esoteric principles, and experimentation with the "clavecin pour les yeux" (known as the ocular harpsichord or color organ). The idea of the ocular harpsichord was inspired Newton's (1730) esoteric theories, that seven colors of the prismatic spectrum have its correspondence in the seven musical tones of a diatonic scale. Castel outfitted his harpsichord with sixty multi-hued lanterns rigged to be exposed when certain notes were played. When a musician pressed on the keys, the colours with their combinations of chords were triggered. Although a color organ expended on the 18th century, the idea to compare the

musical pitches with colors emerges two centuries earlier, thanks to Giuseppe Arcimboldo (1527-1593), who created the Colored Cymbals. Arcimboldo was an eccentric painter, musician and alchemist, famous for creating imaginative multi-sensory portraits from objects such as fruits, vegetables, flowers, fish, and books. He was most likely the first synaesthete who tried to reveal his own synesthetic experiences by using art, to show people how tastes, scents, sounds, colours and shapes may be connected to each other.

The first musical composition that consciously showed synesthesia was *Prometheus: The Poem of Fire*, op. 60 created by Scriabin (1910). This mystical combination of color, light and sound was written for piano, orchestra, choir, and *clavier à lumières* or "Chromola" (a color organ). Currently, philharmonics around the world show this synesthetic composition in a new and exciting way, using modern lighting (e.g., Rothstein, 1983; Yee, 2010). The fondness of 18th century people for multi-sensory experiences may have a continuation nowadays in disco and clubs, or live concerts in which the musical shows are linked to colored lasers creating three-dimensional spaces around the public. So, the technical problems with which Castel struggled when trying to develop a color organs are now no longer limited.

There is a long-standing history of color-music, from the first Colored Cymbals developed by Giuseppe Arcimboldo in the 16th century to the present day (Day, 2001; van Campen, 2007). The special multimedia projects of synesthesia are created simultaneously for the music and visual art, so that each sound has a corresponding colored abstract shape which moves according to sounds and rhythms (e.g., see on YouTube compositions by Ronald Pellegrino). Windows Media Player is popular software for playing and visualizing music which seems to imitate synesthesia as well. At present, children may play with many toys which facilitate developing synesthesia, such as colored musical instruments, wooden blocks with colorful letters, or multimedia games and computer programs of an educational or entertainment character.

The father of abstraction, Wssily Kandinsky, simply painted his musical synesthesias on the canvases. He only lacked movement in showing his full synesthetic vision. The creation of cinema solved this problem at the beginning of the 20th century. The first films that interconnected music with moving abstract shapes were made then, for example *Diagonal Symphony* by Viking Eggeling (1920), *Lichtspiel op. 1* by Walter Ruttmann (1921), *Rhythmus 21* by Hans Richter (1921), *Mechanical Ballet* by Ferdinand Leger (1925), and *Fantasia* by Walt Disney (1940). The synthesis of vision and hearing experiences was developed in many computer, TV and film multimedia projects during the 20th century (Barbatsis, 1999;). Nowadays, virtual reality lets us experience the stimulation of almost all the senses in an exciting and amazing way. The latest advancements in camera and filmmaking technology related to 7D cinema, let us experience visual and touch special effects (e.g., snow, wind, rain, bubbles, etc.) and interact with the virtual and real world. The synesthetic processing of sensory experiences from sight to sound or taste and vice versa may be useful for deaf and blind people. Sensory substitution involves the transposition of the characteristics of one sensory modality into stimuli of another sensory modality using sensory substitution devices, such as *vOICe*, *EyeMusic* and the *ColoroPhone*.

Multi-sensory experiences are also related to contemporary gastronomy and perfumery (Krishna, 2012). The world's best chefs create real masterpieces of culinary art, in which sight, smell, and sound play an equally important role as taste. Using new technologies, some chefs are specialized in creating artificial, unexpected, and shocking tastes related to unbelievable colors of the meal. Although multi-sensory experiences have a more integrative mechanism, some types of synesthesia may be at least an inspiration (see *The Man who Tasted Shapes*, Cytowic: 2002, 2003). Appropriate music almost always accompanies eating food in a restaurant, bar or private home. Perfumes are strongly related to specific colors and shapes of bottles, which also give us touch experiences, besides smell and sight sensations.

Summarizing, it is worth noting that we have been waiting for *The Sensational Past* for a long time. The last book available to a wide audience to comprehensively examine how all the senses work was *A Natural History of the Senses* by Diane Ackerman (1990), which was published 28 years ago. Since that time, fascination with the senses and sensualism seem to have increased among readers. Unfortunately, I have found only one journal devoted strictly to the senses, namely *The Senses and Society*, which is intersensory, international, and interdisciplinary in scope, including a wide range of fields (e.g. esthetics, anthropology, archaeology, architecture, communication and media studies, geography, history, literary and cultural studies, philosophy, and sociology). In its assumptions (Bull, Gilroy, Howes, & Kahn, 2006), the “journal will act to promote and develop research on the cultural and political dimensions of sensory expression and communication, and create a unique theoretical and methodological forum for exploring the varieties of sensuous experience that exists in contemporary society” (p. 6). The postulate of the founders of this journal, that “the senses mediate the relationship between self and society, mind and body, idea and object” (p. 5), sounds extremely familiar, in comparison to the Enlightenment.

Current research is conducted in two main streams: one concerns the meaning of senses in the sociocultural context (Howes, 2018), whereas the aim of the second is to understand the neural basis by which the brain is able to integrate information from multiple senses (Stein, 2012). According to the traditional view of sensory processing, the integration of information across different modalities takes place secondarily after previous processing within modality-specific subcortical and cortical regions. However, the current theory of multisensory processing suggests that multisensory convergence can emerge in a much higher extend into the primary cortical areas of the senses, which are the parts of the widespread network of multisensory regions of the brain (although many more studies are needed to fill this gap). We need much more scientific research in various areas of science, more journals

about the senses, and more scientific meetings, debates and conferences to stimulate scientific considerations of the senses and their meaning for modern humanity.

The first and most important issue to resolve is to redefine and categorize the senses in the light of current science, taking into account many and various perspectives: cognition, neuropsychology, genetics, evolutionary psychology, anthropology, philosophy, the history of the senses in science and culture, etc. (Gordon, 2012). However, many more questions remain to be explored: how many senses do we have? how do we use and manage our senses? how are the senses interrelated? Is synesthesia a normal way of cognition? How do the senses relate to cognition, emotion, and personality, in the context of both health and disease? how is perception shaped by cultures and technologies and vice versa? What is unique about multisensory processing? I believe that an attentive reader of *The Sensational Past* will find many more questions to consider, and an inquiring scientist will find a several inspiring topics for their future research.

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