

Anyone know the URL for the truth? - science and constellations

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The day before I sat down to write this article, I was given a fortune cookie in a Chinese restaurant. The message inside read:

The truth is out there. Anyone know the URL?

Clearly not a traditional proverb as 'URL' stands for Uniform Resource Locator, the technical term to describe the global address of items on the World Wide Web. How apt, I thought, that's pretty much how a constellation feels at times: as if the truth is held somewhere in a web or 'knowing field' and we just need to get the right address.

I once set up a personal constellation and from it emerged a dynamic between an unnamed and unknown couple who expressed shock and grief at a sudden separation, followed by the male representative experiencing such vivid and disturbing war images he felt close to madness. I had no idea what was being played out until the next time I met my mother, who spontaneously told me the story of her father's abrupt enlistment, describing in detail what I had already witnessed.

This story reflects the accuracy of data we have come to rely on in constellations, yet other experiences sound warning bells. I was recently asked for advice by a friend, whose protégé had done a constellation in Austria. The end point was the group leader, echoed by the group, telling her that her two daughters hated her, her marriage was at an end, and only an immediate divorce was the answer! Now, the inappropriateness of this guidance seems to indicate an amateur practitioner trying to play God, but one must also question the data from which the conclusions were reached. While what emerged phenomenologically could be said to be the underlying, unseen dynamics, it bore no relationship to the woman's or my friend's everyday experience of the family. By what stretch of the imagination could it be described as 'truthful'?

In light of such experiences, it becomes advisable to think about what the data we receive in constellations really is, where it comes from and what status we choose to give it.

What can science contribute?

My background is as an historian and philosopher of science, and, during my training as a body psychotherapist, I was excited and amused to see science beginning to find explanations for dynamics that our discipline had been working with for decades. But the impact of the science was more than just playing catch-up. Some of the understanding and insights have been able to inform and refine both our theory and interventions for the better. As I trained in organisational constellations, I was looking out for a similar process and feel it is now beginning, with scientists and thinkers such as Rupert Sheldrake and Ervin Laszlo talking at constellations conferences.

It is a process of engagement that I would like to see extended and deepened as it could bring learning and benefits on both sides. The difficulty is that our understanding of constellations is unlikely to be much furthered by revisiting the mechanistic explanations most of us are familiar with as 'science'. We need to move towards the emerging holistic sciences, which are myriad, complex and frequently perceived as inaccessible to the non-specialist. My view is that the discipline of making these new sciences accessible and relating them to the direct experiences we have every time we do a constellation would shine a spotlight on our underlying assumptions of reality and how we access it in very rich ways.

As constellators, it could sharpen our ideas on the status of what emerges as data and thus support our guidance of clients. It could take us through the valuable process of challenging what we think is going on. And in a world mostly out of touch with the validity of phenomenological data, finding the connections to respected theories and discoveries within science can only add credibility. For the scientists, a serious look at what happens in constellations would provide them with some measurable and ground-breaking data which could provide a test-bed for their theories.

What I offer below is one starting point. It is not an exhaustive review, but a compilation of aspects of science that I have researched over the years and find particularly relevant to constellations¹. It is not the 'truth' or some final answer, but more a stimulus for you to ask: could this be an explanation? Does it fit my experiences? If not, why not? What is missing? Let's start the inquiry...

Communication between people

To tell this story, I want to look at one of the most fascinating organs in our bodies: the heart. In our culture we think of it essentially as a pump, circulating blood and providing oxygen to our tissues. Without it, we cannot survive, so it is acknowledged as important; yet there are aspects emerging about the functioning of the heart that extend its role significantly. Three of these, described below, have been highlighted by the HeartMath Institute (Childre, Martin and Beech, 1999) and are particularly interesting.

Firstly, scientists have long known that the heart and brain are neurologically connected, but they believed that the heart just did what the brain instructed. Since the 1990s it has become clear that the heart is neurologically so complex it may as well be termed a brain in its own right. It can learn, remember and even feel and sense independently of the brain in our heads. Not only that, but there are times when the brain does what the heart tells it, not the other way round.

Secondly, analysis has revealed that heart rate variability (the rate at which the heart beat changes) essentially forms an intelligent language, one that carries information about our emotional states: when we are loving and calm, the signal is a smoothly fluctuating wave; however when we are angry or frustrated, it is incoherent, random and jerky. This information permeates through our bodies via the transmission of nerve impulses, pressure waves in the arteries and also energetically, as the heart generates electromagnetic waves. The impact of the heart's different rhythms on the body provides clear evidence of the connection between emotions and physical well-being. If we are angry, disharmony in our heart waves leads to inefficiency and increased stress, not only in the heart but the entire nervous system and all the other organs. A shift to appreciation and compassion induces better balance within the nervous system, diminished wear-and-tear on internal organs, reduces production of the stress hormone cortisol and boosts levels of IgA, an antibody that forms the immune system's first line of defence. Being happier and calmer really is better for you!

Finally, the heart does not just influence the person whose body it is encased within. Research has shown that if one person touches another, the electrical energy from the toucher's heart (measured by ECGs) shows up in the other person's brain waves (as graphed on EEGs). This has now been taken a step further. Scientists knew that the heart's electromagnetic field, carrying information about a person's emotional states, could be measured up to ten feet away with sensitive detectors called magnetometers. What they have now found is that other people's brains can also pick up the signals when the individuals are in close proximity, without the need for contact.

I bring such detail about the heart because it provides a clear means by which a person's emotional state can be measured and demonstrates that this information can be picked up by other people:

"... we're in effect broadcasting our emotional states all the time (and receiving others'). Of course, we communicate emotional states in other ways as well... but even without body language and additional clues, we transmit a subtle signal. We can't keep it in. All of us affect each other at the most basic electromagnetic level."

(Childre, Martin and Beech, 1999, p. 161.)

The mounting experimental evidence and theory that we can pick up information about each other now goes far beyond the heart (the science outlined in this and the

subsequent four paragraphs can be found in Oschman, 2000). Oschman compares the 'biological electricity' created by the heart's rhythms to the mains electricity flowing into your home and powering the appliances within it. What is now being explored in science is 'biological electronics', equivalent to the subtle electronic processes taking place in your computer or TV. At these levels, it is found that each movement of the body and each organ within it are generating precise biological signals. The question for us here is: are these signals just by-products of necessary biological processes, or do they have some function in communicating with others? To answer that, we need to know if the human body is capable of picking up such signals.

The traditional answer from science is that these very weak electromagnetic fields (known as 'extremely low frequency' or ELF) would be swamped by larger physiological signalling processes, so they must be merely a by-product which our bodies would be unable to pick up. What is now being found in biology, however, is that in living systems extremely weak fields may have potent effects, while there may be little or no response to strong fields. One explanation is that highly ordered arrays of molecules in our tissues are able to extract information from fields originating inside or outside the body. This physical process is akin to that involved in radio astronomy, where phased arrays of radio telescope antennae are used to detect extremely weak signals from star systems millions of light years away.

Moreover, this ability of our bodies to pick up such fields is crucial for our well-being. Some cellular responses require the application of energy in a very narrow range of frequencies and disruption of these processes can lead to allergies and chronic diseases. While many of the required fields are generated within the body, we are also surrounded all the time by naturally occurring ELF fields which are picked up by our bodies and are essential for maintaining regular physiological rhythms.

So not only are we capable of picking up ELF fields, but it is necessary that we do so, and this capacity is also linked to healing. Doctors are applying artificially generated ELF fields to fractured bones, having found that this can convert a stalled healing process into active repair, even in patients unhealed for as long as forty years. A variety of healing practitioners have been shown to emit powerful pulsing biomagnetic fields through their hands. These signals are not constant, but 'sweep' through a range of frequencies, including those that biomedical researchers have identified for jump starting healing of soft and hard tissue injuries.

While science is not yet able to detect the entire range of information that humans can pick up from each other, it has found mechanisms by which such communication could be happening: electromagnetic fields of varying strengths and frequencies carrying information within and between people. This could provide an explanation for the counter-transference long familiar to psychotherapists, as they 'tune in' to the emotions of their clients and validate the body psychotherapists' view that this process is essentially a bodily one. It also

ties in nicely with our experiences from constellations, where the representatives' bodily responses provide clear indications of what is going on.

Electromagnetic communication in constellations

So how does this relate to constellations? At one level, electromagnetic communication could explain the uncanny way in which clients often pick people as representatives who have precisely the issue they are looking at. They could be unconsciously picking up information encoded in a representative's personal 'field'.

In terms of family evolution, we could see the family as existing within an electromagnetic field, which has certain characteristics and dynamics stored within it. A child born into this family unwittingly absorbs all the information from this field², grows up with it, and re-enacts the dynamics in their interactions with those around them. Should they seek therapy, they then re-enact these dynamics with the therapist. The therapist in turn may end up re-enacting these same dynamics in supervision, otherwise known as parallel process. All these are examples of a person's field, as set in their family, being re-created elsewhere.

Is this, then, what is going on in constellations? The issue-holder comes along, entire family energy field in tow, and then sets up the representatives who tune in to it. With more people playing the different parts, more complex dynamics are able to emerge than in one-to-one therapy. These more detailed mappings over multiple families have made it possible to learn the general rules about how family systems work and derive the 'orders'.

It is noticeable that the issue-holder usually sets up the representatives by touching them with intention: optimum conditions for maximum information transfer! Yet we know that people can pick up emotional changes without contact and this is seen in the energetic shifts within constellations by which one person feels differently and all the rest pick it up and respond to it. It is also worth noting that all this communication takes place in a typically calm and open environment, often after some form of meditation: all the right circumstances to allow the kinds of synchronisations between brains and hearts that have been observed in experiments and promote intuitive communication.

So, a certain amount about constellations can be explained through subtle electromagnetic information transfer between people in close proximity, but there are aspects to constellations that appear to go beyond this. Particularly striking is the evidence that what happens in the constellation can impact not only the issue-holder who was present, but also the wider system being represented. This often comes through in anecdotal form, such as Great Aunt Maude from the Antipodes, from whom no-one has heard in twenty years, suddenly calling the day after being represented in a constellation. For such cases, quantum entanglement may have some answers.

Quantum entanglement

Quantum entanglement is the spooky 'action-at-a-distance' that Einstein hated so much about quantum theory that he tried to use it to discredit the entire enterprise. Essentially, quantum physics, focusing on the world of the very small, predicts that if you take two particles and let them interact, they will behave in future as if they are not separated. If you were to move them apart and then change one, the other would instantly change, as if there were no distance between them. Unfortunately for Einstein, this has now been proven experimentally and is accepted fact in the science world (Rae, 1986).

The entities so 'entangled' form a 'whole' which is irreducible to its parts. The parts "sink their individuality into a common wavefunction" (Taylor, 1998) and the behaviour of the parts cannot be explained except by reference to the whole.

The crunch comes when one asks for what size entities this phenomenon holds true. As far as mainstream biology is concerned, the answer is 'not very big'. It allows for quantum coherence in small molecules, but maintains that as the molecules get larger, the random movement of heat (observable as Brownian motion) interferes with any coherence that could express itself. So biologists consider that quantum entanglement cannot be taking place between large molecules and certainly not between cells or living beings.

The new holistic biology is claiming otherwise. A growing body of both theory and experimental evidence supports the case for large-scale quantum coherence. It has been observed in fluids, especially water, and also small organisms (Taylor, 1998). Experiments done with groups of fruit-fly embryos involved shining light onto them and measuring the rate at which it is re-emitted. The extraordinary finding was that, instead of each embryo randomly releasing the light in its own time, they were functioning collectively and re-emitting large quantities of light in short bursts. This means that all the embryos were co-operating, acting as one unit, so there must be communication and coherence between them (Taylor, 2005).

Rigorous measurement of human brainwaves has shown entanglement between people. The experiment in question was originally set up by Jacopo Grinberg-Zylberbaum (1994) and has recently been repeated under much more stringent conditions by Harald Walach and colleagues (Wackerman et al., 2003). It relies on the fact that a sharp stimulus (e.g. loud noise or flash of light) will cause a distinct 'blip' in a person's brain waves. Pairs of subjects meditated together, in order to achieve a state of empathic non-verbal communication, before being put in separate rooms (15m apart) shielded from electromagnetic and other normal signals. One of the pair was subjected to the sharp stimulus, at random intervals. The brain waves of each were recorded and the blip could be seen to stand out clearly against the background brainwaves – both for the initial recipient *and* for their partner who had not been stimulated. Yet no such communication occurred between pairs of subjects who had not interacted, or in a variety of other control situations.

This work is interesting as it specifically counters the possibility of the communication being through electromagnetic fields and so could form the basis of an explanation of how an entire (and geographically distant) system can be impacted by one person from that system doing a constellation. Such connection and passing of information implies that a quantum 'whole' could be operating.

Could family (and organisational) systems be such quantum 'wholes'? The similarity between the qualities of such a 'whole' and what has been found in family systems is striking. Specifically, constellations have shown that you cannot *not* belong to your family. Members are held as part of it down many generations, enacting its dynamics entirely unconsciously. The group has been shown to take precedence over the individual – hence the willingness of children to give up their lives according to the needs of the group conscience. Isn't this akin to an atom losing its identity within the molecule, its behaviour inexplicable without reference to the whole?

Taking things to a more general level, evolution has been a process of 'wholes' emerging in ever greater complexity, from elementary particles to atoms to molecules to cells to more diverse organisms. Schrodinger even envisaged the possibility that there might be a wavefunction for the whole universe. What is interesting is that each level exhibits emergent properties that could not be predicted through understanding the parts from which they are made.

Could family systems be the 'whole' that emerged after the 'organisms'? Allowing for this, then the orders that have been discerned phenomenologically from constellations work could be seen as the emergent properties or natural laws that hold at that level - a blueprint of the wavefunction possibilities that hold for a social system!

The zero-point field

I want to look briefly at a third piece of cutting-edge science: the 'zero-point field'. This is because it seems to reflect what many intuitively feel takes place in constellations, this sense of tapping into an external objective truth with a URL. It also has implications for the question of whether it is possible to represent aspects of systems with which the issue-holder is not directly connected.

My information here comes from a presentation given by Ervin Laszlo in 2004 on his latest book, *Science and the Akashic Field: An Integral Theory of Everything* (Laszlo, 2004). The starting point was that the 19th century scientists had got it wrong: space is not empty. In fact 1cm³ of a vacuum contains more energy than that associated with all the matter in the universe. How has this been missed for so long? The answer, apparently, lies in the nature of the 'zero-point field' (ZPF) that underlies space itself. This field consists of a sea of fluctuating energies that is super-fluid and super-dense, thus having no friction. It cannot be perceived or measured with instruments. It can, however, be measured through

information. In fact, information about everything that has ever happened in life, on Earth and in the cosmos is conserved within it. Not only that but it is holographic - all the information is available at all times at any part of it. Moreover, it is accessible by people.

At the time, this explained everything for me. Those representatives picking up my grandfather's grief at leaving his wife and his pain during the War, were just tapping into historical events as recorded in the ZPF and accessible to anyone at any time in the right conditions. The ZPF is an impersonal universal record. It would be hard to find a closer definition of 'the truth', how we feel we tap into the 'knowing field' to find the URL of the information we need.

Further consideration of some of the more interactive and apparently fickle characteristics of the 'knowing field', however, leads me to feel that there must be more to the story - crucially because I find that what emerges in a constellation appears to be context-specific. It's not just about finding the right URL, but that the information is relevant to the question being asked.

What comes to mind are two constellations I've witnessed in which 'the fate of the environment' was set up as an entity. In one, it collapsed in tears and pain, saying: "This is the cost if you ignore me." In the other it stood strong and tall: "I am fine, don't worry about me." The first was a constellation looking at the wider impact of a polluting industry, the other was about an individual over-working to try and save the planet. I would argue that each response was entirely appropriate to the context, but this belies the idea that there is one 'fate of the environment' out there, encoded in an independent record for all time, which was being tuned in to.

Conclusion

I wrote at the start that I hoped a deeper engagement between science and constellation work could bring learning and benefit on both sides. Having begun that process for myself through the writing of this article, I am now more convinced than ever that this can happen. It is not about 'proving' constellations through science, nor reducing it to simple cause-effect relationships. Instead it is about exploring the different stories that the two disciplines tell, holding the phenomenological data from constellations, the internal experience of our consciousness, to be equally as valid as the readings from an ECG.

Until scientists start really investigating the everyday workings of constellations, they are missing out on an exciting and rich laboratory. Imagine if everyone in a constellation were to have their heart rates and brain waves measured: what would be revealed? How would the readings correlate with the verbal descriptions of the representatives' internal states? Other measuring devices could add further insight. Would Kirlian photography capture the changes as individuals moved from worse to better positions in a constellation? How might it be possible to record what is happening in the spaces between people? Such

investigations would provide fresh data for a wide spectrum of the sciences, from biology to physics, and help the movement from the old separate models towards a more interconnected, holistic paradigm of how the world works.

For constellators, I would say that science, while not able to define what goes on in a constellation, provides theory and evidence that offer a fresh frame of reference. Engagement with it can bring to consciousness our underlying assumptions about reality and these beliefs matter, because they form the basis from which practitioners work and, importantly, how they interpret the work for clients.

For example, a practitioner who believes that representatives are picking up electromagnetic information originating from the issue-holder's personal system will view the constellation as subjective and limit its scope to the individual's sphere of influence. However a practitioner believing that constellations are capable of tapping into an all-knowing impersonal field, would be much more likely to set up systems far distant from the issue-holder and give weight to the data emerging as having objective validity.

I believe that these issues are important, because working with constellations is a skilled task that can have a powerful impact on the lives of those involved. As an historian and philosopher of science, I have had to abandon the idea of science finding the 'truth' and instead see it as a way of creating better and better stories to explain more and more phenomena. My hope is that exploring the stories from science and constellations together will lead to an even fuller, more inclusive picture, which in turn will translate into more effective and valuable actions in the world. I look forward to others bringing their stories from their perspectives and engaging with the process.

Footnotes:

¹ *The science presented is in summary form for the sake of brevity. Readers wishing to know more can find detailed technical explanations and primary sources through the books and articles referenced.*

² *Clearly, the child is absorbing information about the family through a variety of mechanisms including explicit behaviour, language and unconscious bodily signals, as well as subtle electromagnetic communication. This touches on fascinating questions regarding the inter-relationships between the behaviour and the family field. For example, does the behaviour define the field? Or vice versa? Unfortunately these lie beyond the scope of this article.*

Editor's Note:

Melissa Roussopoulos, MA MSc, is an Associate of the **nowhere**foundation and has researched constellations and run a number of exploratory workshops at Schumacher College for their MSc in Holistic Science. She is currently looking at the application of constellations in the environmental field and is especially interested in what such work can reveal about the nature of consciousness. Any responses to the article or ideas to further the constellations/science engagement would be welcome and her contact details are: melissa.roussopoulos@nowherefoundation.org.

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