

The Hidden Sense: Synesthesia in Art and Science

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ARTECA

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The Hidden Sense

After my wanderings in search of the meanings and functions of synesthesia, I am finally able to draw up the balance sheet, though doing so leaves me sadder but wiser. The missing link in the brain's functioning that explains synesthesia has not yet been found. Brain research proceeded quickly in the eighties and nineties, but the early successes that confirmed the physiological bases of synesthesia have not been followed up by decisive insights into the nature of synesthesia, or in practical applications in education or audiovisual technology. I learned from my wanderings through a wide range of artistic and scientific disciplines what synesthesia is not (an audiovisual performance, a trend in art or music, a drug-induced hallucination, a kind of metaphor), and discovered some fascinating new aspects of synesthesia (as a tool for visual artists, musicians, and poets; as a kind of visual thinking for scientists and laymen). After closing some old windows on what synesthesia is not and opening new windows on what synesthesia might turn out to be in the future, I would like to make a short excursion into history to shed a light on the philosophical background of our current thinking of synesthesia, before presenting my current view on the nature and function of synesthesia.

A Particular Common Sense

The ancient Greek philosophers observed that humans have separate sense organs—eyes, ears, nose—but at the same time also have one undivided experience. This raised the question of how sensory experiences are unified. The

ancient philosophers did not define synesthesia in our current neurological and psychological terms, but they expressed a notion of synesthesia in posing the philosophical question: How can human beings perceive a unity in the multitude of sensory impressions?

The answer offered by the Greek philosopher Aristotle (384 BC–322 BC) not only was original then but has stayed valid to our day. Behind the exterior senses, he assumed the existence of what came to be called a *sensus communis*, which perceives the common qualities in the different exterior senses. For instance, we perceive brightness, rhythm, and intensity in images, sounds, smells, odors, and tactile sensations. By the way, our notion of *common sense*, though the modern definition is slightly different, nonetheless is derived from this concept.

Aristotle's ideas had a great influence on medieval thought at the time when a theory of the working of human perception was established known as the “three-chamber theory.” The medieval Italian theologian Thomas Aquinas (1225–1274) posited the existence of three chambers in the human brain (see figure 10.1). In the first chamber the sensory impressions, sent by the exterior senses, were perceived by the common sense (*sensus communis*), which stimulated imagination (*imaginativa* and *fantasia*). In the second chamber, cognition (*cogitativa*), reason (*ratio*), and judgment (*aestimativa*) determined value with the help of former perceptions from memories (*memorativa*), which were housed in the third chamber.

This theory, which retained its power for centuries, entered Renaissance thought with only slight changes. The Italian renaissance artist Leonardo da Vinci shared the Thomist principles but he located the *sensus communis* in a more central position, within the second chamber.

The idea of a common sense explains a large part of human multisensory perceptions, but it does not explain synesthetic perceptions nor its variety among individuals. One, it is not common to perceive sounds in color; and two, the disagreement of synesthetes on, say, the “right” color of a musical tone cannot exactly derive from common sense.

During the Enlightenment and, later, the Romantic period, a number of philosophers acknowledged individual differences in the common sensory perception of the physical environment. The eighteenth-century German philosopher Alexander Gottlieb Baumgarten (1714–1762), who was the founder of aesthetics as a philosophical discipline, stated that not only the human intellect but also the human senses have the ability to know. The cognition

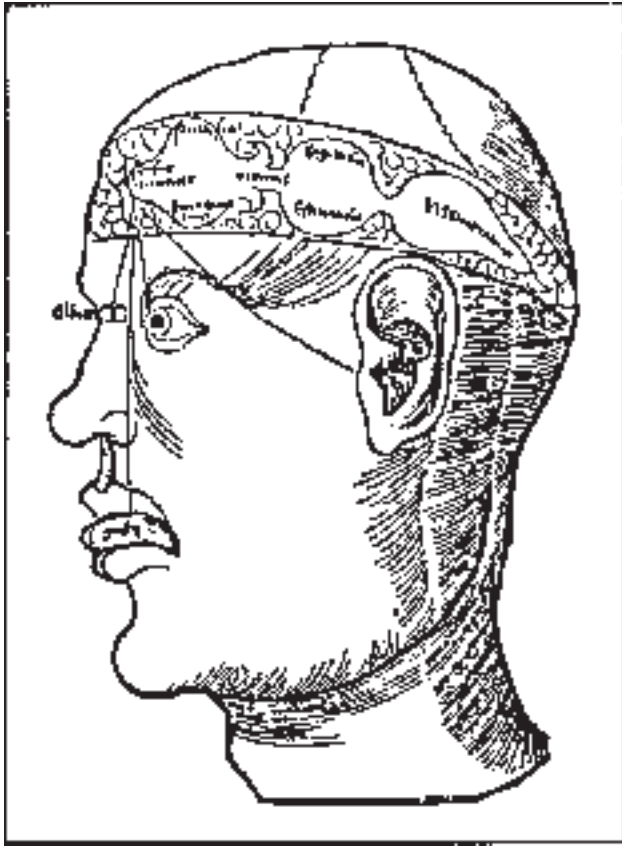


Figure 10.1 The human mind as concerned by Thomas Aquinas and other medieval philosophers. By Gregor Reisch, around 1503.

of the senses, however, differs from rational cognition by the human intellect because whereas the intellect uses rational principles such as logic, the senses immediately perceive aesthetic qualities in sensory impressions.

One example is the ability to perceive a melody in a series of sounds. A melody is a form that is perceived by the common sense as a meaningful unity, or *Gestalt*, as it would later be named by German philosophers. In France, the philosopher Jean-Jacques Rousseau made a similar distinction between the *raison sensitive* and the *raison intellectuelle*.

For the first time in history, philosophers regarded the senses as active, creative organs of human perception. And it was recognized that humans

differed in their abilities to use the common sense. Some people are more gifted, more creative, and more susceptible to qualities of nature than others.

In the late eighteenth century, the German philosopher Immanuel Kant (1724–1804) made an important distinction between the *sensus communis*, which he said was equal for all humans, and the *sensus communis aestheticus*, which he said showed individual differences. All people have the common sense to perceive the rhythm in a film's sequence of images or in the percussion in a musical piece, and even that these rhythms may match. Fewer people, however, have the aesthetic sense to perceive color nuances in the sound of a cello. Though these examples are taken from the present, the conceptual distinction by Kant gave room to categorize what I have called synchronesthetic and synesthetic perceptions. The *sensus communis* is a common gift to perceive matching qualities in different sensory domains (common synchronesthesia). The *sensus communis aestheticus* is a personal gift to perceive special aesthetic qualities in multisensory domains (as in personally colored sound synesthesia). The German poet and naturalist Johann Wolfgang von Goethe (1749–1832) drew on Kant's idea of the *sensus communis aestheticus* and considered it an autonomous creative force of the human imagination.

These theories were developed in the field of aesthetics. Synesthetic perceptions are not always beautiful or aesthetic according to numerous reports by synesthetes. In the beginning of the twentieth century, the aesthetic theory of gestalt perception was reformulated as a more general theory of human perception. In this view, not the idea of universal beauty was considered central to gestalt perception but rather the inner necessity of the perception. For instance, the perception of a melody is a fundamental component of anyone's perception, whether you like the melody or not.

Gestalt psychologists such as Max Wertheimer, Wolfgang Köhler, and Erich von Hornbostel and others whom we encountered in earlier chapters proposed a radical new view of human perception in the first decades of the twentieth century. According to this new view, when you look out of your open window, you do not compose your perception as from a mosaic of optical, auditory, olfactory, and tactile little precious stones, but rather you immediately perceive your view as an integral image a gestalt, of, say, horses, trees, and flowers. Only when you focus on a detail—distinct colors, figures, sounds, and smells—do you notice the component elements.

Still, this gestalt theory does not yet satisfy all the questions raised by synesthetic perceptions. Some people are more sentient than others in

perceiving gestalts in the environment, but how does one explain that one synesthete perceives the sound of a piano as a purple haze while another perceives it as the taste of a strawberry-flavored ice cream?

Around the 1950s, the French philosopher Maurice Merleau-Ponty elaborated on the individual differences in gestalt perceptions. According to his view, all human experiences are based in the human body, which explains the unity of the senses. The body is not only a physical thing but is also a subjective sense organ for each person. All kinds of stimulation of your body create responses that mingle in a flux of impressions before you become aware of them. In fact, your body shapes your sensory experience on an unconscious level (under “sea level,” so to speak) and you are aware only of the tip of the iceberg. Unconscious body experience is essentially synesthetic, according to Merleau-Ponty. All sensory impressions correspond and talk to each other on a preconscious level. Out of this preconscious flux of impressions some gestalts emerge. And since everybody’s body experience is personal, the emerging gestalts are similarly personal, and thus different from each other.

These gestalts are human experiential facts. Only when you start to consider them, you become aware that they are different from others, according to Merleau-Ponty. A synesthete may perceive a deep blue *K*, but only when he abstracts from this experience does he observe separately the color blue and the letter *K* and can think of the fact of their correspondence. In his initial experience, the color-and-letter combination is a gestalt, a necessary unity.

Several contemporary thinkers have articulated this philosophy of the unity of the senses in light of self-reports by synesthetes and results of scientific experiments. The American psychologist Lawrence Marks has adopted the Aristotelian idea of common sensualities, such as brightness, in his matching studies. He adheres to the theory that all sensory systems have evolved from the skin and are in fact still interconnected with this large sense organ that forms the basis for the unity of the senses.

The American neurologist Richard Cytowic has searched for a brain equivalent of this bodily unity of the senses and suggested the limbic system. This part of the brain has evolved as a function of general bodily functions such as nurturing, caring and fighting.

Finally, as heirs of Goethe’s theory of the organical creative power of human perception, the German neuropsychologist Hinderk Emrich and the American neuropsychologist Vilayanur Ramachandran have pointed to the plasticity of

the brain as responsible for making possible the autonomous organization and reorganization of sensory information.

A New View

I have reached a new view on synesthesia, or, more accurately, a new perspective on a field of synesthesias, as I think that the plural form suits the variety in descriptions by synesthetes better.

Not only in my interviews but also in the discussion lists on the Internet you can observe the great variety in synesthetic descriptions. Table 8.2, listing types of synesthesia, contains more than forty categories. And even if you ask synesthetes within one category to describe their experience of, say, colored letters, the results may differ greatly in intensity, form, and location. For instance, some synesthetes will tell you that colored letters appear before their inner eye, whereas others report projections of color that lie as shadows on printed letters. The perceived colors differ in form, spatial arrangement, transparency, and solidity, intensity, and nuance. Instead of being a well-defined area of perception, synesthesia appears in these reports as a set of related perceptual phenomena that show a great variety in form and intensity.

As a consequence, synesthetes report myriad uses and advantages of synesthesia—at least, the number of reported advantages far exceeds the number of disadvantages. And although brain-scan studies have shown that synesthesia is the result of a neurological aberration, few synesthetes find their experiences to be disabilities in their daily functioning.

Nonetheless, the wide variety in types of reported synesthesia shows a cultural bias. As far as I know, no synesthete has reported odored-taste synesthesia, since that is common experience in Western culture. Westerners normally do not distinguish sharply between smells and tastes. But Western synesthetes would report colored-smell synesthesia, which is generally uncommon in Western culture. Conversely, the Desana in the Amazon area commonly experience smell in color (“color energies”) and so they would not report that as an uncommon synesthesia. This example shows that reports of synesthesia may be partly biased by the culture one lives in.

Not all synesthetes are equally aware of their synesthetic perceptions. We rely on the reports by self-conscious synesthetes. Obviously, you need to be aware of your synesthetic perceptions to report them. Many synesthetes only become aware of their synesthesia when, in the course of social interaction with

family and peers at an early age—when they are about five or six years old—they realize that it is a perceptual oddity. After this first sudden discovery, synesthetes become aware of more aspects of their synesthesias, often in social exchange with other synesthetes. Some grown-up synesthetes report that they still discover new layers in their synesthetic perception of the physical environment.

Inspired by the theory of Merleau-Ponty, I picture the wide variety of synesthesias as conscious or semiconscious sustainable, solid, perceivable *gestalts* that emerge like shapes in the stream of a river. They are layered, come clear to the surface, or lie just beneath it. When they make sense, they are solidified, are fixated as *gestalts* in daily perception, like a familiar melody. Once you have perceived a melody in separate notes, each time you hear this sequence of notes you perceive the melody forever as a unity instead of its constituents parts.

In general, people are not aware of all their perceptions. And synesthetes are not aware of all their synesthetic perceptions, either. When you get older you become more aware of the layeredness of the tangible world. As a child you perceive, say, red and blue. As you get older you learn to distinguish many kinds of blues and reds. Your awareness of the perceptible world is deepened and refined. In this way, not all synesthesias will be perceptible from childhood. Not that you were not able to see them as a child, but as you grow up you are more aware of their existence. Many synesthetes remember their synesthesias in childhood, but only became aware of them as such when they, say, read an newspaper article on synesthesia.

Our awareness of the number of sensory organs might serve as an analogy. Most people are aware of five senses: vision, hearing, taste, smell, and touch. When additional senses, such as movement and equilibrium, are mentioned, people easily become aware of more sense organs. They have always used these sense organs, but they were not really aware of them.

The same holds for synesthesia and other multisensory perceptions. To a certain extent, people can become aware of the “darkness” of sounds or of the musical rhythm in visual animations. To a limited extent people are simply not aware of many synesthesias because they have never paid serious attention to them. Most people are only familiar with a small number of provinces of the empire of the senses. It is as though your conscious perception were limited to a little garden in the middle of a jungle. You taste the five types of vegetables that you grow in the garden and overlook the exotic fruits in the surrounding jungle.

I do not think that every person can become aware of all types of synesthesia. There are obviously brain constraints on that. But I do think that many persons are not aware of their synesthetic potential, simply because they use only a portion of their senses.

In general people link their sensory perceptions to exterior senses; color perceptions to their eyes or sound perception to their ears. Synesthesia is not connected to an exterior sense organ. Synesthetic experiences do not enter the body at one point, whence they flow to consciousness. Synesthesia is not grounded in an external sense organ. It is not an ordinary sensory function. Synesthesia operates in the area between the senses. Its etymology—*syn* together; *esthesia*—perceiving—refers to this function. The sense of synesthesia is not observable at the exterior human body but lies hidden beneath the senses. It remains hidden in most people who do not have synesthetic perceptions. But in some it stands up and they perceive synesthesia consciously.

Finally, these and other observations served me as steps to a new view on the wide panorama of personal reports of synesthesias. I have become to see them as personally developed abilities to perceive uncommon multisensory gestalts in the physical environment. I would compare this ability to a hidden sense. However, it may take a person a lifetime to unveil the hidden sense that allows her to perceive synesthesias in the physical environment.

Enjoying, Knowing, and Creating

So far, my discussion has been quite theoretical. At this point I would like to show how my view of the nature of synesthesia brings a number of more or less known functions of synesthesia into perspective. These functions can be applied in daily uses of the senses by children and grown-ups.

We are all familiar with the functions of the five well-known senses. The ears draw our attention to relevant and pleasant auditory patterns, the nose smells danger in noxious odors, and the tongue prevents us from poisoning ourselves. But what can be the function of synesthesia?

One can approach this question from a philosophical angle. We already encountered several philosophers who have written on the aesthetic functions of the *sensus communis aestheticus*. First, there is the hedonic function of pleasure and joy from the experience of synesthetically perceiving music in three-dimensional colored and textured patterns, for instance. Second, there is the cognitive function of perceiving meaningful gestalts that remain hidden to

other persons. Think of calculating in colored numbers or planning an agenda in colored shapes of months, weeks, and days. And third, there is the creative function of perceiving a set of elements in a different gestalt with new meanings and then using this as an input for artistic expression.

In my interviews with synesthetes, I nearly always asked them what they thought the functions of their synesthetic perceptions were in their daily lives. I liked using that practical approach, in addition to the philosophical approach. I met Patrick, who loves the music of Prince because of the beautiful images that the sounds evoke for him, which illustrates the aesthetic function of synesthesia. Later, I spoke with Dorine, who uses her synesthesia to analyze musical structures in her study at the academy of music. Primary school teachers told me that children do something like what Dorine does when they are introduced to classical music in school. Children learn very quickly to perceive corresponding music and visual animations. The physicist Richard Feynman perceived formulas in color and used these perceptions in his visual thinking. By the way, you do not need to be a Nobel Prize winner to use them that way: Katinka and David use their colored-number forms in mental arithmetic and in planning their agendas. These are all examples of the cognitive function of synesthesia.

The creative function is illustrated by a number of examples of poets and novelists who use synesthesia as a source of inspiration. Vladimir Nabokov is the most famous novelist among those who have discussed using their synesthesia in this way. I found several poets, including Hans Andreus and the poets of the Group of Fifty in the Netherlands, who considered synesthesia as a self-evident kind of perception. Earlier, the visual artists Wassily Kandinsky and Paul Klee discovered synesthetic perception as a source of original art forms. They developed a visual language based on their synesthetic perceptions and explorations of multisensory perceptions. Their contemporary Piet Mondrian experimented with the correspondences of visual line patterns and auditory rhythms in jazz.

These and other examples from the preceding chapters might give you a taste or let you feel what the philosophers have meant when they spoke of the hedonic, cognitive, and creative functions of the synesthesia.

Awareness of Synesthesia

Can you become aware of synesthesia? Yes indeed, though it may take a long time and a lot of concentration. You have to learn without examples, because

synesthesia is personal, and there is no educational program available to help you. You will have to find it all by yourself. You cannot imitate another synesthete or follow his or her suggestions, either.

One way to begin is to become aware of common sensual correspondences like those in the rhythms in music and film or the correspondences in the “brightness” of the sound of vowels and colors. Once you have trained yourself to be aware of these common sensualities, you can start to explore your personal sensualities and perhaps discover your synesthesias, though no guarantees can be given, of course.

It may sound strange to hear that you can become aware of a neurological phenomenon that seems fixed and hand-wired. To the contrary, the brain is flexible and will develop multisensory connections that are meaningful and are used by you. Synesthesia is hidden in your senses. You will have to explore and go looking for it to consciously experience it.

Though the awareness of synesthesia most commonly emerges in childhood, I believe you can become aware of it and start to use it at any age. Synesthetes report that they have become aware of their synesthesias in all stages of life. Some discover their synesthetic gifts as preschool children, some in the years when they learn language and math in school, and some as grown-ups. Nonetheless, when adults become aware of it, they report that it was already existent in their childhood.

Presumably everyone is born with a kind of synesthesia, the experience of the primordial sensory soup. During the first year of life, this general synesthesia apparently is cut back or pruned to fewer intersensory connections. In the second year and later, the synesthetic connections will only survive when they probably are useful to the child; otherwise they are pruned away. So at a young school age everybody will have a number of neural synesthetic connections, some more than others, and some people are more aware of it than others. Several children know already at the age of seven that their numbers are colored, whereas other children only realize it decades later, when they are tested with a consistency test for colored numbers, for instance.

For a number of children in the ages of about three to six, it is quite normal for music to have colors, tastes, or smells. You can ask young children and perhaps they will tell you about it. Children make beautiful paintings based on these perceptions, like the ones we saw in chapter 3.

When children go to primary school and start to learn cognitive skills such as writing and calculating, their synesthetic gifts seem to subside into the

background. The cognitive training asks much of their concentration and energy. Little energy is left to explore their sensory skills. Take, for example, the decrease in drawing skills and imagination at that age, which is reported by teachers and child psychologists alike.

Learning the letters of the alphabet and counting numbers is an important moment in the development of children and in particular of synesthetes, because at this phase the symbols get their solidified colors. It is the earliest age synesthetes can remember consciously when numbers and letters have their particular colors and shapes.

During the school years and adolescence, socialization becomes a factor in the awareness of synesthesia. Children do not like to be different from their peers. They do not want to be ridiculed. Announcing that you perceive letters and numbers in color may seem rather deviant in the eyes of the other children your age. Little is known of the social processes that influence the awareness of synesthesia. So far, scientists have been more interested in the neurological and perceptual aspects and less in the social development of young synesthetes.

Even among adults, the reactions of others play an important role in the way synesthetes deal with their perceptual gifts. Only a few decades ago synesthetes would regularly consult neurologists for medical advice concerning their “deviant perceptions.” In this medical setting, synesthesia was often considered a neurological deviance or a rare disease by nonsynesthetes. The neurological label that has been attached to synesthesia might still inhibit a number of synesthetes from speaking freely about their synesthetic perceptions. In this light, it is revealing that relatively more synesthetes in liberal and artistic communities report in public on their synesthetic abilities.

In general, people’s reactions to the confessions by synesthetes are still stigmatizing. Do not underestimate the number of people who think that synesthesia is a mental handicap. Moreover, because synesthesia is not visible, people often doubt the veracity of what synesthetes report: “Behave normally” is a common reaction.

The fact is that synesthetes do behave normally. It is people in their social surroundings who react strangely to their confessions. Hopefully, once synesthetes get recognition. Eventually they may be compared to late medieval artists who started to see and use linear perspective in their paintings, and who were stigmatized and ridiculed at that time. Now, we honor them as innovators who taught us to see the visual world in new ways.

Awakening to the multisensory perceptions is one key to synesthesia, but other keys are exposing yourself to new sensations, not being ashamed, expressing your synesthesia, communicating it to others, being able to experiment with it—all are important in the learning process that starts somewhere in childhood with the neurological development of multisensory connections and continues as a lifelong journey in becoming aware of all synesthesia's sensory aspects.

What Is Learned in the Cradle Lasts Till the Tomb

Young children look at the world differently than adults do. For preschool children, the boundaries between themselves and their surroundings are less sharp than for grown-ups. As we know, preschool children and even some children of the primary school age perceive their environment as a magical world where puppets and castles come alive. The same holds for their bodies and the incorporated senses. Compared to grown-ups, children are less aware of their body as an entity separate from the environment. In their perception, an “angry castle” may move forward and make growling sounds when it smells the dragon in the mountains. This is an example of a perception that can be very vivid for a young child. I do not say that children cannot distinguish between images and sounds, but only that the boundaries between the senses, their bodies, and the outside world can be more or less sharp from day to day, and from one mood to another. The child can even act out being the “angry castle.”

Grown-ups are more analytical. If they sense their synesthesias, they will analyze their perceptions into the well-known sensory categories. Saying that you perceive colored sounds implicitly contains the analysis of the original perception into two categories: colors and sounds. Young children do not yet perceive in an analytical way and an adult might have great difficulty explaining to a young child that his or her perceptions consist of separate elements like colors and sounds. For the child, the color and sound form an indivisible whole, a gestalt that cannot be separated into elements without losing its meaning and sense. And I must say, the child is right. The adult sticks to a theory of synesthesia, while the child sticks to the original perception. Young children do not often distinguish between sensory domains in their perceptions: a smelling sound may be as real for a child as a green rectangle—who knows?

Once children go to school, their sensory development is squeezed between the main lessons in cognitive development and the less-valued lessons in

physical development. In the end, children are judged in school on their cognitive skills, not on physical and sensory skills. Most schools pay little attention to the sensory development of their children. The ability of children to know the world not only by means of words and numbers but also by their own senses, let alone the awareness of their synesthetic abilities, is hardly developed at school. Consequently, multisensory development is in effect halted by neglect. I believe that children would profit from a rebalancing of cognitive and physical-sensory skills in the school program. They would have more opportunities to preserve their synesthetic talents and develop them.

For a long time we have taught our children at school that sensory experiences are separated into five senses according to the Western division, which is based on the exterior characteristics of eyes, ears, mouth, nose, and skin. We do not teach children to follow their own senses and we do not encourage them to explore their multisensory experiences of the environment. How different is it for the children of the Desana, who grow up in a culture where they are familiarized from the cradle with the multisensory color energies of objects? It is this difference that makes the Desana children more aware of the “synesthetic” color energies of sounds, tastes, and odors than their North American and European peers.

When Western children enter adolescence they start looking for new stimuli, to explore and test their environments. New and experimental art forms are challenges for their brains. Experimental art forms disorder the regular ways of perceiving via the five sensory domains that they have learned in school and open ways to multisensory perceptions in audiovisual art forms, for example. It is easier to discover colored patterns in a new piece of electronic music by Jan Boerman than in the well-known *Four Seasons* by Vivaldi because they have learned from their parents and teachers how to listen to Vivaldi, but not how they should listen to Boerman’s work. Experimental art forms have a viable function in helping people find new ways of experiencing and perceiving.

As I have said, the school system has a large share of the responsibility for how children and adolescents develop their senses and awareness. In addition, the social surroundings of the youngsters play a role in the way uncommon sensory perceptions such as synesthesia are accepted. The social surroundings can make the difference between accepting and hiding your synesthesia, between joy and shame, between the experience of having a gift or having a handicap. Youngsters like to belong to significant groups, so when

your friends laugh at you because you see numbers in colors, you might hold these confessions back. And this socialization of synesthesia starts in family life. Sometimes, mothers who understand their synesthetic children figure in the stories of the discovery of their synesthesia by synesthetes, who are not afraid to talk in public about their unusual perceptions. Think of how lovingly Vladimir Nabokov describes his mother, who patiently questions her son on his synesthetic gifts, which she partly shares with him.

Synesthesia can become a gift when someone knows how to use it in daily life. It can become a handicap when the person cannot do something significant with it and he or she experiences it as a burden. And of course there is an unknown number of synesthetes who are not or do not want to be aware of their synesthesias.

Even in older age, it is still possible to learn how to become aware of synesthesia. Tony di Caprio, whom we met in chapter 2, had a long career as a musician before he became aware of the specific colors of musical notes. But since that time he has used the colors in his music making and he finds composing and performing music easier now.

The very old may discover, when the mechanical apparatus of the senses starts to fail, that new synesthetic resources may open up. The mechanics of the senses may show hitches, but the sensitivity of the senses continues to develop until a very advanced age. Think of the famous conductors of symphony orchestras who in their seventies and eighties find new interpretations of classical pieces. Perhaps they have discovered new colors and textures in the notes they have had been playing for decades? No one is never too old to enjoy life and discover new sensualities in the rich multisensory environment.

My Synesthesia

Since synesthesia is so personal, my ideas remain humble pieces of pedagogical advice. I cannot predict how a synesthete will become aware of his or her synesthesias. In fact, I can only speak for myself.

It took me many years to become aware of my synesthesias; it was a sensibility hidden under many layers of daily perceptions. One of the reasons it took so long to reveal itself was that I was misled at first by the Western theory of the senses and later by scientific theories of synesthesia. Since I grew up with the belief that the senses are separate, I concentrated on developing my sensory awareness within the five well-known categories. I taught myself

to distinguish more nuances of color or I taught myself to distinguish the musical styles of classical composers, but I never combined these interests in the nuances of colored sounds of classical pieces.

Then I learned about synesthesia and became fascinated by its theory linking color tones like blue and red to musical notes like A and F. And still, I did not notice my own synesthesia, because scientific research articles had taught me that synesthetes perceived musical notes in color tones. And I did not perceive that type of synesthesia. Only when I left the theories aside and reconsidered my musical experiences introspectively did I realize that sounds have nuances, textures, and forms for me. These perceptions did not strictly fit into the then-accepted synesthetic combinations like colored letters or colored sounds reported in journals, magazines, and Web sites under the heading “genuine synesthesia.” I was also misled by the theory that synesthesia is congenital, that you either have it at birth or not at all. In addition, the accepted theory implied that every synesthete was aware of his or her synesthesia early on, in childhood. Now, I realize that the assumed sharp line between the group of “synesthetes” and “nonsynesthetes” is in fact blurred. Moreover, even within the group of synesthetes, not all individuals are aware of their synesthesia in childhood. Some people recognize it in early childhood, while others recognize it decades later. In addition, even among synesthetes who recognize it early, there are other forms of synesthesia they have that they only slowly become aware of over time, according to biographical reports. Synesthesia is not like a digital bit in a computer that is either zero or one. It is a personal ability that can turn from a slumbering state of being half awake to a sudden full, bright, conscious awareness. In addition, certain types of synesthesia may follow different time paths and may take decades to reveal themselves.

In my case, it took me decades to become aware of my first type of synesthesia, the perception of textured music. Once I cognized that one, however, others followed more rapidly: textured taste and textured odors. Then, nuances and spatial forms of sounds followed. The sounds lack distinct colors, but have some nuances, such as wrinkling in a ray of light. I have looked for colors, but when I see them, they are always very light or very dark, so it is hard for me to distinguish a hue. They move to the foreground against a lighted cloudy background and are always in movement, like coils in the wind, or, when slower, as if the coils were under water, but they seldom come to a standstill. This play of textured sounds is situated in a mental space and not in front of my eyes. Only when I close my eyes does it feel as though the images are before my eyes.

Sometimes I ask myself why I have discovered synesthesia only after so many years. If I had not read about synesthesia, would I still be unaware?

Many synesthetes are aware of their synesthetic gifts and only learn they have a scientific name when they read about the phenomenon or meet other synesthetes who talk about their perceptions. As I said, my type of synesthesia had not been described in the media when I started to study the subject. In a way, this lacuna postponed my awareness, and the same may be true for more synesthetes who read about it now that it is frequently discussed in the media. But I notice that the media mention only a narrow range of the possible synesthesias. Most of the time, only colored letters and numbers are described. Therefore, possibly a number of synesthetes watching and reading these publications could think as I did in the beginning: that it is an interesting subject but one that does not apply to me.

Looking backward, my awareness of my own synesthesia has been a gradual process of awakening that has occurred during the search that I have described in this book. By consciously analyzing my sensory perceptions, comparing them with those of other synesthetes, by testing my senses and exposing them to new artistic stimuli and carefully observing how they responded, by reviving memories of some childhood experiences, I have been slowly finding a track that leads me to my personal conclusions and views on synesthesia—or, better, synesthesias. In little leaps of understanding, I have come to realize what my synesthesias mean to me and how they are related to my broader perception of the physical environment.

By taking uncommon perceptions for granted and not automatically pushing them aside as irrational moments or as hitches in the system, the meanings of my synesthesias had the time to blossom and show their beauty. By my questioning of my sensory perceptions of the world, by means of my testing them in little experiments, the synesthetic perceptions were able to grow to full stature and acquire sharp and distinct features.

When I started my search for the meaning and use of synesthesia I could not imagine how it feels to be a synesthete—for instance, to perceive a purplish piano sound. Now that I have been seeing how the sound produced by a bow on a violin string can scratch edged lines in a white hazy space, I have a better understanding.