

# Archetypes as action patterns<sup>1</sup>

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*Abstract:* The discovery of mirror neurons by researchers at the University of Parma promises to radically alter our understanding of fundamental cognitive and affective states. This paper explores the relationship of mirror neurons to Jung's theory of archetypes and proposes that archetypes may be viewed as elementary action patterns. The paper begins with a review of a proposed interpretation of the fainting spells of S. Freud in his relationship with Jung as an example of an action pattern that also defines an archetypal image. The challenge that mirror neurons present to traditional views in analytical psychology and psychoanalysis, however, is that they operate without recourse to a cognitive processing element. This is a position that is gaining increasing acceptance in other fields as well. The paper therefore reviews the most recent claims made by the Boston Process of Change Study Group as well as conclusions drawn from dynamic systems views of development and theoretical robotics to underline the conclusion that unconscious agency is not a requirement for coherent action. It concludes with the suggestion that this entire body of research may lead to the conclusion that the dynamic unconscious is an unnecessary hypothesis in psychoanalysis and analytical psychology.

*Key words:* archetype, dynamic systems, dynamic unconscious, Freud, image, Jung, mirror neurons

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## Image, action, and affect

2009 marks the 30<sup>th</sup> anniversary of the completion of my first work on Jung in the Department of Philosophy at Yale University. I then worked under the direction of Professor Rulon Wells, a great teacher of philosophy, linguistics and semiotics, whose recent death at the age of 90 was a singular loss for scholarship, and a deep personal loss for me. I therefore dedicate this paper to his memory.

In that early work I built an argument around what I called the existential enactment of the relationship between Jung and Freud. I will not review the entire argument, but an essential aspect of the argument was that Jung and Freud did not merely engage in a conceptual debate, but rather actually enacted critical elements of the debate. One particular element of this process of enactment was Freud's propensity to faint at critical moments in his relations

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<sup>1</sup> An earlier version of this paper was presented at meetings of the Centro Italiano di Psicologia Analitica in Milan and Rome, in January 2009.

with dissident followers—Jung was not the only one. In discussing this aspect of the relationship, I made the following summary comment:

The element of action in this argument . . . is Freud's acting out of a primal confrontation and killing at strategic moments in his relations with close followers. . . . [I]n the fainting spells we have what is termed the presentation of an *image for the psyche*—in this case an image of the killing of the father—which seeks to organize the psychic activity of the observer.

(Hogenson 1983, p. 161)

The point of my argument in this instance was that the enactment of the killing of the father, a fundamental element in Freud's interpretation of the Oedipus myth, was intended—unconsciously—to enlist the spectator in the Oedipus drama. Freud repeatedly claimed that Jung had a death wish against him, which, were it true, would in a sense validate Freud's system. The fainting spells were Freud's enactment of his theory. Jung, I argued, was almost captured by the power of these enactments, and his so-called 'encounter with the unconscious' after the break with Freud was his own way of experiencing an alternative interpretation of psychic phenomena. It is important, in considering the history of the relationship between Jung and Freud, to keep in mind that Jung did not reject the importance of the Oedipal theory. While he disagreed with Freud on the specifics of interpretation regarding Oedipus, he in fact considered the myth to be archetypal. Indeed, he characterized Freud, in his remembrance of the master (Jung 1966), as having been in the grip of a daemon, the Oedipus archetype. I will have more to say about this situation later in this paper, but it is worth noting at the outset that it was the archetypal qualities of the fainting spells that posed the particular danger of psychic entanglement with the archetype, and finally destroyed the relationship between the two.

Even before the end of the relationship, however, Jung had come to the conclusion that the psyche was first of all and most of the time a place of images, and that vision (Jung 1967) was the most critical of the senses such that 'seeing' the Oedipal drama enacted would have a particularly powerful impact. Contrary to the traditional Freudian argument, the project of analysis in Jung is not to bring the image back to the original desire and then express the desire in language, but rather to valorize the image as the foundation of psychic experience. Although the history of Jung's development of the theory of archetypes is complex and, as Jean Knox has carefully outlined, his formulations of the theory often take very different forms (Knox 2003), I believe the role of the image in Jung's thinking generally cannot be overemphasized. It is therefore worth our while to gain an overview of his thinking on the nature of the archetype as image and action pattern.

In 1919 Jung attended a conference sponsored by the Aristotelian Society, the Mind Association, and the British Psychological Society on the theme of 'Instinct and the Unconscious'. The conference is best known for marking the first public use of the term archetype as a fundamental element in Jung's system. The

conference title, however, carries an additional message; the unconscious, for all of the presenters, is taken to have at least some relationship to the biological, or instinctual, level of human behaviour. Needless to say, the term instinct is no longer in vogue, but Jung's paper, along with the others presented, clearly makes a relationship between mind or psyche, in the form of the archetype, and the body, in the form of the instinctual. Together, Jung argues, the instincts and the archetypes form the collective unconscious as distinct from the personal unconscious. He writes:

But, over and above that, we also find in the unconscious qualities that are not individually acquired but are inherited, e.g., instincts as impulses to carry out actions from necessity, without conscious motivation. In this 'deeper' stratum we also find the a priori, inborn forms of 'intuition', namely the archetypes of perception and apprehension, which are the necessary a priori determinants of all psychic processes. Just as his instincts compel man to a specifically human mode of existence, so the archetypes force his ways of perception and apprehension into specifically human patterns.

(Jung 1919, para. 270)

Here we immediately see the importance Jung attached to the 'ways of perception'. The archetype is directly implicated in seeing the human environment. That which is seen in the archetypal sense is the archetypal image. While it was evident from Jung's early work that the status of the image was critical for his theories, it is in his mature work that a number of important elaborations and clarifications of his thought occurred. Critical among them is a curious discussion of the nature of the image found in his paper, 'On the nature of the psyche', which I consider to be the most carefully argued paper of Jung's *Collected Works*. Jung writes, with implicit reference to the ethological studies of Konrad Lorenz and his colleagues:

Instinct and the archaic mode meet in the biological conception of the 'pattern of behaviour'. There are, in fact, no amorphous instincts, as every instinct bears in itself the pattern of its situation. Always it fulfils an image, and the image has fixed qualities. The instinct of the leaf-cutting ant fulfils the image of ant, leaf, cutting, transport, and the little garden of fungi. If any one of these conditions is lacking the instinct does not function, because it cannot exist without its total pattern, without its image. Such an image is an a priori type. It is inborn in the ant prior to any activity, for there can be no activity at all unless an instinct of corresponding pattern initiates and makes it possible.

(Jung 1919, para. 398)

Jung was fond of analogies to animal behaviour, clearly holding out for a more biological and evolutionary continuum in behaviour, but what is most instructive about his example is the complexity of the description, the situated nature of the behaviour—the central role of what would now be called the species-typical environment, and the implication of universality. The notion that an a priori pattern must exist will, however, concern us in a moment. One could say that in the absence of all the features of the 'image of the leaf-cutting

ant' the ant would, in some ontological sense, cease to exist. These qualities of the image are what qualify it as an analogy to an archetypal image. As Jung remarks elsewhere, 'An image can be considered archetypal when it can be shown to exist in the records of human history, in identical form and with the same meaning' (Jung, 1967, para. 352).

One further feature of Jung's thinking about archetypes is important for our purposes. In his famous paper 'Synchronicity: an acausal connecting principle', Jung writes:

The archetypes are formal factors responsible for the organization of unconscious psychic processes: they are 'patterns of behaviour'. At the same time they have a 'specific charge' and develop numinous effects that express themselves as affects. (Jung 1952)

What we have in the theory of archetypes, therefore, is a combination of features that include ways of knowing the world (patterns of apprehension and intuition—a specific subset, it seems, of ways of acting in the world), patterns of behaviour, affective states that accompany these intuitions and patterns of behaviour, and finally, a notion of the image that appears to go beyond our common sense notion of the image as simply a picture or representation of some other state of affairs. The question that arises in the context of this meeting is what relationship these aspects of Jung's theory have to the discovery of mirror neurons.

### Mirror neurons and psychoanalysis

Our topic is the relationship between the discovery of mirror neurons by Gallese and Rizzolatti and Jungian psychoanalysis. At the outset it is safe to say that the discovery of mirror neurons has generated considerable excitement throughout the psychoanalytic world due to the prospect they offer of a neurological explanation for critical features of clinical practice such as empathy. The distinguished Harvard psychiatrist and psychoanalyst, Arnold Modell, speculates that mirror neurons may provide an explanation for the clinical phenomenon of projective identification, the experience on the part of the clinician of deep emotional pain in the patient, often with no noticeable emotional disturbance in the patient. Projective identification is often described by the clinician as an experience of having a feeling 'put into' oneself (Modell 2003). Citing the work of Gallese (Gallese 2001), Modell concludes that 'our brains resonate to the other's feelings in a manner similar to how we resonate with the other's intentional actions' (p. 187). 'This supports the contention', he continues, 'that the roots of empathy are in the body, and as with projective identification, this process occurs unconsciously' (p. 187). Indeed, a review of the literature leads to the conclusion that in addition to empathy and projective identification a substantial portion of the more classically psychoanalytic categories of clinical understanding, such as the

transference and countertransference, may find an explanatory mechanism in the realm of mirror neurons. The work of Iacoboni is particularly germane to this research (Iacoboni 2005, 2008).

The findings of Gallese, Rizzolati and their colleagues, as well as the theoretical and clinical hypotheses about the application of mirror neurons to psychoanalysis mark a fundamental inflection point in our understanding of the brain/mind/body. In developing his 'shared manifold' model of empathy, Gallese highlights the role of intersubjective action patterns in our ability to understand one another, and establish an empathic relationship. Similarly, Modell highlights the importance of 'goal-directed, relational actions' in establishing empathic relationships (p. 182). A similar sentiment can be found in the work of the Boston Process of Change Study Group, a loose affiliation of distinguished developmental psychologists and psychoanalysts, including Daniel Stern and Ed Tronik. But this group has gone further in their attention to action patterns and points us in an important direction for thinking about the foundational implications of mirror neurons in psychoanalysis. The foundational role they assign to interaction, both in developmental settings and in clinical treatment, turns the traditional order of psychological functioning on its head. The group captures this outcome in a summary statement:

The major point of this paper has been to delineate the upside-down relationship between the supposedly 'superficial' layer of immediate interaction and the supposedly 'profound' layer of intrapsychic entities, such as conflict and defense. Traditionally, the intrapsychic entities were assumed to determine what happened at the interactive level. The interactive level was seen merely as the instantiation of deeper forces. We suggest instead that the interactive process itself is primary and generates the raw material from which we draw the generalized abstractions that we term conflicts, defenses and phantasy. From these moves as experienced in the interaction, psychoanalytic interpretations are drawn. It follows that conflicts and defenses are born and reside in the domain of interaction, and that this relational living out is the deep layer of experience, while the abstractions that we use to describe the repetitive aspects of these relational strategies, such as conflict and defense, are secondary descriptors of the deep level, but not the level itself, and exist further from the lived experience.

(Stern et al. 2007, p. 14)

The interactive implications of mirror neurons—including those more attuned to affective states, appear, therefore, to be largely compatible with recent developments in psychoanalytic theory and practice. Indeed, it is likely that the majority of classical characteristics of the psychoanalytic interchange, ranging from the transference to the defining mechanisms of the dynamic unconscious, as noted by the Boston Study Group, can be subordinated to the interactive experience instantiated in the mirror neuron system. As an aside, and in anticipation of some of what will follow, I think it is worth noting the ironic turn that enthusiasm in psychoanalytic circles for recent neurological discoveries carries with it, as fundamental presuppositions regarding the dynamic unconscious are turned on their head. It should therefore be evident that the discovery of mirror neurons may hold equally consequential

implications for Jungian theory. To further the discussion of these implications, however, I want to outline some considerations from other disciplines, the dynamic systems approach to development, artificial life, and most specifically theoretical robotics, that provide a deeper and more philosophically compelling description of the problems in hand.

### Action patterns and cognitive processes

The members of the Boston Study Group touch on a central issue facing psychoanalysis in all its forms; can we attribute the elemental forms of behaviour that concern analysts to some form of agency, usually referred to as the dynamic unconscious? I want to suggest that mirror neurons do play a part in our consideration of this problem, but the role played by their discovery is very much in the form of providing a neurologically based instantiation of a point of view developed in other fields. Taken as a whole, however, the addition of mirror neurons to the other fields concerned with this question may prove to be the decisive move in answering this question. Let me outline the issue by recourse to several sources, which I will review very briefly in something resembling chronological order.

In 1985, psychologist and theoretical biologist, Susan Oyama, published her influential book, *The Ontogeny of Information*. She begins the book with the following overview of Western assumptions about the order of nature:

In the Western religious tradition, God created the world by bringing order to chaos. By imposing form on inchoate matter, he acted according to a convention that was very old indeed, one that separated form from matter and considered true essence to reside in the former . . . Those who have argued over the origin of ideas and of biological beings have usually agreed that form in some sense preexists its appearance in minds and bodies. They have only disputed the method and time of its imposition . . . Whether it is God, a vitalistic force, or the gene as Nature's agent that is the source of the design of living things and that initiates and directs the unfolding of the design thus matters little to the structure of the argument. Nor are the problems inherent in such a notion lessened by the use of a succession of metaphors, such as genetic plans, knowledge, and programs, to serve these cognitive and intentional functions.

(Oyama 1985, p. 1)

Oyama goes on to argue, as Horst Hendricks-Jansen summarizes, that:

[T]here is no reason that the structure of a dynamical system needs to be prespecified in any form or shape. It simply emerges in the form that it does because of the coincidence of certain parameters and components, which in the past have tended to result in a viable system within a particular environment, and the possibility of whose emergence has thus been preserved by natural selection.

(Hendricks-Jansen, 1996, p. 261)

In a similar vein, the developmental psychologists, Ester Thelen and Linda Smith, of the University of Indiana, writing of their experimental work with

infant development, *A Dynamic Systems Approach to the Development of Cognition and Action*, and having cited the work of Oyama, lay out the foundations of their approach:

We propose here a radical departure from current cognitive theory. Although behavior and development appear structured, there are no structures. Although behavior and development appear rule-driven, there are no rules. There is complexity. There is a multiple, parallel, and continuously dynamic interplay of perception and action, and a system that, by its thermodynamic nature, seeks certain stable solutions. These solutions emerge from relations, not from design. When the elements of such complex systems cooperate, they give rise to behavior with a unitary character, and thus to the illusion of structure. But the order is always executory, rather than rule-driven, allowing for the enormous sensitivity and flexibility of behavior to organize and regroup around task and context.

(Thelen & Smith 1998, p. xix)

My final example of the turn away from plans, rule-driven behaviour, or central cognitive systems comes from the roboticist, Rodney Brooks, Director of the Artificial Intelligence Laboratory at the Massachusetts Institute of Technology. Beginning in the late 1960s artificial intelligence research became increasingly concerned with how to model behaviour in complex environments. Until the mid 1980s this research programme focused on building ever more intricate command programmes for recognizing objects and navigating a robot through spaces occupied by a small number of geometrically simple shapes. The computational power required to carry out these simple action patterns was enormous, and successes were few and far between. Brooks, at the time a young AI researcher at Stanford University, proposed a radical departure from the received AI orthodoxy. He summarizes his insight, writing:

The realization was that the so-called central systems of intelligence—or *core AI* as it has been referred to more recently—was perhaps an unnecessary illusion, and that all the power of intelligence arose from the coupling of perception and actuation systems. This is the cornerstone of behavior-based robotics, both mobile robots as they have developed over the last twelve years and humanoid robots that have been developed more recently.

(Brooks 1999, p. viii)

The new model, proposed by Brooks, and since used in the development of the most successful robotic systems removed the cognitive element from inside the system, and relocated it to the environment, in the form of attributions of meaningfulness on the part of an observer. This formulation is almost identical to the view of Thelen and Smith, among others (Kaye 1982; Kaye & Wells 1980) insofar as early infant development is largely dependent on the meaning attributions made by the caregiver to the objectively meaningless action patterns of the infant. We can compare this formulation of the perception/action system in robotics, which has allowed for the development of mobile robots that can successfully navigate the chaotic office space of the MIT robotics lab—desks, chairs, soft-drink cans, etc.—to this summary passage in Rizzolatti and Sinigaglia:

The mirror neuron system and the selectivity of the responses of the neurons that compose it, produce a shared space of action, within which each act and chain of acts, whether ours or 'theirs', are immediately registered and understood without the need of any explicit or deliberate 'cognitive operation'.

(Rizzolatti 2008, p. 131)

My purpose in this section of the paper has been to bring together a group of research programmes which, largely independent of one another in their formative stages, have all come to the conclusion that a complex cognitive processor, possessed of some set of rules or algorithms is unnecessary for an account of behaviour, in simple organisms, robots, developing children, or in the behaviour of adults. I would suggest, in fact, that taken together, and particularly with the addition of the mirror neuron system, that we have come to the end of the so-called cognitive revolution in psychology and philosophy. Indeed, I would go so far as to say that the discovery of mirror neurons provides the final link in this process, allowing us to ground the counter-cognitive revolution in a neurological substrate.

#### Archetypes as (non-cognitive) action patterns

If, then, action patterns, such of those of a leaf-cutting ant take place in a species typical environment, and if Jung is willing to go so far as to argue that the pattern of action combined with that environment constitutes the image of the ant, it would appear that a consideration of the relationship between Jung's theory of archetypes and mirror neurons requires some consideration of what precisely constitutes the species typical environment that gives rise to distinctly Jungian, archetypal action patterns. I have suggested that Freud's fainting spells were an enactment of a crucial moment in his interpretation of the Oedipus archetype. What I now want to add to that story is that the circumstances of the fainting spells—two in the case of Jung—actually did involve a discussion of something approaching a father-killing story. The most important of these was a discussion that Jung had with Freud and Karl Abraham regarding the destruction of the cartouches of the Pharaoh Amenhotep III by his son and successor Akhenaten when he began his religious revolution. Jung and Abraham offered conflicting interpretations of the event, Abraham insisting that this was an Oedipal moment, Jung arguing that it was a normal act of succession. Whereupon Freud fainted, later claiming that Jung was masking a death wish against him (Jung 1963).

If we followed the Boston Study Group in seeking to understand this event we would first of all have to examine the interactive pattern that was in process, rather than follow Freud and attribute to Jung a repressed desire to kill Freud the father. This would also be the consequence of following the investigators I have cited in the last section. Thus, to follow Rizzolatti and Sinigaglia we should try to understand this event as a shared action space. But what kind of action is involved in an argument about Egyptian cartouches?

I want to begin to answer this question by taking a somewhat speculative step into a larger field of considerations than I have touched on thus far. Even a casual reader of Jung's works will be struck by his fascination with figural representations, the work of art, the pictorial—I want to use this word to distinguish between specific visual objects and the more complex definition of an image that I have proposed. Entire volumes in his collected works and seminars are devoted to the examination of such representations, and many Jungian analysts, certainly those in the United States, devote a great deal of clinical time to visual representational processes. I believe it is safe to say that for Jung a significant part of the species typical environment of human experience is the world of made objects that fall into this world of representations. For Jung the visual object is as important as language is to Freud. The relationship of language to the mirror neuron system has, as I understand the field at this time, come under considerable scrutiny with the discovery of echo-neurons and the proposal that an important element in the acquisition and subsequent understanding of language is following the micro-activities of the process of verbal articulation. Indeed, some research now indicates that the uniquely human behaviour of infant babbling links to the echo-neuron system and facilitates the development of syntactical patterns (Pulvermuller 2003, forthcoming). The implication here is that a direct linkage exists between a high level human behaviour, syntax or language more generally, and elementary neuronal structures, and that link has both developmental and adult operational consequences.

Can the same be said for the visual object? The art historian, Barbara Stafford, of the University of Chicago believes that the visual object may enjoy a similar relationship to the mirror neuron system as language and patterns of action in general. With specific reference to the work of Rizzolatti, Stafford asks a critical question:

How do we make sense of the fact that subjectivity emerges when the brain-mind simultaneously produces not just self-images and the organism's responses to its surroundings but something else as well: an organism in the act of perceiving and responding to some external object?

(Stafford 2007, p. 77)

Stafford is a leading authority on Renaissance and Baroque emblems, the exotic representations that populated esoteric texts. She writes, regarding these works:

Certain dense and interstructural kinds of artwork, I argue, permit us to see the synchronizing cerebral processes involved in vision, that is, the process of an image of the visual world actively constructed by the cerebral cortex after having discarded extraneous information. Such composites render visible neural cooperation and normally invisible operative forces of the central nervous system.

(p. 45)

The tradition of emblem construction was particularly prominent in Renaissance and Baroque alchemy, a tradition that Jung argued constituted a form

of proto-psychoanalysis, reflecting in its representations, including narrative, procedural and iconographic, patterns that corresponded to his own experience of the analytic process. Jung, of course, was still an heir to the western intellectual tradition wedded to the notion that some pre-existing plan had to underlie the emergence of phenomenal experience, the proximate form of this tradition—at least for the early psychoanalysts—being the dynamic unconscious. And so we have the Jungian theory of the collective unconscious. I now want to suggest that just as theoretical robotics, complex dynamic systems theories of development, and the discovery of mirror neurons have concluded that it is possible to develop complex behavioural patterns without the cognitive processor embedded somewhere in the brain/mind, that we may be in a position to do without the dynamic unconscious as an explanatory hypothesis. Rather, we may be looking at the historical emergence of human behaviour from the interactive engagement with the developing artefactual and linguistic species typical environment. The unconscious, then, would be more a matter of what we have yet to encounter, rather than that which lies below, either in the form of repressions or collective forms.

As with the growing evidence that echo-neurons play a role in the emergence and development of language, it is likely, as Stafford suggests, that some form of echo relationship exists in the development of the artefactual world, and that some subset of that world is particularly relevant to our understanding of the workings of the mind. This proposition sets a research challenge, I believe, to the psychoanalytic community generally, and to the Jungian community in particular. A writer for whom I have great admiration, Horst Hendriks-Jansen, provides the clearest statement of this challenge. Shortly before the discovery of mirror neurons Hendriks-Jansen wrote, commenting on Daniel Dennett's argument for a 'narrative selfhood':

If consciousness is the outcome of narratives that are not deliberately planned but that resemble the species-typical behavior of web-spinning spiders and dam-building beavers, shouldn't a study of consciousness begin by investigating these typically human activity patterns in their natural surroundings . . . Instead of trying to justify functional components and internal representations of a fully fledged conscious mind by appeals to natural selection, wouldn't it be more logical to try to discover the underlying activity patterns that make it possible for a human infant to acquire this unique, unconscious ability to spin narratives about himself and the world? How exactly do narratives 'spin us'? Or, to put it differently, how do our conscious selves become established as the result of participating in public dialogue that consists of coherent, intentional stories.

(Hendricks-Jansen 1996, p. 335)

I believe that a careful reconstruction of Jung's theory of archetypes, informed by the developments in neuroscience encompassed by the discovery of mirror neurons, and coupled with developments in related fields, particularly dynamic systems models of development and the analytic insights of researchers such as the Boston Study Group, will allow us to find the path to answering this question. But the key will lie in the recognition of the primacy of species typical

action patterns, and the species typical environment within which those action patterns are elaborated. The image, as an action pattern embedded in the species typical world of human meaning creation, particularly including the artefactual world of human creativity will then be a guiding principle, as intended by Jung.

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TRANSLATIONS OF ABSTRACT

La découverte de neurones miroirs par des chercheurs de l'université de Parme promet une altération radicale de notre compréhension des états cognitifs et affectifs fondamentaux. Cet article analyse le rapport entre les neurones miroirs et la théorie des archétypes de Jung. Il pose l'éventualité que les archétypes puissent être envisagés comme des «patterns» élémentaires d'action. Il part d'une interprétation des évanouissements de Freud aux temps de sa relation avec Jung, comme exemple de «pattern» d'action définissant également une image archétypique. Le défi posé par les neurones miroirs aux conceptions traditionnelles de la psychologie analytique et de la psychanalyse, réside dans une modalité de fonctionnement qui exclut le recours aux processus cognitifs. Une telle conception est de plus en plus répandue et ce, dans des champs divers. L'article passe en revue les dernières avancées du *Boston Process of Change Study Group*, de même que les conclusions des théories dynamiques du développement et de la robotique théorique, pour appuyer l'idée que les agents inconscients ne sont pas la condition absolue d'une action cohérente. L'article s'achève en évoquant la probabilité que l'ensemble de ces recherches ne parviennent à la conclusion que l'inconscient dynamique constitue une hypothèse superflue en psychanalyse et en psychologie analytique.

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Die Entdeckung der Spiegelneuronen durch Forscher an der Universität von Parma verspricht eine radikale Änderung unseres Verständnisses von Kognitiven und affektiven Zuständen. Dieser Aufsatz untersucht die Beziehung zwischen Spiegelneuronen und Jungs Theorie der Archetypen und kommt zu dem Vorschlag, daß Archetypen als elementare Verhaltensmuster zu betrachten seien. Begonnen wird mit einer Rückschau auf eine angenommene Interpretation der Ohnmachtsanfälle S. Freuds im Kontakt mit Jung als eines Beispiels für ein Verhaltensmuster, das gleichzeitig ein archetypisches Bild definiert. Die Herausforderung aber, die Entdeckung der Spiegelneuronen für die traditionellen Sichtweisen der Analytischen Psychologie und Psychoanalyse darstellt besteht darin, daß sie ohne Rückgriff auf kognitive Prozesselemente funktionieren. Dies ist eine Position, die auch auf anderen Gebieten zunehmend an Akzeptanz gewinnt. Der Aufsatz resümiert deswegen die neuesten diesbezüglichen Theorien, die von der Bostoner Forschungsgruppe 'Prozeß des Wandels' aufgestellt wurden sowie die Schlüsse, die aus der Untersuchung von dynamischen Systemen, aus Erkenntnissen der praktischen und theoretischen Roboterentwicklung gewonnen wurden um die Folgerung zu stützen, daß die Existenz einer Ebene des Unbewußten zur Ausführung kohärenter Aktionen nicht erforderlich ist. Der Text schließt mit der Annahme, daß der gesamte Fundus dieser Forschung zu der Folgerung führen könnte, daß das dynamische Unbewußte eine unnötige Hypothese der Psychoanalyse und der Analytischen Psychologie sei.

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La scoperta dei neuroni specchio fatta dai ricercatori dell'Università di Parma ci permette di cambiare radicalmente il nostro modo di intendere gli stati fondamentali cognitivi e affettivi. In questo lavoro viene presa in esame la relazione tra i neuroni specchio e la teoria degli archetipi e si propone di considerare gli archetipi come schemi di azione elementari. Si inizia riesaminando una interpretazione degli svenimenti di Freud nella sua relazione con Jung considerandola come un esempio di uno schema di azione che definisce anche un'immagine archetipica. La sfida che i neuroni specchio presentano al punto di vista tradizionale della psicologia analitica e della psicoanalisi è che essi operano senza ricorrere a un elemento procedurale cognitivo. Tale posizione viene sempre più accettata anche in altri campi. In questo scritto si analizzano poi sia le più recenti affermazioni fatte dal Boston Process of Change Study Group sia le conclusioni raggiunte dal punto di vista dei sistemi dinamici di sviluppo e dalla teoria robotica per giungere alla conclusione che l'agentività dell'inconscio non è un requisito necessario per un'azione coerente. Il lavoro si conclude con la considerazione che questo intero corpo di ricerca può condurre alla conclusione che un inconscio dinamico non rappresenta un'ipotesi necessaria né nella psicoanalisi né nella psicologia analitica.

El descubrimiento de las neuronas de espejo por los investigadores en la Universidad de Parma prometen alterar radicalmente nuestra comprensión de estados cognoscitivos y afectivos fundamentales. Este trabajo explora la relación de las neuronas de espejo con la teoría del Jung de los arquetipos y propone que los arquetipos puedan ser vistos como pautas elementales de acción. Se inicia con una revisión de la interpretación propuesta a los desvanecimientos de S. Freud en su relación con Jung como ejemplo de una pauta de acción que define una imagen arquetípica. El desafío que las neuronas espejo presenta a los conceptos tradicionales en la psicología analítica y el psicoanálisis, sin embargo, es que ellos operan sin el recurso de un elemento de procesamiento cognoscitivo. Es esta una posición que ha ganado aceptación también en otros campos. El trabajo por lo tanto revisa las reflexiones más recientes del Grupo de Estudio del Proceso de Cambio de Boston así como las conclusiones descritas por las dinámicas de los sistemas del desarrollo y la robótica teórica para subrayar la conclusión de que el control inconsciente no es un requisito para la acción coherente. El papel concluye con la sugerencia según la cual estas investigaciones pueden llevar a la conclusión de que el inconsciente dinámico es una hipótesis innecesaria en el psicoanálisis y la psicología analítica.

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