

# How to fix a screw with a hammer? – Explanatory coexistence and the western framework of magic, religion and science

## Introduction

My research interest is the diversity of human cognition including for example voodoo, Hinduism, Christianity, Science and Zen-Buddhism. In contrast to the humanities and cultural anthropology a deductive model based on Piaget, Vygotsky, Maslow and Malinowski is being developed as methodologically common in science and economics. The model describes four fields of cognitive potentiality on the individual and on the cultural level. The model is based on scientific reasoning, but due to the fact that science is also an object of consideration in this model it is true that this model can only be relatively true if it is true.

The researcher can use the fifth position of the epistemological observer to decide which of the four fields (modes of thought) will have the best outcome in a real life situation without being focused on one field only. Phenomena, which do not fit into the model, are collected in a "book of anomalies" for future advancement or other solutions.

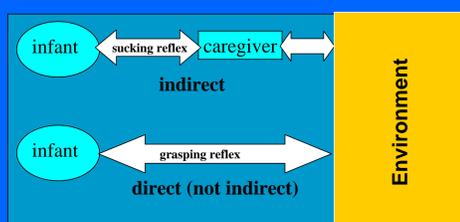
## Method

To construct a model of the cognitive system we take a global perspective using all available data about the used explanation principles („A priori“) from psychology, anthropology and the humanities. Then a field of cognitive potentialities is constructed. The observed phenomena are explained by promotion or suppression of cognitive potentialities („A posteriori“) by using or not using. Every mode of thought has a specific explanation principle, which provides the explanation structure and is defined by the basic premises („A priori“) of this mode of thought. A culture is the resulting product of the activities of its members, which are coordinated by the cognitive system usually using one dominant mode of thought while other modes of thought are subordinated but available (explanatory coexistence).

This **methodological synthesis** goes beyond methodological individualism (orientated at the idealized individual of a specific culture only) and methodological holism (orientated at culture only).

## Model

In contrast to Piaget we do not focus on the development of pure logic. Instead the body is taken into account (embodiment) and the focus is on the coordination of the need-satisfying-actions by the cognitive system.



Hypothesis: The human cognitive system is not flexible enough to deal with the fundamental changes in the structure of need-satisfying actions without suffering delays in adaptation.

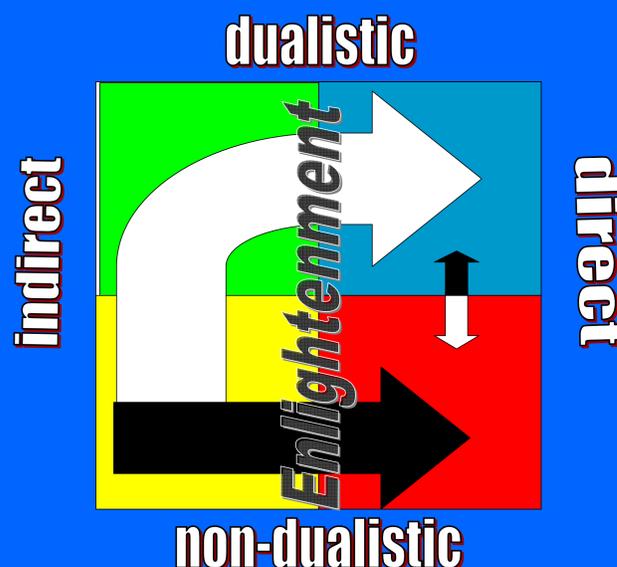
Primary integration	Disintegration	Secondary integration
cognitive system = indirect ↔	cognitive system = indirect ↔	cognitive system = (indirect) direct
need satisfying environment = indirect	need satisfying environment = direct	↔ need satisfying environment = direct



## Why this person gets ill and not the other?

<p><b>Field 2:</b> "A 1984 editorial in the official journal of the Southern Medical Association, entitled "Homosexuality: Kick and Kickback," reasoned that AIDS was God's punishment for gay men's sins - "the due penalty of their error," the editor explained, quoting St. Paul." Peter Lewis Allen: „The Wages of Sin: Sex and Disease, Past and Present“, University of Chicago Press 2002 (2.nd edition), page xvii-xviii (introduction).</p>	<p><b>Field 3:</b> "A novel viral cause of the disease was only one of many plausible theories in the early years. ... Nonetheless, doubt about a viral cause persisted until the actual virus was detected, confirmatory studies were performed, and the reports of transmission through blood and blood products became too numerous to ignore." Kent A. Sepkowitz (2001): "Aids – The first 20 Years", The New England Journal of Medicine Vol. 344 (23): 1764-1772.</p>
<p><b>Field 1:</b> „Few people in western Uganda would deny that one contracts AIDS through sexual contact with an HIV-positive partner. Yet, unfortunately, this explanation is perfectly compatible with witchcraft accusations because the witchcraft discourse functions as a secondary rationalisation by addressing the question 'Why me and not another?'. While Europeans are not really able to answer this question, referring to 'chance' or 'bad luck', or taking the responsibility on themselves, in western Uganda it is, at least up to now, the witchcraft discourse that most often gives the answer. ... Although many people know that AIDS is not caused directly by witchcraft, a witch can influence a man or a woman, for example, to drink too much beer so that he or she leaves all caution aside and has sex with a HIV-positive person and so may contract the virus." Behrend (2009): page 34-35. See also: Legare et. al. (2008).</p>	<p><b>Field 4:</b> "The basis of TCM theory is Yin-yang and five elements which related to the whole universe, so TCM views the human body and nature as integral not divided. A healthy human is under the state of relatively dynamic balance maintained by both inside and outside of the body, if the balance is broken, the illness occurs. TCM aims to recover the balance of human body" Jian Wang, Wen Zou, Ying Liu (2010): "Use of traditional Chinese medicine in HIV/AIDS in China", J. Biomedical Science and Engineering (3) 828-831.</p>

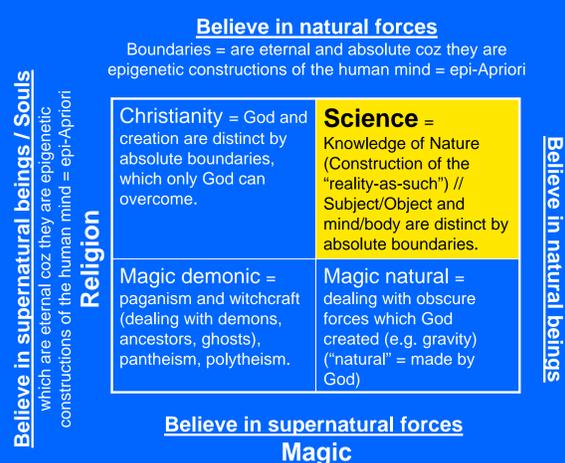
Every mode of thought has a specific explanation principle, which provides the explanation structure and is defined by the basic premises of this mode of thought. This kind of explanation principle is only ever possible to experience and never to prove, as all evidence demands a principle of explanation.



Jean Piaget: "I got interested in Chinese science because of the book we're doing with Garcia [Piaget & Garcia, 1983]. The problem was whether there is only one possible line of evolution in the development of knowledge or whether there may be different routes . . . Garcia, who is quite familiar with Chinese science, thinks they have travelled a route very different from our own. So I decided to see whether it is possible to imagine a psychogenesis different from our own . . . and I think that it is possible. (Piaget in Bringuier, 1977/ 1980, p. 100)" Citation taken from Lourenço & Machado (1996), page 151.

## Magic, Religion and Science

Bronislaw Malinowski: "There are no peoples however primitive without religion and magic. Nor are there, it must be added at once, any savage races lacking either in the scientific attitude or in science, though this lack has been frequently attributed to them. In every primitive community, studied by trustworthy and competent observers, there have been found two clearly distinguishable domains, the Sacred and the Profane; in other words, the domain of Magic and Religion and that of Science." (Malinowski (1948): page 1).



Historians of science about Newton: "First modern scientist? Last ancient magician? These judgments attest to the difficulty of gasping Newton in his totality. It is not really helpful to insist on considering Newton as one or the other. Nor is it sensible to consider a multiplicity of Newtons: one engaged in science, another dabbling in alchemy, a third devoted to theology, and so on. We need to appreciate that Newton could be one and all of these things, and not suffer a modern crisis of identity in the process. To embrace Newton as an archetypal scientist is to recognize that science itself is a much richer and more ambivalent activity than we may have been taught to believe." (Fauvel et al. (1988): page 7).

## Conclusion

In this approach the observed cognitive phenomena are interpreted as the interaction between ontogenesis and quadrogenesis, which enables us to explain phenomena like explanatory coexistence or self-actualizing people (Maslow).

Using the new approach of cognitive development the different modes of thought and the related principles of explanation are independent side effects of ontogenesis ("spandrels"). Subsequently a new definition of "intelligence" will be necessary independent of the used mode of thought.

## Further Reading

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