

Seeing is Believing: Synesthesia at Sinai

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According to the Biblical text, the Jewish people “saw the voices (of G-d), the lightning, and the sound of the shofar” (Exodus 20:18) at Mount Sinai [1]. Essentially, an estimated two million people experienced sensory stimuli in one modality but perceived sensation in a different modality. Specifically, the Biblical text states that the sensory stimuli of G-d’s voice and the sound of the shofar were perceived by the Jewish people as an image(s), which, of course, is the typical perception evoked by a visual stimulus, not an auditory one.

This phenomenon seems to share similar characteristics with an interesting neural condition known as synesthesia, a subject of study that has more recently become accepted in consciousness research. Synesthesia is a neurological phenomenon in which stimulation of one sensory pathway produces involuntary and spontaneous perception in a different sensory pathway. Although synesthesia used to be considered a rare condition, recent estimates report that its incidence in the human population may be as high 4%. Synesthesia can involve any of the senses, but the most commonly reported form of synesthesia is perception of graphemes – printed numbers or letters – with a colored hue [2]. Rarer forms of synesthesia also include unusual tactile, olfactory, and gustatory perceptions, such as tasting shapes or smelling numbers [3].

Some of the classic Biblical commentaries provide explanations for this perceptual phenomenon recorded in the Torah, and their descriptions are apparently consistent with our modern understanding of synesthesia. For example, the Ibn Ezra states that “all the senses were connected into one” [4]. Stimulation of any given sensory pathway led to experience in one or more different sensory pathways, giving rise to the perception that the senses were somehow connected to one another.

Since the early 20th century, one popular theory has attributed this perceptual anomaly to “crossed wires” in the brain. Over recent years, competing theories have emerged through increased understanding of brain anatomy and function. One of these newer theories proposes an excess of neural connections, enabling heightened communication between brain regions that are functionally unconnected in typical brains. Dr. Daphne Maurer, a psychologist at McMaster University, has further posited that all humans might be born with an excess of neural connections, but that most people lose those connections as they grow, a process known as “pruning.” Insufficient pruning may give rise to the unusual multisensory perceptions experienced by synesthetes [5].

All these hypotheses are intriguing, but the theory that might best explain the mass synesthetic experience at Mount Sinai is one suggested by Dr. Peter Grossenbacher, a psychologist at

Naropa University. He speculates that in the typical brain, sensory information is first processed in multisensory areas and then “fed back” through neural connections to its proper single-sense area. While this is happening, a process of inhibition also occurs to prevent information from being sent to inappropriate sense areas. In synesthesia, the process of inhibition is somehow disrupted, giving rise to perceptions of jumbled senses [5].

According to the Psychology Corner and Dr. Peter Grossenbacher, the latter theory is consistent with the fact that hypnosis, meditation, and hallucinogenic drugs can temporarily induce synesthesia, a concept that might explain the jumbled senses experienced by our ancestors at Mount Sinai [5].

According to Dr. Zvi Rosenstein, a professor on the medical faculty at Hebrew University in Jerusalem, synesthetic perceptions are often associated with deeply spiritual and creative experiences, a phenomenon that has been confirmed by many synesthetes [6].

Dr. Rosenstein points out a relevant Midrash stating that while crossing the Red Sea “each maidservant saw more than the prophet Ezekiel saw in the course of his prophecy.” While this Midrash might not literally be true, it serves to convey that the spiritual level of the Jewish people was tremendously elevated. Given this information, Dr. Rosenstein posits that the mass synesthetic experience at Kabbalat Ha”Torah is testament to the dramatically elevated spirituality of the Jewish people at the time [6].

Interestingly, an article in Psychology Today speculates that all humans are capable of experiencing synesthesia under suitable conditions, such as those that entail feelings of intense spiritual awareness, which are often achieved through hypnosis or meditation [7]. The latter was actually a bona fide and important part of mainstream Judaism up until the 18th century, its traditional roots observed even in Biblical times [8]. For example, our patriarch, Isaac, is described as having gone “lasuach” in the field – a term interpreted by Rashi in Genesis 24:63 as a kind of meditative practice [9]. While there is no evidence that our ancestors achieved spiritual elevation through meditation at Mount Sinai, it might have been employed as a preparatory exercise in the days leading up to *Kabbalat HaTorah*.

Synesthetic experiences such as “seeing sounds” and other altered perceptions of reality are also known to occur under the influence of hallucinogens. Interestingly, many drug users have also reported that hallucinating with drugs can lead to life-altering spiritual enlightenment [10]. While no suggestion is being made here that our ancestors achieved spiritual elevation through the use of psychedelics, these points further the notion that experiences of synesthesia and spiritual enlightenment tend to occur together.

Based on the Biblical descriptions of our ancestors' unusual perceptions, as well as scientific explanations for similar neurological experiences in the modern human population, it is plausible that our ancestors experienced mass synesthesia at Mount

Sinai. Taken a step further, we can use scientific knowledge to support the veracity of traditional teachings and understand our ancestors' perceptions of jumbled senses as evidence of their intense spiritual awareness at *Kabbalat HaTorah*.

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