

Mirror Neurons, Quantum Physics, Morphic Fields, and Family Constellations

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The fundamental phenomenon on which family constellations are based is the phenomenon of *representative perceptions*. These perceptions manifest in the *representatives*, whom the client has chosen to represent himself and certain members of his family. We are not going to discuss the reality of this phenomenon, which can no longer be called into question except by people who have not experienced it and on the basis of dogmatic and theoretical criticism. We will try to show how current thinking in quantum physics and neurobiology, as well as psychology and field theory, can lead us to hypotheses concerning phenomena that are apparently incomprehensible, but that have nevertheless been observed thousands of times during the course of family constellations. Perhaps this will enable us to overcome many constellators' cognitive delay with respect to their practical experience, and their clinical practice when they are therapists as well. We are also aware of the necessarily metaphorical nature of our reflection.

Let us begin by recalling, in short, the methodological practice of family constellations. The client presents his problem to the *mediator* (a coach, therapist, or euphonic counsellor, for example) who decides which people from the client's family system are to be *constellated* (placed in a determinate space). Of course it is not possible to place all the members of his family system, since there would be several dozen of them; the constellator places the most important members in connection with the problem the client has presented.

From among the people present, the client chooses the *representatives*, afterwards placing them, according to his feeling, in relation to each other within the defined space.

What then takes place is as strange and surprising as it is interesting: the representatives begin having sensations, emotions, thoughts, and even impulses to move or speak that genuinely correspond to the relational and psychological situation of the person they are representing, a living or deceased member of the client's family system. These representatives know nothing or practically nothing about the lives of the people – complete strangers to them – who they are representing; I would like to place special emphasis on the fact that the representatives have no (or practically no) information – neither detailed nor explicit – about the people they are representing. In spite of this, the representative perceptions, surprisingly but quite habitually, guide the mediator towards a (better) solution to the problem presented by the client, not only for the client's benefit, but also for the benefit of all the members of his family system who are connected with the problem.

It is as if the people constellated in this new representative system are entering into contact, into resonance with the client's family system, and are able to do so in spite of the spatio-temporal distance. Biologist Rupert

Sheldrake calls this *morphic resonance*. In the context of constellation work, I refer to this phenomenon as *morpho-systemic resonance*.

Inspired by the German embryologist Hans Driesch, the eminent scientists Alexander Gurwitsch (St. Petersburg) and Paul Weiss (Vienna) demonstrated that the classical biological explanation based on genetic transmission is not sufficient in order to explain the evolution of life; they integrate the theory of fields of force, drawing attention to the existence of other fields, such as those of gravitation and electromagnetism.

The British biologist C. H. Waddington of the University of Edinburgh employs the term “chreode” to signify a developmental pathway directed towards a goal. He explains that this goal is an attractor that permits information and energy to converge, and this in turn gives rise to their manifestation or materialization.

It was then Rupert Sheldrake’s work to study, elaborate, and broaden the idea of the *morphogenic field*, extending it from biology to many other areas including social interaction, economics, and psychology, and proposing that these phenomena be referred to as *morphic fields*.

But let us return to our family constellation, during which representative phenomena of the following kind occur: the representatives manifest a precise knowledge of detailed facts concerning the client’s family, of which the client himself had been ignorant until then, and the truth of which he later verifies after talking with the people or relatives in question. I mention here that we are not dealing with a mediumistic séance, and that these phenomena occur practically all of the time during the course of family constellations. We could ask the question: if there exists a family morphic field, a family system, which Jungian psychologists might refer to as a “collective or family unconscious,” how does sensory, emotional, and cognitive information manifest in the people belonging to the new constellated representative system?

From our point of view, only quantum theories and their application to fields can today provide us with a few satisfactory answers and hypotheses to this question. We will come back to this in the final section of the article.

But beforehand, we need to first examine another question that requires explanations that are provided by genetic biology, systemic psychology, and genealogy: what are the different “elements of information” transmitted in a family system?

At the biological level – and this is no longer a mystery to anyone – transmission occurs through our genes.

At the psychological level, it occurs primarily through behaviors based on relationship, observation, and imitation. We know today that beyond the mother’s and father’s genetic contributions, the embryo, through its symbiotic relationship with the mother, beginning with conception and during its entire fetal development over the course of pregnancy, is positively or negatively influenced not only by the mother’s physiology, but also by her emotional life. This is followed afterwards by the period of education and conditioning.

Knowledge of how “mirror neurons” work sheds light not only on the processes of learning and imitation, and consequently on the development of intelligence, but also on the mysterious phenomena of representative

perceptions, which are always connected to “movements” of a bodily, sensory, emotional, or intellectual nature. These movements are necessarily provoked by information. And this information can only have its source in the represented morpho-systemic family field, which is in resonance simultaneously with the problem presented by the client and with his family system; the mirror neurons reflect or mirror this information in the visual centers of the brain and communicate it instantaneously and immediately (etymologically, “without intermediary”) to the representatives’ motor centers. The constellation then becomes the materialization, the manifestation of the past evolution and present state of the client’s family system.

Rupert Sheldrake, after witnessing family constellations, expressed his astonishment at seeing, for the first time, the manifestation of morphic fields in action before his very eyes.

In a letter to the Academy of Science of the Institute of France, one of the discoverers of mirror neurons and professor at the University of Parma’s Department of Neuroscience, Giacomo Rizzolatti, describes certain essential functions of mirror neurons. Their principal characteristic is that they are activated both when we perform an action ourselves and when we observe it performed by somebody else. They are a mechanism that projects the description of an action, localized in complex visual zones of the brain, onto its motor lobes. This is also the mechanism that permits the action to be understood and possibly imitated afterwards. This means that mirror neurons allow us to see what the other person is doing and to understand why he is doing it (that is to say, his intention), before we can imitate it ourselves. They thus enable us not only to recognize an action, but also to foresee the following action, in other words, to recognize the intention. More recent research has demonstrated that these mirror neuron mechanisms are also active in “empathy,” which is defined as the capacity to feel the same sensation, the same feeling, or the same emotion as another person.

Apropos, these mechanisms also substantiate the thesis of the gestural origin of language; the spoken word was born of the language of gestures and not from animal cries, which had been the prevailing opinion prior to Condillac’s work. Through the action of mirror neurons, movements and gestures – themselves archaic messages – are understood by the observer without any need for verbal communication. (Over the course of more than ten years, I developed the psycho-corporal practice Samadeva Gestural Euphony, which is an application of these principles). In the context of family constellations, this explains the importance and effectiveness of placements, re-placements, and other symbolic movements with respect to this archaic form of communication that is immediately understood by the representatives. It also permits us to explain the practically instantaneous transformations of the representatives’ emotional states during the course of a constellation.

For psychologists, psychiatrists, and psychotherapists, the study of mirror neurons also offers a new contribution to the understanding of certain serious mental pathologies such as autism and schizophrenia, an important basis of which – for autism, at least – is a lack of empathy, connected to a deficiency in the person’s mirror neuronal system, in which the seriousness of their illness is proportional to the degree of this deficiency.

Knowledge of mirror neurons also helps us understand the importance of the mother-child relationship, the quality of which conditions the child's development; indeed, not only the mother herself is reflected in the child's psyche, but also her own relationship with her parents, ancestors, siblings, and naturally with the child's father (Freudian identification).

During family constellations, a further phenomenon occurs: when the mediator asks the client himself to choose the representatives of the members of his family system, he generally (and unconsciously) chooses people who have the same type of problem as the one he has presented, in spite of the fact that he knows nothing about the lives of the representatives he has chosen. Perhaps this serves as a further example of the gestural and emotional mechanism of mirror neurons.

While the study of mirror neurons provides us with clues for understanding many of the phenomena that occur during family constellations, other phenomena call for a reflection that incorporates quantum physics, in particular the following question: during a constellation, how is information transmitted from the mother to the child, from the client to his representative, or from the client's real family system to the constellated representative morphic system?

As we all know, Albert Einstein's equation $E=mc^2$ can be translated as "energy is equivalent to matter." Quantum physics, and particularly quantum mechanics, developed by Werner Heisenberg (Nobel Prize, 1932) and Paul Dirac (Nobel Prize, 1933 with Erwin Schrödinger) and its later extension to quantum field theory with Wolfgang Pauli (Nobel Prize, 1945), allow us to understand the equivalence of matter, energy, and information, as it is presented today by Thomas Görnitz of the University of Frankfurt.

Equivalence here means that from the elements of information-energy-matter, each can transform itself into the other. Görnitz demonstrated that by associating quantum theory with the theory of gravitation, and particularly with black holes and cosmology, it becomes possible for us to define the absolute value of quantum information. Let us recall that the more we approach the infinitely small in the domain of matter, the more this matter tends to disappear, giving way to energy, and finally to information. Thus an atom is mostly empty space with a central nucleus consisting of quarks, considered to be the building blocks of protons and neutrons. This is the classical conception, but it is in contradiction with the quantum reality: the mass of the quarks represents only about two percent of the proton's total mass, while the rest is what we could call the "movement" of the quarks!

If we return now to the matter-energy-information equivalence, understanding in this way that information can exist outside of the transmitter and the receptor, we can come to the conclusion that quantum information is, above all, *non-local*, that is to say, "present everywhere throughout the entire cosmos"; it is cosmic in the truest sense of the word. This also means that we must conceive any unit of quantum information (a quantic bit) as being present throughout the entire cosmos. However, the moment this unit of information is defined, it becomes, as a consequence, capable of being localized. Thus, if a normal bit is represented only by "right" or "left," a quantum bit is defined by the context "where 'right' and 'left' are located," that is to say, the environment. This is incidentally the

characteristic of any quantum system: its relational potentiality that includes every possibility. The more information there is, the more manifestations there are; thus we can define matter, in connection with black holes and cosmology, as condensed quantum information, something like water vapor condensing into a drop. This means that our thoughts – that is to say, information – are just as real as the neurons in our brain. These neurons are condensed information, and our thoughts pure, non-materialized information. From a more general point of view, this implies that since *every unit of information is everywhere* (in the cosmos), it is present nowhere, in other words, neither here nor now... unless it is coupled with a substrate that carries it.

In the work of family constellations, we create a context – the client, his problem (that is, his intention), and the representatives – in which information having its origin in the client's family system can manifest in the representatives in the form of representative perceptions. If we now, through specific work, introduce new information (propositions for better solutions) into the constellated system, this information – and our experience confirms this – brings about changes in the client's family system. And due to its non-locality, this information is capable of manifesting itself instantaneously and immediately if an attractor exists; in our case, the attractor is the morpho-systemic field of the client's family. This is an example of an "EPR" phenomenon (after Einstein, Podowsky, and Rosen); indeed, according to the quantum principle of non-locality, the information produced in one place is perceived immediately and instantaneously in another place, without requiring any conducting element between the transmitter and the receptor.

Let us take an example. A client tells us that after an argument, her son has not spoken to her for ten years. We can imagine the suffering of the mother... and certainly of the son, closed up inside his negativity. During the family constellation, we find a solution of reconciliation. The following morning, after returning from our seminar, the mother tells us – and we can imagine her emotional state – that when she came home, she found a message from her son on her answering machine!

Most psychotherapists, coaches, and other counsellors know that EPR phenomena are not rare, and that after a supervision during which a (private or business) client's case was examined, a solution had already begun to emerge without the client being told about the supervision or its content.

These few reflections are not meant to be either exhaustive or definitive as an explanatory approach toward the apparently mysterious or frankly extraordinary phenomena that occur during family constellations. I hope I have provided a few lines of further inquiry for interested researchers. A final reflection by way of conclusion: the principle of non-locality in quantum physics is not only spatial, but also temporal. A quantum system does not have internal time, that is to say, it is in a continual present without past or future. This is the same idea that the masters of wisdom of the past referred to, in their spiritual teachings, as eternity. It is perhaps also what Carl Gustav Jung called the unconscious and which Sigmund Freud spoke of as having no knowledge of time. The reality of information and thought also enables us to conceive of the reality of *consciousness* and the *spirit* without the substrate of matter, in other words, without the brain and without the

body. Quantum physics, at the forefront of science, enables us to better understand the non-material existence of the spirit, and its survival even after it has separated from the physical body. The question arises: due to its informatic nature, does this spirit become non-local and dissolve into the cosmos, or does it remain individualized by joining itself to another substrate or supporting body?

It is self-evident that the evolution of psychological, and particularly psycho-neuro-immunological and neurologically-based approaches during the past two decades oblige us to abandon most of the theories of the 20th century, the majority of which were born of the “Age of Enlightenment” and founded on Cartesianism. And those of us who have succeeded in integrating these new approaches know to what extent the “enlightenment” in question was only that of a candle, and that materialist Cartesian thought was only one possible model and language applied to a limited field of knowledge, due to its own rationalist syntax.

Thus the quantum, systemic, genetic, informatic, and cybernetic models shed a new light upon the scientific knowledge of the last two centuries, which nevertheless served as their foundation, but to which many outmoded scientists still remain fettered, and along with them the greater part of contemporary adults trained in these antiquated languages that confuse syntax with semantics. But the *new era* has begun, during which the minds of those who have succeeded in remaining young are joining themselves to the new generation.