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Torell, Kurt

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Kurt Torell

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Makin' the Seen: Synesthesia, the Grateful Dead, and the Total Work of Art

Kurt Torell

At their best, Grateful Dead concerts were immersive experiences, ones that left both band and audience transformed in some powerful though nebulous way. This essay attempts to clarify the nature of those experiences by explaining how a Dead concert approximated, if not fully instantiated, the ideal of a *Gesamtkunstwerk*, or total work of art, especially when, in its peak moments, a performance aroused in its audience the synesthetic experience of something seen.[1]

After introducing the concept of *Gesamtkunstwerk*, I provide a rough sketch of the phenomenon of synesthesia.[2] Appealing to the *Cratylus* of Plato, this sketch helps to explain how some degree of synesthesia may be embedded in ordinary human experience, particularly at the level of language acquisition. After a brief phenomenological account of synesthetic experience in relation to sound in general, I use that to see how such experiences could be manifested in the music of the Grateful Dead. Finally, I suggest not only how these manifestations may fulfill the cri-

teria for a total work of art, but, in turn, how they also help to clarify the extraordinary nature of the band's finest performances.

Although the origin of the idea of the total work of art is frequently attributed in popular consciousness to the German composer Richard Wagner, it is also widely agreed among scholars that he was neither the first to use the term *Gesamtkunstwerk*, nor the first to conceive its aesthetic aspiration. Indeed, there appear to have been numerous conceptualizations of what constitutes a genuine total work of art proposed before and after Wagner's. In a recent collection of essays on the subject, Anke Finger and Danielle Follett (2011) sketch three criteria for a total work of art that are based on a general "aesthetic ambition to borderlessness" inspired by the Schlegel brothers' early reference in 1798 in their *Athenaeum*, and rooted in the idea of a "blending" and "merging" of "the separated and disparate forms of creative endeavor, criticism, and philosophy," in addition to a merging of "art with nature and art with society" (3).

First, like most other accounts of the total work of art, Finger and Follett propose that the artwork seeks to somehow unify the perceptual qualities of different art forms (2011, 4). Secondly, they acknowledge that, as in all cases of art, the audience is an indispensable component of the complete artwork—that in fact, as Friedrich Schleirmacher and others have insisted, the audience is its coproducer, since art only really occurs in the heads and between the ears of the people who witness it (Shaw-Miller 2011, 194). Thirdly, they suggest that the total work of art serves as some kind of metaphysical avenue or portal that reveals a deeper, higher, transcendental or religious truth beyond the mundane, profane world (Finger and Follett 2011, 4).

Synesthesia is a phenomenon no less allusive than the concept of *Gesamtkunstwerk*.[3] Synesthesia is often roughly characterized as an experience associated with one sensory modality, such as sight, that is apparently triggered by an experience of a stimulus typically associated with another sensory modality, such as hearing. Accordingly, synesthesia has been typified as some kind of blending of sensations, as the etymology of its name suggests. Yet synesthesia does not always appear to be cross-sensory, nor purely sensuous in nature. For example, in the case

of Grapheme-color synesthesia, one of the most studied and paradigmatic forms, the so-called 'triggering' experience is taken to be a visible, though cognitive phenomenon, such as a symbol, while the 'triggered' experience, or the synesthetic experience itself, is a color—something that is also typically categorized as a visible phenomenon. Furthermore, although in standard cases the synesthetic experience is said to appear "in front of" the subject, it has also been reported that it is sometimes experienced on an "inner screen," or in the so-called "mind's eye" (Dixon et al. 2004).

To complicate matters further, various differences among synesthetic experiences have also been supposed to attend certain etiological differences of their emergence, that is, whether these experiences are (1) deemed to be lifelong or natural (sometimes also referred to in the literature as "developmental," "genuine," or "idiopathic"); (2) "acquired" through some kind of brain injury or sensory deafferentation; or (3) "drug-induced," through psychedelics and other hallucinogenic drugs (Grossenbacher and Lovelace 2001; cf. Sinke et al. 2012). And new investigations and observations have expanded the definitional net over the years, so much so that it is now common to find synesthesia merely defined as "an unusual phenomenon in which stimulation in one sensory modality elicits additional anomalous experiences" (Chiou et al. 2013, 1750–1).

Yet such an experience is nonetheless unusual, given the supposed discreteness of our sensory modalities, a point underscored by the so-called Molyneux problem made popular by the philosopher John Locke in 1690. This problem proposes that if a man had been blind his entire life and merely felt square objects, he would not be able to identify those objects merely by sight if his sight was ever restored (Sinha et al. 2014; cf. Van Cleve 2014). However, I propose that synesthesia encompasses a wide range of phenomena, from purely sensory to more cognitive and associative synesthesia, as well as prompting language and metaphor (cf. Hochel and Milan 2008, 113). In addition to Grapheme-color synesthesia, other commonly referenced forms are chromesthesia, where one sees colors from hearing sounds or music; lexical-gustatory synesthesia, where one might experience a taste or smell from seeing letters; mirror-touch

synesthesia, where one experiences a tactile sensation when one sees others touched; and auditory-tactile synesthesia, where a sound may also evoke a sense of being touched.

Despite its purported rarity, synesthesia seems to be a capacity that most humans possess, though their awareness of it varies, depending on its intensity.[4] Along with the lack of consensus over the definition of the term, this variation in intensity and corresponding awareness may explain the wide-ranging estimates of its occurrence, both today and throughout history. Synesthesia interested Pythagoras and Isaac Newton, and it accompanied the growth in interest in color organs in the eighteenth and nineteenth centuries (and other instrumentation that attempted to associate smell and taste to sound).[5] Moreover, the idea fascinated the Romantic and Symbolist poets of the nineteenth century and a number of other writers, visual artists, and composers of the twentieth century.

Yet Plato may be even more instructive in understanding just how prone humans might be to synesthesia. In Plato's dialogue *Cratylus*, Socrates speculates that the referential quality of spoken words may have been established through the imitative qualities of spoken letters and syllables. Socrates proposes, for example, that the letter R is "a beautiful tool for copying motion" because the tongue is "most agitated and least at rest in pronouncing this letter" (Plato 1998, 426d–27a). Likewise, letters that require a great expenditure of breath to pronounce seem to mimic qualities of their referents, as in windy, seething, and shaking. In addition, "the compression and stopping of the power of the tongue" that is required in the pronunciation of certain letters, as in T, could serve to mimic things that are "shackling," or at rest. The pronunciation of letters and syllables where the tongue slips may serve to imitate qualities such as smoothness, slipping, sleek, and gluey, and letters and syllables that "detain" that slippage may be combined with the former to jointly imitate "a glutinous nature" (Plato 1998, 427b-c; cf. Jowett 2008.) The letter nu (ν) , because it is experienced as inwardly heard when pronounced, may serve to reference things inside, and omicron (ο) may have been established to signify roundness, because of the shape of the mouth when it is pronounced. It is also worth mentioning here that perhaps a less archaic version of such a hypothesis was more recently forwarded by Ramachandran and Hubbard,

who proposed "a non-arbitrary synaesthetic link between object shapes and sound contours … a synaesthetic mapping between sound contour and motor lip and tongue movements … a synaesthetic correspondence between visual appearance and vocalizations … and cross-activation between motor maps concerned with gesticulation and vocalizations" (2001, 29).[6]

Based on this brief overview of the concept of *Gesamtkunstwerk* and the rough sketch of contemporary understanding of synesthesia, and the assumption that synesthesia pervades ordinary human experience in various respects and to varying degrees, this essay suggests some of the phenomenological features of the synesthetic experiences the Grateful Dead fostered through their music—apart from any consumption of psychedelic drugs. The term 'phenomenology' here follows its mostly traditional sense intended by Edmund Husserl, referring to a science of mental life or consciousness that describes and then analyzes the nature of various aspects and interrelationships of the experiences that comprise it by drawing from the so-called raw material of experience itself. For example, the business of phenomenology might proceed by describing and then analyzing how the past is experienced, in contrast to the present or the future, as well as how each of these kinds of experiences are, in turn, related to each other. In addition, phenomenology might describe and analyze the consciousness of numbers in contrast to the consciousness of experiences with a sensory quality, such as taste. Accordingly, while neuroscience might be said to approach the investigation of mental life from the "outside-in" by examining the physical properties of brains, phenomenology, in the sense that I intend it, examines the nature of mental life from the "inside-out" by taking its investigatory point of departure from the raw material, as it were, of experience itself, as it is experienced.[7]

It is also important to note that relatively little research has been done on the sorts of synesthetic experiences that I argue are prompted by the music of the Grateful Dead. Indeed, for auditory-visual synesthesia, existing research has focused on cases where the triggered experiences were color-concurrents. This essay, however, focuses on the visible, three-dimensional type of synesthetic experience, those often possessing a material-like physicality, or texture, and spatial contour, irrespective of

specific colors, and prompted, in part, by the sheer sonic volume that often projected the music. In fact, in some instances, the visible quality of the experienced object triggered by the sound may have appeared nearly translucent to some.[8]

Turning now to phenomenology, let me begin by making a couple of general assumptions. *Prima facie*, it would seem that strictly visible and tactile physical attributes of things—such as width, breadth and depth, the shape or roundness of an object, angles, and motion—do not typically appear to possess any 'audible' characteristics or properties, where an 'audible' property is one which is perceivable by being heard, a 'tactile' one is perceivable by being felt, a 'visible' one is perceivable by being seen, and so on. In similar fashion, colors may be said to be visible, but not tactile, and the sound of a train whistle in the distance audible, but not visible. In addition, let me propose that when one perceives a strictly visible or tactile property, such as shape or motion, merely by hearing it and not by seeing or touching it, then this would count as an authentic synesthetic experience, not unlike perceiving something as red merely by tasting it.

Of course, people often experience visible things even though they do not see them, audible things even though they do not hear them, and so on; these experiences are neither rare nor necessarily cases of synesthesia. Indeed, this happens all the time through our imagination and memory. When we remember our childhood home, or read a story, for example, we may experience something as visible even though we are not actually seeing it at the time. Likewise, we can imagine the feeling of something smooth or something wet even when we are not actually feeling it, or a train whistle blowing in the distance even though we are not actually hearing it. However, what I claim here about the synesthetic experiences in question is different. These synesthetic experiences are of things that have discernible, visible properties perceived entirely through non-visible, audible media, and that appear to possess a quasi-objective quality of existing outside the mind, unlike what we merely imagine. They are, therefore, very similar to the things we normally perceive through our sensory modalities under standard conditions—the physical characteristics of the external world as we know it.

To further illustrate the nature of these synesthetic experiences and how they differ from cases of imagination or memory, suppose that we perceive the spinning of a child's top on a table. At first glance, it does not seem as if the phenomenon we perceive—the spinning—is something that has audible characteristics. We do not perceive the spinning by hearing it any more than we perceive the spinning by tasting or smelling it. Rather, the spinning appears to be strictly visible and/or tactile—a point confirmed by the fact that, if we closed our eyes, we could no longer be sure that the top was still spinning. Now let us imagine a case where all that we sense in a given instance is sound. In this scenario, if we were to also experience something as spinning, then it would seem that we would be experiencing something purely through the experience of sound that, in fact, has only visible and tactile properties, but no audible ones. We would have an experience of a strictly visible and tactile thing solely by hearing it—a genuine synesthetic experience, not unlike a case where one experiences something as having purely visible and tactile properties, such as shape, by merely tasting it. I believe this occurs often when listening to certain kinds of music, and especially when listening to the music of the Grateful Dead.

What is also important to observe about this example—and which has been noted specifically in connection with drug-induced synesthesia—is that to the person perceiving the triggering experience and the synesthetic experience, the two are indistinguishable to the degree that they appear as one, unified, singular thing, or at least so similar that the perceiver may become confused about which experience is the trigger and which is the triggered.[9] In our example, for instance, the sound and the visible property—the spinning—may be so indistinguishable that they are experienced as identical and, therefore, one and the same thing. Furthermore, by being indistinguishable from each other, or experienced as one and the same thing, the synesthetic experience can sometimes be perceived as existing outside the mind of the perceiver, unlike in the case of mere imagination or memory. For, if the synesthetic experience (in our example, the experience of the spinning) is indistinguishable from the triggering experience (the heard sound), and the triggering experience is perceived to be located outside of the mind of the observer, then the

synesthetic experience (the experience of the spinning) will be perceived by the perceiver to exist outside her/his mind as well. Thus, the perceiver may perceive the visible property (the spinning) in a manner that is analogous to what happens in imagination, as a quasi-sensory image of sorts; but unlike in imagination, where that image is typically perceived to be internal to the mind, the perceiver experiences the quasi-sensory image as something that exists outside the mind, or perhaps somewhere between the inside or outside of the mind. In other words, the perceiver has an 'imagination-like' experience, the content of which is perceived to possess some kind of objective, independent existence beyond her or his consciousness.

When one combines this observation with the fact that, in instances of music, the triggering sounds typically vary, fluctuate, and occur over time, the identity between the sounds and the synesthetic experiences can cause fluctuations in what listeners see that correspond, and are perceived to be identical to, the triggering experiences. That is, what listeners experience as visible—the synesthetic experiences themselves—can fluctuate and evolve in accordance with the successive sound-triggers that comprise the music, and with which those synesthetic experiences are construed as identical, a phenomenon that has also been reported in connection with drug-induced cases of synesthesia (cf. Sinke et al. 2012, 1430).

All of this contributes to a further impression that the synesthetic experience is perceived to be intersubjective or perceivable by others, regardless of whether it is.[10] Because the sound the listeners hear is perceived to be external to the mind, and the synesthetic experience listeners perceive seems identical to the sound (and, therefore, the synesthetic experience is perceived as possessing some kind of objective existence), the synesthetic experience is also perceived as intersubjectively accessible to others, irrespective of whether it *actually* is. Moreover, the fact that two or more listeners may not *actually* be having the same synesthetic experience of the same visible features attending the sound they hear may do little, if anything, to disrupt their sense of the intersubjectivity of what they experience, just as that is true for other things deemed intersubjective in nature during the course of everyday life. Differences between the experiences of persons that are taken as intersubjectively accessible often

go unnoticed, and even when differences are noticed, they are often disregarded. That is, like many things people experience as external to their minds, they may not be aware that their experiences differ from those of others, and even if they do become aware that there are differences, those differences may be disregarded for a variety of reasons. For example, if two people are sitting in a room facing each other, they typically believe that they are experiencing the same room, and that the room they experience is intersubjectively accessible and objective, in the sense that they do not believe it exists only because they experience it. Still, the contents of each of their experiences, or *qualia*, actually may differ extensively. For example, if we assume that they are looking at each other, the content of each person's experiences is likely to differ in that the content of each includes the appearance of the other person, but not themselves, and yet this difference is not likely to motivate either person to doubt the intersubjectivity of her/his experience.

Based on this sketch of how experiences of audible phenomena may trigger experiences of visible phenomena, and how the visible phenomena may be, in turn, experienced as having objective existence outside the mind of the perceiver and be intersubjectively accessible to others, let us now consider the music of the Grateful Dead specifically. To begin, there is evidence that certain members and crew of the band were quite self-conscious about thinking of sound and music in visible, three-dimensional, and synesthetic terms, and deliberately sought to foster that perception in the audience through the music and its amplification. For example, Phil Lesh has written that his interest in the spatial quality of music predated his experiences with LSD and the band, when he was working on an ambitious orchestral piece called *Foci*: "The piece itself was composed spatially: I imagined the music rotating or sweeping around the audience with each orchestral group at a focus of an ellipse—the image was of planetary orbits, I guess" (Lesh 2005, 33). In his memoir, Lesh also describes a drug-induced synesthetic experience after joining the band:

> At one point, I looked over at Jerry and saw a bridge of light like a rainbow of a thousand colors streaming between us; and flowing back and forth across that bridge: three-dimensional musical notes—some swirling like the planet Jupiter rotating at 100 times

> normal speed, some like fuzzy little tennis balls with dozens of legs and feet … some like pool balls, some even rectangular or hexagonal, all brilliantly colored and evolving as they flowed, not only the notes that were being played, but all the possible notes that could have been played. That moment may well have been the peak of psychedelic music for me. (2005, 148)

Lesh often refers to the three-dimensionality of sound in his memoir, including the Fillmore Acid Test (2005, 70–71), and how he learned about and experienced the movement of sound in the music of Charles Ives and Karlheinz Stockhausen.

A more direct reference to sound-induced synesthesia appears in an interview with Owsley Stanley, where he discusses a pivotal experience at an Acid Test:

> One of the earliest things that happened to me with regard to psychedelics was that the universe became even more three-dimensional. It seemed to have more dimension and depth and space to it. Colors and things seemed very intense. At one of the Acid Tests—I don't know which one it was, it might have been Watts—it was a very strange experience where all of a sudden I was *looking* at sound coming out of the speakers. This happened on several occasions. It also happened at the house we were staying in Watts, where I actually saw sound coming out of the speakers … What's that called? Synesthesia. I've never talked to anyone else who's actually had that experience, but I actually had that experience. And it was funny because I'm looking at this sound, I'm really out there, and all kinds of other things are going on, and I was thinking, you know, that doesn't look the way I thought sound [looked] …. (Gans 2002, 295)

Indeed, the experience was so significant to Stanley that he retold the story on more than one occasion (cf. Greenfield 1996, 83), and explicitly linked it to his original vision for the band's legendary 1973–74 PA system, the Wall of Sound (Gans 2002, 331). But, more importantly, Stanley seemed to have experienced sound as a three-dimensional phenomenon as a matter of course:

> For instance, when I'm working with sound, I work with sound in three-dimensional fashion which to me is palpably three-

> dimensional. I do that in the way in which I set up stages for a live show, in which I orient speakers, the kinds of electrical things that I do to the sound. To me it is physical, and you can walk through the hall and feel its shape and change, For instance, you experience a certain spatial form, dimensionality … It's always coherent, it's always three-dimensional. But the spatial image changes, your perception of it changes, and it seems palpable. It seems real, like a sculpture. It's the way I look at sound. It flashes back to the time that I saw the sound coming out of the speakers. (Gans 2002, 314)

And, of course, Garcia also spoke of sound as colored and three-dimensional on occasion. In a 1981 interview he commented, "I aim notes for the room that I'm in. Notes for me have shape and form and everything, color. And for me, that would be the way to have music come out of a computer—to first tell it what the music looks like. Give it color versus timbre, size versus pitch, shape versus attack, envelope" (Gans 2002, 331). That fits with remarks he made in 1967, when he described a technique he had developed that made a note appear to emanate out of thin air, thereby creating an impression of moving from a remote to an adjacent location in reference to the listener, engendering the experience of spatial depth in the music:

> I've been using the feedback stuff instead of for playing lines or for producing a layer of sound which is the thing that happens most naturally. I've been using it by like striking a string and bringing up my volume knob so that there is no attack on the beginning of the note. The note just starts to come out of the air. 'Cause I've already played the string, turn up the volume, the feedback starts. And I stop the string at a rhythmic interval. So that … if I were to draw a picture of the tone, it would be just about the reverse of what a guitar tone normally is where you have a heavy attack and then a slow decay. Because it's the other way around, it decays *in* and attacks *off*. So I use it as a rhythmic device more than anything else. In that particular thing. But you know, the more it happens, the more I know about it and the more ideas I get for it and so forth. It's just a matter of playing more. (Gleason 1969, 319)

Indeed, by amplifying and manipulating the sound, the band enhanced the materiality of the music, and hence its visible, tactile, and three-dimensional objective quality. For example, on some occasions the band could appear to push the sound out towards the audience like a wall, and then abruptly cut it off or allow it to decay so as to create an impression of falling or moving forwards or backwards, and thereby a sense of distance, three-dimensionality, and motion. The synchronicity between notes played sometimes fostered an impression of physical edges or angles to the sound. The use of the progression and sustain of notes over time also helped to create an impression of mercurial fluidity that would morph dynamically from moment to moment into new spatial dimensions and contours. In some cases, the sheer projection of a sound through increasing and decreasing volume created the impression that the sound emanated from a vanishing point to envelop an empty space, geometrical or otherwise, and then dissipated. On more rare occasions, the sheer density of sound and the progressive playing of notes might foster the impression that the physical reality outside the listener, or the atmosphere itself (perhaps what is meant by Weir's "thick air" or Stockhausen's "colored silence") was somehow being cut or ripped apart to reveal some kind of transcendental reality behind it.

Furthermore, in some instances, the drums, bass, and rhythm would work in concert with the manipulation of volume to give the impression of something collapsing toward a vanishing horizon, as if into a well-like hole or tunnel, that progressively unfolded in turn with the passage of time and in advance of the 'heard' sense of the present 'location.' Sometimes one would have the impression of cascading down a precipice seemingly constituted by the notes. Lesh's bass, accompanied by Kreutzmann's and Hart's drums, might generate an impression of an undifferentiated, Jell-O-like material, and in some cases, the way Lesh would play would provoke a sense of a spinning blob of the material whose movement might be further implied or sustained by the sound of an intermittent cymbal. On some occasions, the material would appear to be round; at other times it would appear as an elongated, spinning, cylindrical object or spindle. Sometimes it might evolve into something more elongated, and then dissolve back

into a more roundish blob, much like a mass of wet clay on a spinning potter's wheel might morph into a vertical mound and then dissolve back to a more oval or roundish shape. And Weir might cut into the material with his strings, or tug on it, stretching out a chunk or globule only to release it so that it snapped back to dissolve into the whole.

On occasion, Weir's rhythm work could sound like a loop that, when released, would appear to unfold in a curl that he might reel back to its point of origin, almost as if he were casting a line while fly fishing. At those times, he might "cast" the music outward, the sound of each string progressively fanning out with the passage of time to cover an increasingly wider space, only to reel it back toward its point of origin, with the sound progressively narrowing along the path of its recession. Once returned to the point of the sound's origin, Weir might terminate or pinch it off as if he were launching or setting something afloat, like a bubble, at which point the sound would appear to dissipate into the auditorium as the present moment receded into the past. At other times, while Weir was casting, Garcia might exploit the space within the loop that Weir had created in order to foster an impression that he was threading his lead—the notes he was playing—through that loop, like the eye of a needle. In some of these cases, Weir might seem to cast successive loops that would occur temporally "after" but metaphorically "in front of" the pinnacle of Garcia's previous lead note, and Garcia would then thread the next lead note through each loop, again and again.

In some cases, Garcia did this merely by extending the previous note into the present, creating the impression that he and Weir were jointly weaving separate threads of sound together. At other times, Weir's rhythm, because of its abrupt fullness and sheer volume, would feel like a spike or needle that would appear to move to a new spatial location (though, in actuality, merely a new temporal moment) with each strum, sometimes dragging a slight residue of sound from the prior strum to the present strum, so that the spikes seemed as if they were connected, while Garcia would thread a lead through an apparent hole in the sound as if he were threading a needle repeatedly, or perhaps stitching his sound through Weir's. To some audience members, these threads might appear to have visible properties, though in reality, they might not literally see the visible

threads with their eyes, and even though, upon reflection, the only thing that they were actually experiencing was sound.

Finally, in some instances, all of the sounds of the band collectively worked together, with the help of amplification, to generate the impression of intersecting gears, interlocking shapes and mechanisms, spinning axles and disks, silvery spindles, and flywheel and pulley-like objects, where only their intersections and subsequent divergences might be constituted by the sounds themselves, while the gears and interlocking mechanisms and shapes themselves were perceived as existing only beyond the sound, and therefore only implied by it. At those times the sound would merely circumscribe and imply the existence of those gears, axles, and flywheels beyond the sounds themselves, where the sound served merely as a kind of cradle and visible portion of the gear that otherwise might remain hidden from view. Other visible motifs included translucent soap bubbles and opaque, Jell-O-like tear drops, sometimes sliding down a twisting wire connected to a turning spindle, the pistons of motorcycles, and brief representations of points of collision of the wheels of train engines moving down tracks, materialized only for a brief glimpse and occasionally accompanied with sparks provided by the sonic handiwork of Weir.

And now we can address how the Dead's music represents a total work of art, according to the three criteria established by Anke Finger and Danielle Follett. The first criteria, a blending or breaking down of distinctions between media forms, describes how listeners might experience the sound, and the trans-auditory motion, spinning, interlocking and disengaging shapes, as identical or one, and so the phenomenon of the purely audible and the purely visible could be experienced as seamlessly indistinguishable. Accordingly, unlike the operatic and theatrical work of Wagner, for example, or the pretensions of so-called "visual music" and other visual media intended to mimic or *represent* the phenomenon of music (as found in the work of Kandinsky and George O'Keefe, among others), or even the aesthetic aspirations that attended the advent of color organs and other multimedia artistic endeavors, the music of the Grateful Dead and the visuality it manifested were not coincidental, parallel, correspondent, or merely synchronistic, but separate manifestations. Instead,

the Grateful Dead blurred and, in quite a few instances, unified or fully transcended the boundaries of typically distinct art forms to produce a completely undifferentiated audible, visible, and sometimes even tactile, artistic spectacular.

Secondly, to be fully realized, the art work of the Grateful Dead's music relied on the minds of the listeners within whom both the perceived sound and synesthetic experiences could only come into being: the audience was, in fact, always the indispensable coproducer of the music. Finally, like the aesthetic aspirations of Joost Schmidt's Mechanical Ballet and Prampolini's Mechanical Theatre, the music of the Grateful Dead, in its more mundane moments, might produce in the audience an experience of a ballet of dancing shapes against a theatrical backdrop comprised entirely of sound; yet, at other times, when everything was right, something else happened. The art work that could only come to be within the minds of the audience, but which was perceived to exist outside their minds, appeared to open a portal to some kind of otherworldly and transcendental reality that lay beyond the world of the mundane and the profane. Since the audience experienced this music, and its visible manifestation, as intersubjective, that transcendental reality possessed a quality of being real, and thus engendered a religious-like experience of something truly existing beyond the mundane, akin to the Romantic and Symbolist desire to see art as a vehicle through which the transcendental, sublime, and divine may be accessed.

This synesthetic experience, I suggest, was the *material* of the allusive and ineffable "it," or X factor, the essence or goal of what the Grateful Dead were really doing, the thing that seemed to take on a life of its own beyond the sounds and the musical efforts of individual band members. And when it was right, that was the sinews of the religious experience, the vision, or the real magic that band members, family, and audience alike claim to have witnessed on so many occasions.[11]

Notes

1. This account does not imply that band members deliberately set out to produce a total work of art, already armed with the concept of what such a thing might be, nor that they were well informed of any art history of the concept. Accordingly, I do not believe that something can only be a total work of art provided its author thinks it is one, or tries to make it one. That said, it is clear that Lesh was certainly aware of the concept of the total work of art, as he recounts in his memoir: Speaking of a 1984 trip with his soon-to-be wife, Lesh notes, "I had another dream come true when we spent a week at the Bayreuth Festival in Germany, immersing ourselves in *The Ring of the Nibelung*, Wagner's vast operatic tetralogy. It was in every particular the tremendous artistic experience I'd hoped for; the composer's vision of a 'total artwork' compellingly realized by the most dedicated artists of the day" (2005, 267).

2. That interest in synesthesia has historically accompanied interest in the concept of *Gesamtkunstwerk* is well acknowledged. As Cretien Van Campen has asked, "Are the visual and musical arts distinguished disciplines that work with separately perceived stimuli? Or are these disciplines part of a larger organ that unites the different arts in the ideal of the *Gesamtkunstwerk* (Total Work of Art)? Since the nineteenth century, the *Gesamtkunstwerk* has been an important motivation for numerous artistic experiments with synesthesia" (1999, 9).

3. For a number of years now, there has been noticeable disagreement about the use of the term 'synesthesia' within the humanities and between the humanities and neuroscience, with some humanities scholars and neuroscientists in closer agreement than they are with others in their respective fields. Indeed, by 2001, the disagreement had become so significant among the editors of the journal *Leonardo*—which was, itself, in the midst of publishing a multi-year 'special project' called *Synesthesia and Intersenses* at the time—that they felt compelled to also publish an "Open Letter on Synesthesia" by Bulat Galeyev, its International Co-Editor, that expressed vehement disagreement with his Western editorial counterparts over the use of the term, and that had been originally prompted by argument among the journal's referees (Galeyev 2001; cf. also Berman 1999; Dann 1998; Tsur 2007; Van Campen 1999).

4. Calculations as to the degree of its rarity have appeared to vary wildly in the literature over the years, perhaps due to definitional differences and further study. For example, reported ratios of synesthetes to non-synesthetes have ranged from 1 in 25,000 to 1 in 1 million (Dann 1998, 8); 1 in 300,000 (Cytowic 1989, 64); 1 in 2,000 (Hochel and Milan 2008, 100); and 1 in 200 (Ramachandran and Hubbard 2001, 6).

5. In addition to the frequently cited *Clavecin des colours,* or *Clavecin pour les yeux*, apparently constructed by the Jesuit Priest Louis Bertrand Castel in 1724–25, Gunter Berghaus also mentions Castel's conception of a *clavecin des odeurs*, "a keyboard that opens and shuts a row of scent-boxes that have been arranged

in a kind of diatonic series so that the musical chords are accompanied by a 'concert of perfumes'," as well as an "instrument *harmonieux des saveurs*" that was conceived by Polycarpe Poncelet in 1755 and that was intended to associate sounds with flavors to produce a "music for the tongue and palate" (Berghaus 1986, 8–9).

6. Among the examples they offer, they include Wolfgang Kohler's *Takete and baluma* experiment (cf. Kohler 1929, 243), words referring to small things "making a synaesthetic small /i/ with the lips and narrowing of the vocal tracts (e.g. words such a 'little', 'petite', 'teeny' and 'diminutive')" (Ramachandran and Hubbard 2001, 20), "a partial outward pout with my lips (as in English 'you', French 'tu', 'vous' and Tamil 'thoo')," and "when I point inward to myself, my lips and tongue move inwards (as in English 'me', French 'moi' and Tamil 'naan')" (Ramachandran and Hubbard 2001, 21). "Another example of a 'synaesthetic metaphor' found in everyone is the use of the word 'disgusting'. We say this in response to unpleasant smells and tastes while at the same time raising our hands up and scrunching up our noses (Darwin showed that even a newborn infant would do this…)" (Ramachandran and Hubbard 2001, 22). Also, Ramachandran and Hubbard assert, "One wonders … whether there exists a genetically based synaesthetic link between sex and aggression … Again, the use of sexually loaded words as aggressive swear words ('F*** you') appears to be cross-cultural … If there is no genetic basis related to anatomical/neural constraints, why do all (or most languages say 'F*** you' and one never hears 'Bite you', which would be the more logical choice given the obvious *semantic* associations between biting and aggression?" (Ramachandran and Hubbard 2001, 23).

7. As an example of the use of the term 'phenomenology' in the less traditional sense than I intend, consider Ramanchan and Hubbard (2003). In their view, 'phenomenology' seems to refer to the business of gathering descriptions from subjects about their phenomenal experiences in order to produce generalizations from those reports, what I would characterize as conducting phenomenology from the 'outside-in' because it involves attributing properties to phenomena based on second hand experience (cf. Sinke et al. 2012).

8. It should be mentioned that the kind of synesthesia I believe is triggered by Grateful Dead music has begun to be examined more recently (cf. Chiou et al. 2013). That said, prior reference to it has been rather sparse, with the exception of such rare examples as Kevin Dann's mention of Michael J. Zigler, who in 1930 "reported on two female undergraduates at Wellesley College who saw three-dimensional geometric forms when they heard musical instruments played. As in all other cases of synaesthesia, the forms were always the same for any particular instrument, although sometimes they were in color and sometimes not. Hearing the sound of a flute, one subject saw a photism resembling a thimble or an acorn cup, the other a hollow tube; a bugle produced a morning glory and a sphere with an opening on its upper side; piano produced quadrangular blocks or spheres. Forms for other instruments included a mass which burst into

jagged splinters, lumpy dough, ribbons, streamers, and daggers" (Dann 1998, 72). Another reference to this kind of synesthesia is provided by Harry Hunt, who explicitly links it to psychedelic drugs: "In psychedelic states there are also the so-called 'complex synesthesias' (Kluver 1966), in which tactile-kinesthetic patterns are experienced as fused with rapidly shifting geometric designs, all this inseparable from felt meaning. These fusions of body image and geometric form are directly manifested in the mandala and chakra experiences of psychedelic drug and meditative states" (Hunt 1995, 144).

9. "In drug-induced synesthesia subjects perceive the inducer and concurrent as an integrated unified entity. For the subjects it is even confusing to tell the single modalities apart and to state in which modality a stimulus occurs (Mayer-Gross, 1931). This phenomenon of perceived unity even goes beyond the inducer-concurrent coupling as everything seems to have a deeper sense and is connected to everything, and is the basis for often reported mystical experience (Mayer-Gross, 1931); (Shanon, 2002)" (Sinke et al. 2012, 1425.) Furthermore, according to Sinke et al., this also appears to be a phenomenological characteristic found in cases of 'genuine' or idiopathetic synesthesia. In these cases, "the concurrent and the inducer are perceived as an inseparable unitary entity, even though the location of inducer and concurrent may differ" (Sinke et al. 2012, 1425, citing Grossenbacher and Lovelace, 2001).

10. Both with regard to the present point, as well as in what follows, I do not wish to imply that the synesthetic experiences witnessed by audience members are intersubjective in the sense that they *are actually* the same for multiple audience members. Rather, I only wish to maintain that when they are experienced, they are *perceived* to be intersubjective in the sense of being perceived as the same by, or at least similarly accessible to, multiple audience members. But, as the subsequent point should demonstrate, this actually differs very little, if at all, from many other phenomena that are perceived to be intersubjective in everyday life.

11. In addition to frequent references to "it" by band members, crew, and audience, one discussion of the phenomenon occurs between Lesh and Gans in their February 5, 1983, interview (Gans 2002, 200), and another in the interview on February 24, 1983, with Lesh, Garcia, and Gans (Gans 2002, 208–16), that specifically touch on some of the features of *Gesamtkunstwerk* mentioned above. But speaking directly to "its" autonomy, no less for the sake of future examination of the subject, I think it is worth repeating Gan's paraphrase of something Hart told him, namely that "the Grateful Dead really doesn't care whether you like it or not." Lesh replied, "It doesn't even care whether we like it or not" (Gans 2002, 196). Moreover, in the subsequent interview with Garcia, Lesh says "I still believe in it. It still works. It's slow, it's anarchic, and sometimes it sputters and fuckin' won't start (Gans 2002, 215). Finally, to further underscore the band members' collective view of the Grateful Dead as some kind of autonomous being in its own right and separate from them as individuals, consider Garcia's memorable remark in *Signpost*: "Hey, this is a picture of us. I could draw you,

almost anybody in the Grateful Dead could draw you a picture of the Grateful Dead, man. It's got like six or seven weird legs, mismatched pairs, and one moth-eaten eagle wing and one bat wing, you know, and it snorts fire and it's cross-eyed, you know, and you know (*laughter)* but it's … MOUNTAIN GIRL: A genuine monster" (Garcia, Reich, and Wenner [1972] 2003, 134). For a discussion of its relationship to faith, religion, magic, and the divine, see Bryan (2012).

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KURT TORELL is Associate Professor of Philosophy at the Greater Allegheny Campus of Pennsylvania State University. He has published papers on Thomas Hobbes, laws of nature, ethical theory, Plato, and Native American myth. His current research focus concerns the history and philosophy of the 1960s counterculture.