

## A Groundbreaking Study on **Music**, Spirituality, Religion, and the Human Brain



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**T**HROUGHOUT MY CAREER in both mainstream academia and alternative education, and in my own personal explorations, my primary interest and area of expertise has been the unique capacity of music to induce powerful altered states of consciousness (ASCs) that allow access to spiritual dimensions. However, as many of us are aware, such states are highly subjective and ephemeral, and it is often difficult for skeptics to accept the validity of these states, take them seriously, and recognize them as an important part of the human experience. So when a friend forwarded an e-mail to me a couple of years ago on a study of musically-induced chills using state-of-the-art brain scanning equipment, I was excited because these subjective states were now being objectively verified by scientific methods. When I investigated further, I was even more excited to discover that there was a growing body of this kind of research using brain-scanning technology to investigate musical experience, and other kinds of spiritual and religious experiences as well.

A few months later, while I was organizing a conference on music and spirituality through my non-profit educational organization, the Sacred Center, I decided to find a brain scientist to do a presentation on this kind of work. At the time, I was doing some adjunct teaching at UC Davis, and to my surprise, I discovered that UC Davis has one of the top facilities for brain science in the country, the Center for Mind and Brain, and that one of the leading researchers in the brain science of music, Dr. Petr Janata, had just taken a position there. So I contacted Petr and met with him and we made a good connection, particularly because it was clear that we both shared a strong interest in musically-induced peak experiences. When he presented at the conference, I began to get a sense that he and I might collaborate on some important research somewhere down the line. The opportunity presented itself sooner than I imagined a couple of months later when I received a postcard from the Metanexus

Institute and the Templeton Advanced Research Program soliciting proposals for \$1,000,000 grants in science and spirituality. I called Petr to suggest we collaborate on a proposal for a three-year study on the brain science of musically induced spiritual experiences and he agreed. After much effort over several months, we crafted a proposal and sent it off. To my utter amazement, we just recently found out that, out of over 130 applicants, our proposal is one of two that has been approved for funding, and we are now hard at work getting things going. The synchronistic way these events have unfolded confirms my sense that this view of music as a consciousness-shifting spiritual technology is not only gaining wider acceptance, but that it is also part of a larger paradigm shift away from a view of science and spirituality as mortal enemies to one in which they actually work together as allies.

Since this is the *MAPS Bulletin*, you may be wondering how all this relates to

psychedelics. In the first part of the study, we will be conducting interviews and surveys with people from six test groups: two mainstream Western religions (a Christian church and a Jewish synagogue); two non-Western religions (a Hindu temple and a Yoruba/West African group); and two non-religious but spiritually-oriented musical scenes (the rave/electronic dance music scene and the jam band scene). These last two groups have an obvious association with the use of specific drugs—primarily MDMA with the rave scene and LSD with the jam band scene (although, as we know, people in these scenes use many other drugs)—and this association is one of the reasons I was so surprised we got the grant. However, before our proposal was cleared for final approval, we did have to address a number of concerns raised by reviewers, and the use of drugs in these scenes was definitely one of them. Specifically, they wanted us to establish an experimental control for drug use among the participants, so that we could be certain the altered brain states were induced by music, rather than by drugs. This was certainly a legitimate concern from a scientific perspective and one we were able to address to their satisfaction, primarily by assuring them that, for the interviews and surveys, we would rely as much as possible on people whose experiences were drug-free, and that drug use would be strictly prohibited in the laboratory experiments of the later stages of the study.

Nevertheless, these concerns raise larger issues that I think are of interest to *Bulletin* readers. First, even though there was some trepidation by the reviewers

about drug use tainting the rave and jam band data, I still think it is a positive development that this project was ultimately approved with these two test groups, despite their association with drugs, and that it validates them as legitimate spiritual communities worthy of serious research. Second, I think that separating the effects of music from the effects of drugs actually furthers research on both fronts. When I spoke with MAPS President Rick Doblin, Ph.D., and told him we had won this grant, he was amazed because MAPS had applied several times for grants from Metanexus and Templeton and never succeeded. I can't help but think that psychedelics probably had something to do with this track record and that the absence of this issue probably contributed to our proposal's success. Of course, I am happy to see that, despite its record with Metanexus and Templeton, MAPS has received funding for numerous scientific studies from other sources.

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In my view, all of it is important research that scientifically verifies ASCs and their beneficial effects, and it all contributes to the paradigm shift of science and spirituality becoming allies. Finally, I hope that our study will open the way for further studies on the effects of music on the brain, and that these might someday include the central and almost universal role of music in the use of psychedelics in both Western and non-Western cultures. •

*Robin Sylvan is author of Trance Formation: The Spiritual and Religious Dimensions of Global Rave Culture. For more information about this study, please see: <http://atonal.ucdavis.edu/projects/tarp/>*