

King of infinite space

by [Ian Simmons](#)

[[people](#) - april 04]

Metod Saniga is an astrophysicist at the Astronomical Institute of the Slovak Academy of Sciences in Tatranska, Lomnica, who started researching space and time after becoming frustrated with physics' conventional view that spacetime is unchanging and the flow of time is an illusion. Saniga believes that science has to be based on perception, and so has to take into account the *different* spacetimes experienced. A chance encounter with a geometrical construction called a pencil of conics became the basis his grand unified model of spacetime.

Ian Simmons (IS): In your research into spacetime, you have concluded that the experiences of distorted space and time found when taking drugs, undergoing mystic states or suffering mental illness can throw light on its structure. How did you reach this conclusion?

Metod Saniga (MS): Since the very first moment I started to gather and look into first-person accounts/narratives describing the so-called "altered" states of consciousness, I have been struck with the fact that subjects, irrespective of their religious, cultural and/or academic backgrounds, pay a lot of attention to the concepts of time and space, as well as to the structure of the Universe as a whole, when trying to share their "uncanny" experiences. Eugene Minkowski, a French psychiatrist of the first half of the last century who is well-known for his in-depth studies of schizophrenic patients, used for this feature a particularly apt phrase: "a morbid preoccupation with geometry". To justify this claim, let me introduce several illustrative examples.

The first case, picked up from my own collections, is the subject who took about 9oz of Robitussin DM Extreme Cough and reported: "I could see time flowing out in a cylindrical thread, which spawned toroidal sub-dimensions from its length. I knew instinctively upon seeing it that the small toruses were supporting sub-dimensions of the main larger dimension. I could see all past, present and future time in its entirety as well as its supporting dimensional structures in effect... The attached graphics,

which I created in 3D Studio, is a 'vision' I saw... Note that the image is incomplete; the small toruses along the string's length should extend off into infinity..."



The second case is a severe schizophrenic patient of a famous German psychologist Franz Fischer (*Zeit. Ges. Neurol. Psychiat.* 1929: 121; p567), who described one of her many psychotic episodes as follows: "One evening during a walk in a busy street, I had a sudden feeling of nausea... Afterwards a small patch appeared before my eyes... The patch glimmered inwardly and there was a to-and-fro of dark threads... The web grew more pronounced... I felt drawn into it. It was really an interplay of movements which had replaced my own person. Time had failed and stood still - no, it was rather that time *re*-appeared just as it disappeared. However, this *new* time was infinitely manifold and intricate and could hardly be compared with what we ordinarily call time. Suddenly the idea shot through my head that time lies not only before and after me, but in *every* direction..."

The final excerpt, taken from the message which I found posted at www.shroomery.org, is one of my favourites, as it depicts in a remarkable detail the process of transition from our "ordinary, waking" state of consciousness to a profoundly deep, mystical one: "For twelve hours I moved in and out of dimensions of both space and time. The incomprehensible became comprehensible... In one moment I was myself, a separate thinking entity with all my individual thoughts; as I merged out my self-hood ceased to exist; my individuality gone; my thoughts as unique things ceased to be, giving way to absolute thought. Time and space played an interesting part in this experience. While in myself time existed, time flowed, there was past and future, but while merged in unity time ceased, there was no past or

future. Everything was a single instant; what Plotinus called the "Eternal Now." In myself space had dimension, there was up and down, limitations existed. Merged in the other, there was no up, no down, no limitation, all was infinite and absolute. This gave rise to another incredible phenomenon; with time suspended and space without boundary omniscience came into full awareness; yes, all things known; no limitations to knowledge..."

IS: What do these states tell us about the universe?

MS: There are a number of extraordinary experiences where subjects claim to have understood the secret of the universe and its creation. These subjects seem to "see", "perceive" the whole universe as being suspended in a sort of abstract, numinous *void, nothingness, emptiness*, which is said to underlie, connect and support everything. Here is a truly fascinating [account](#) to illustrate this point: "Upon smoking the Salvinorin I was transported to a dimension where it seemed that all of creation was visible to me... The entire surface of the universe could be seen as though existing on the interior surface of a giant sphere. With the movement, part of the universe would flow through the centre of this sphere, where it seemed that I was staring down the "axis" where form and non-form met and flowed through each other... As I observed all this I felt a loving connection reaching out to everything in the universe, coupled with pristine clarity and vastly expanded consciousness. At some point I had a revelation where I perceived all form, all creation, as the male counterpart to being. At this same time, I realised there was a female counterpart to manifest creation, which was the emptiness or space from which, and in which, all of this had been created." A seriously-injured patient gives a strikingly similar [portrayal](#) of her extraordinary state, which took place while she was being resuscitated and later operated on: "I shifted my body and flew to the blackness beyond the stars and then turned to catch the view. And what a Kodak moment! The entire universe - our beautiful, abundant universe - spread before my eyes in an immense, white-fired sphere. But more than my eyes took in this sphere - all my senses took it in, as well as my awareness. My spirit drew the universe inside of me, or the universe drew me inside of it. However it happened, I *knew* all of creation from every perspective at once - top to bottom, side to side, outside to inside. I knew the broad reaches of the galaxies, and at the same time, I knew the hidden hearts of the tiniest particles. With

this view, I understood at once the order of the universe. Its composition, dynamics, and rhythms of operation became clear. I saw that, as the Creator's handiwork, our universe is vast and grand but also simple and obvious and sublime. I saw that everything echoes everything else throughout every level of the universe. In fact, everything IS everything else..."

Many subjects also mention that, while in a profoundly "altered" state of consciousness, they experienced *other/additional* dimensions to those we are ordinarily aware of. As one near-death experimenter [puts it](#) explicitly: "I could see all directions at once, yet there were no directions or dimensions as we think of them... I became Love - my entire being, every strand of my spirit spreading throughout the Universe had become Love times a million billion. This is the point where I have to contradict myself. I said earlier that over there was not a "place" like we experience here... I was no longer Ray, my ego had dissolved but somehow I was still Ray... Now this is very difficult to describe, but time ceased to exist. It had no value there... past and future were completely non-existent. I was travelling in an intense, burning now. Now was everything. I ceased to be a noun (person, place or thing) but became a verb (action). I was Ray-ing instead of Ray. This is the best I can do to describe what no-time is like... I was given a huge message at this point... I could not tell the difference between myself and the infinite galaxies. I became all-powerful and all-knowing - and yet I was still Ray. I cannot describe this better than this, but this "story" feels so inadequate next to the real thing... The "place" I went to was not the physical/rational place we know in our everyday experience."

In a few cases, subjects claim to attain the state which is *beyond any conceivable reality*, like the one described in the [following account](#), induced by a mixture of nitrous oxide, ketamine, LSD and DMT: "...First my peripheral perceptions blurred and contracted, then my primary senses, my connection to my body, and finally my sense of 'me'... At the end of this process, I was nothing but a single, dense, tiny point of consciousness in the midst of a vast, multidimensional, seemingly empty space. Then that vanished, and with it went the last vestige of observer consciousness and individual identity. At this point I felt I had travelled back to the primordial, undifferentiated oneness of being that preceded the big bang and the creation of the manifest universe. There was nothing to see or interact with; I had penetrated a level prior to any sort of subject/object distinctions. The universe was all one thing, and I

was it!" Another NDEr uses a slightly different vocabulary to [describe](#) the same: "I felt as though I was finally being my true self... The sense of freedom was inexplicable. I was also strangely aware that the thing we ordinarily call 'time' now was suspended, and no longer existed... Earth and the life I'd lived on it felt very distant, was getting more distant all the time, almost like it had never really existed at all. I was in this place... for a period of time that felt like eternity. No 'time' in the usual sense existed here. Neither did the concept of 'space', but even so there were different places to go, and spans of time that passed by. This is a contradiction in terms, but it is the only way I'm able to explain it in words. Spaceless space, timeless time. In this place there was only pure Being... "

IS: Do these ideas link with other theories of spacetime?

MS: Yes, they do. Additional dimensions, although rather tiny (compactified, curled-up), are necessary stuff for string and related theories which aim at unifying all the known fundamental interactions. The concept of primordial void, emptiness strongly reminds us of the concept of physical vacuum. The feeling of fusion, oneness with the whole universe and everything in it, so typical for meditative, mystical and drug-induced states, may well have something to do with concepts like quantum non-locality and quantum entanglement. And, indeed, one of the interpretations of quantum mechanics, the so-called Everett many worlds (parallel universes), also finds a strong "psychedelic" support, as nicely illustrated by the [following excerpt](#): "...all of a sudden, reality folded up like an accordion. I found myself becoming aware of being aware of being aware of 'myself', who had become a concept, an abstraction. I had become "unstuck" from consensus reality. Now I understood the Everett-Wheeler-Graham model of quantum mechanics on an intuitive level. This states essentially that at each quantum 'moment', the universe splits into many alternate realities, one in which the particle goes to 'x', one where it goes to 'y', etc.. And now I saw that consciousness was the hidden variable, pushing through those alternate realities. Only in this state I could pick and choose which one I wanted to go to. It was like flipping pages in a book. The physical world in fact seemed flat and I could see 'underneath the board' so to speak. I was meta-aware of these quantum possibilities..."

IS: Can all this be expressed mathematically?

MS: From the accounts sampled about it is quite obvious that the variety of extraordinary forms of time and space is so intricate, complex and multifarious that, at first sight, it may seem to lie completely beyond grasp of any mathematical framework, seriously threatening the integrity of our "rational", or "objective" worldview. Yet, the contrary is true. Last year, I came up with a relatively simple algebraic geometrical model of states of consciousness that qualitatively underlies and accounts for the most pronounced and most frequently reported groups of "non-ordinary" mental spacetimes. Stephen Battersby gives a very nice, elementary exposition of this model in the 20/27 December 2003/3 January 2004 issue of the *New Scientist* magazine (in the article 'Einstein on acid'). A somewhat more technical, yet still accessible to the general reader, description of the theory is presented in my recent joint paper 'The psychopathological fabric of time (and space) and its underpinning pencil-borne geometries', accessible on-line at the physics [e-print archive](#). The more mathematically 'oriented' reader will surely enjoy reading a couple of closely related papers, viz. [Geometry of time and dimensionality of space](#) and [Cremona transformations and the conundrum of dimensionality and signature of macro-spacetime](#) (published in *Chaos, Solitons & Fractals* 2001: 12;2127-2142).

IS: Would you, then, recommend physicists seeking mystic states or taking drugs to better understand the universe, would that actually help, or is it enough to analyse reports of these extreme states of consciousness?

MS: Although I believe that a deep meditation is the best way to unlocking the secret of the universe and the very essence of our being, I think we can really learn a lot by a careful mathematical analysis and examination of these extraordinary, first-person experiences. I am convinced that the time is already ripe we considered these experiences, irrespective of their ontological status, without any preconceived ideas, as being on the par with "standard" observations and, in principle, repeatable by everyone.

IS: How has your work been received by fellow researchers?

MS: Within the past few months, I have received quite a few messages, many of them as a feedback to the *New Scientist* article. A great majority of these responses

were very encouraging, which I regard as a reassuring sign for my approach to be on the right track. Let me quote from one of them: "I just completed reading Battersby's article. The material is not only highly original. It is truly fascinating and enormously challenging... For the first time I see the possibility of bridging the gap between altered states of consciousness and scientific factuality. What Saniga has thought out makes a lot of sense in the light equally of relativity, of mystical knowledge and, finally, of my own personal intuition..."

IS: Where would you like to take this work next?

MS: There are a couple of things I intend to do in this respect in the near future. First concerns a proper refinement and generalisation of my model. Second is my effort to set up a long-term international trans-disciplinary project where this fascinating fabric of mental spacetimes will be subject to a rigorous scientific scrutiny.