Myth, Science and Social Representations: from replacing to coexisting model

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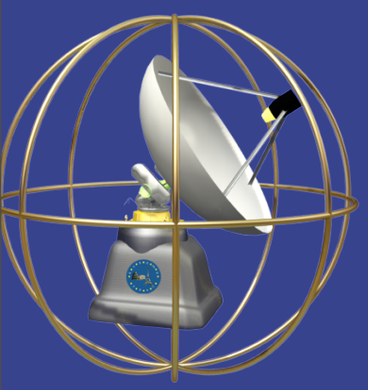
16th International Summer School:
"Social Representations and Sciences"



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OUTLINE

Introduction: intriguing question

- **The persisting Myth in the era of Science**
- **The "*myth*": a key dimension articulating Social Representations and Collective Cultural Memory**
- **From the limits of the "replacing model" to the "*co-existing model*": Myth, Science, Social Representations, Collective Cultural Memory and Thémata**
- **The "*cognitive poliphasia*": a heuristic concept supported by empirical evidence.**
- **Looking behind the surface: the representation of madness 30th years after the de-institutionalisation of the psychiatric asylums**

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de Rosa, A.S., (2009). Mito, ciência e representações sociais. In Paredes, E.C., Jodelet, D. (Eds), *Pensamento Mítico e Representações Sociais,* (pp. 123-175). Editions de l' Universidad Federal du Mato Groso, Coleção Educação e Psicologia vol. 13

de Rosa, A.S., (2010). Myth, Science et représentations sociale, In Jodelet, D. Coelho Parades, E. (Eds), *Pensée mytiques et représentations sociales,* (pp.85-124) L'Harmattan, Paris

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Starting with an example:

the ***Centaur*** is one of the most popular figure of the Greek mythology, represented as an half man, an half horse, always violent, irascible, savage and brutal man, drawing the bow.

During the Middle Age, the Centaur's image was attributed to the heretics and their internal dissociation half Christian half heathens. Dante put them in the Hell (XII), in their role of guardian hangman of the violent people against humanity, due to their violent character during their life.

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Intriguing question driven by empirical data:

is a “mad person” a centaur?

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The picture below has been chosen from a collection of thousands of drawings representing a "*mad*" person, in particular the "Centaur", made even more monstrous by the added dimorphisms and contaminations in the upper part of the drawing, representing a man with two heads (one similar to human figure, the other more similar to an animal), a crocodile instead of a hand attached to his harm and a hook attached to the other harm. In this image of a mythological type the mad person, as opposed to the normal one, is represented in the forms of a Centaur, in which also the upper part of the human being is contaminated by animal semblances.

We cannot suspect that parents, teachers, or doctors have socialized a child to the representation of a mad person as a Centaur or as a theriomorfic figure.

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- How do archaic and mythical representations (belonging to the domain of collective representations) take form in the contemporary imagery?
- How it they appear in young children, with such surprising autonomy from the socialization, transmission and elaboration of knowledge?
- How can we explain social representations out of the visible circles of social genesis and elaboration of knowledge?

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The persisting Myth in the era of Science

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The Top 5 lay definitions of the "myth" - accessible to anyone on the web - as:

- "a **traditional story** ***accepted as history***; serves to explain the world view of a people" (WorldNet 3.0, Princeton Univ.,2008);
- "a **story** about superhuman beings of an earlier, age, usually of how natural phenomena or social customs came into existence"(Colin English Dictionary, 2006);
- "a **popular belief** or story that has become associated with a person, institution, or occurrence, especially one considered to illustrate a cultural ideal"*The American Heritage@ Dictionary of the English Language, 2003*;
- "a usually **traditional story** of ostensibly historical events that serves to unfold part of the world view of a people or explain a practice, belief, or natural phenomenon" (*Merriam-Webster Online Dictionary*. , 2009);
- "a **popular belief** or tradition that has grown up around something or someone; *especially*: one embodying the ideals and institutions of a society or segment of society" (*Merriam-Webster Online Dictionary*.)

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Definitions of the "myth" by EXPERTS as:

Armstrong, 2006; Barthes, 1957,1971, 1993; Bierlein, 1994; Cassirer, 1953; Cousineau; Larsen, 2003; Finley, 1981; Le Goff, 1977/1988; Campbell; Moyers, **1991;**Scott, Mcclure, L. Mcclure, M. , 2003; Segal, 2004; Smith, 1974; Stephenson Bond, 2001;Vernant, 1959, 1996; Veyne, 1983; Von Hendy, 2002; Wessels, 2006

- All top 5 lay definitions share with classical and contemporary studies on the myth provided by expert historians and social scientists some key points related to the **articulation of the myth with history,** being a "*traditional history accepted as history*", **and therefore with social, collective and cultural memory**.

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Its imaginary or unverifiable existence is always connected to the ancient inaccessible past in a sort of suspended primordial ***eternal time out of the time*;**

however its **power in the cultural memory is projected over the historical time** and even the present and future, shaped and transformed by the different forms of oral transmission from a generation to another with its mixture of truth and false beliefs and legends, socially validated, negotiated and manipulated trough the social interactions and communication.

Similar to other cultural and socio-cognitive forms of the social thinking, its social function is to serve to unfold part of the worldview of a people or explain a practice, belief, or natural phenomenon.

It basically belongs to the sphere of the **ontology of social thinking based on the principle**: **rationally people do not *think* its true**, but at some extent and without being even aware of its power, **people *believe* in it.**

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Now the question is *what's the place of the myth in contemporary society?*

in a society where the **forms of communications are multiple** (oral, written, visual, virtual and technologically mediated) and where there are **canonical and formalized ways, contexts, agents, tools of knowledge building and validation dominated by the science**?

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BARTHES (1957: 204) moves from the assumption that **the myth in the contemporary society is:**

- **a "*language*" - a "*langage volé*" - ,**
- **a form of communication, a message,** with a peculiar nature "à la fois: imperfectible et indiscutable" where the time, nor the knowledge adds or takes off anything (idem: 204),
- "a **semiological system** perceived and over imposed as factual system" (idem: 207).

The MYTH can be analyzed as any other form of communication to understand social phenomena related to particular people, objects, artefacts, events etc. who belong to the collective imaginary.

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The "*myth*":

a key dimension articulating Social Representations and Collective Cultural Memory

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More focused questions concern:

- Are there any relations between "myth" and "social representations"?

- Are mythical dimensions still alive in the dynamic process of knowledge production and **exchange between creative and reproductive genesis of social thinking**?

- If yes, how to detect these mythical dimensions and how to establish the level of awareness?

- Are mythical dimensions **accessible only within "primitive" and "archaic" cultural contexts** – not yet dominated by the science - or is it possible to identify them even in our advanced **contemporary societies, where science and its vulgarization are very pervasive**?

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Table 4 – Distribution of Constructs and Concepts (in F and %) emerged by the meta-theoretical analysis of 2116 articles and book chapters retrieved from the specialized Bibliographic Inventory on *Social Representations and Communication*.

Constructs and Concepts	F			%
Attitude	878	41,5	58,5	100
Cultural Knowledge	756	35,8	64,2	100
Belief system and Ideology	694	32,8	67,2	100
Cognitive schemas and processes	690	32,6	67,4	100
Image	654	30,9	69,1	100
Social processes	641	30,3	69,7	100
Practice	623	29,5	70,5	100
Value	614	29,0	71	100
Behavior	595	28,1	71,9	100
Opinion	554	26,2	73,8	100
Identity	539	25,5	74,5	100
Communication	535	25,3	74,7	100
Action	453	21,4	78,6	100
Language	438	20,7	79,3	100
Common-sense	426	20,2	79,8	100
Norm	409	19,3	80,7	100
Ideology	399	18,9	82	100
Stereotype	396	18,7	81,3	100
Categorization	366	17,3	82,7	100
Context	357	16,9	83,1	100
Symbol	351	16,6	83,4	100
Perception	293	13,9	86,1	100
Emotions and Feeling	267	12,6	87,4	100
Collective Representations	233	11,0	89	100
Change	229	10,8	89,2	100
Attribution	217	10,3	89,7	100
Judgment	203	9,6	90,4	100
Self	194	9,2	90,8	100
Development	144	6,8	93,2	100
Consensus	131	6,2	93,8	100
Prototype	130	6,1	93,9	100
Prejudice	114	5,4	94,6	100
Individual Representations	110	5,2	94,8	100
Myth	108	5,1	94,9	100
Social Memory	101	4,8	95,2	100
Motivation	86	4,1	95,9	100
Metaphor	58	2,7	97,3	100
Thêmata	52	2,5	97,5	100
Stigma	51	2,4	97,6	100
Assimilation	48	2,3	97,7	100
Habitus	29	1,4	98,6	100
Cognitive Representations	23	1,1	98,9	100
Cognemes	22	1,0	99	100
Archetype	20	0,9	99,1	100
Projection	16	0,8	99,2	100
Coping	14	0,7	99,3	100
Individual representations	9	0,4	99,6	100
Semiotic triangle	5	0,2	99,8	100
Total	14375			

In the literature on Social Representations, the empirical data based on the meta-theoretical analysis of 2.116 articles and book chapters extracted by a larger Bibliographic Inventory specialized in Social Representations, including 5.680 articles, show that on 14.275 constructs and concepts detected analyzing this specific corpus the **"Myth" appears 108 times (5,1%).**

It is interesting that it appears **just immediately before the "Social Memory" construct, present in 101 source's codification (4,8%).**

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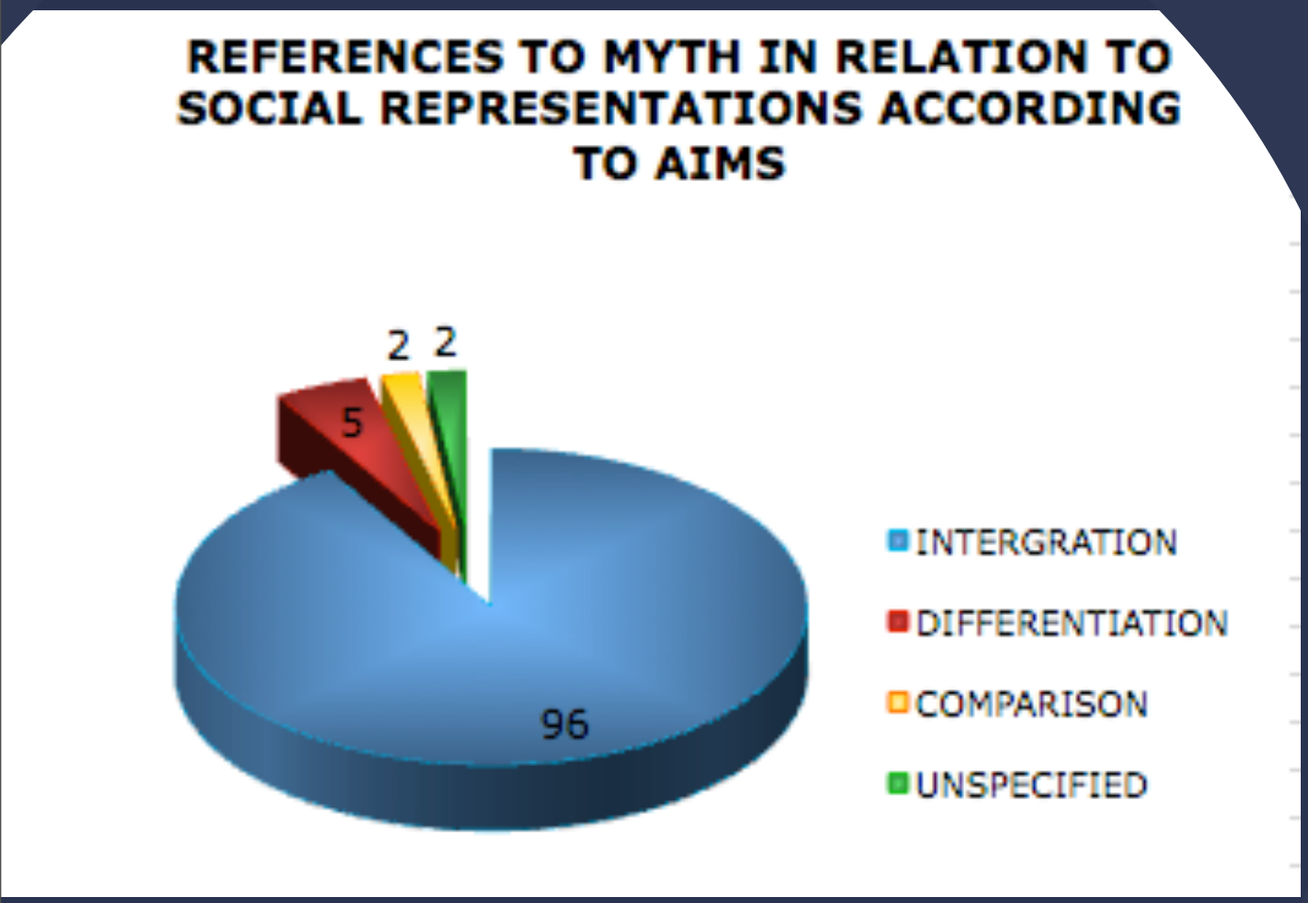

in most of the cases the authors adopt an integrating perspective

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In most of the case, **when authors refer to the "myth" construct, concept or dimension, they also take into account the "social memory" and history**, although the myth is not history, but it belongs to it and even influences it, becoming sometimes a **powerful tool of group identity and identification process**.

Echebarria Echabe and Gonzales Castro (1988) in their chapter dedicated to "***Social memory: macro-psychological aspects***" stress the **role of the "myth" in making easier the re-elaboration of the past through a commemoration** when the personage or event to be remembered has been transformed into a myth instead of just being an object of scientific science.

Nikos **Kalampalikis (2007)** in his book "***Les Grecs et le mythe d'Alexandre***" examines the relations between multiples versions of the history, collective memories, including the dimension of the myth, and the social representations with their identity functions.

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Both **Jodelet** (1989) and **de Rosa** (1987, 2005, 2010) have faced to the problem of the articulation of the Social Representations with "Myths" in several empirical investigations, paying always great attention to the historical and symbolic dimensions of a sort of ***"tacit knowledge"*** embedded in the experience and practices, quite different from a rational scientific form of knowledge.

The *mythical* dimension and its **"power" in the tension between rational experience and imaginary cultural dimension** is evident in the itself genesis of the process of building and structuring a social representation, referring for example to the ***figurative nucleus*** of the psychoanalysis proposed by **Moscovici** (1961/1976):

L'émergence du conscient et de l'inconscient comme termes du noyau figurative tient, nous l'avons vu, à leur résonance existentielle. Ils font écho à une expérience conflictuelle intime dont ne sont absent ni la dimension imaginaire, ni la dimension mythique, avec l'image d'une lutte entre "puissances" ou "forces antagoniques". Ainsi certains éléments du fond culturel présent dans l'univers mental des individus et des groupes peuvent être mobilisés dans l'activité de structuration et recevoir saillance au titre de référents idéologiques ou de modèles culturels. (JODELET, 1984, p.370)

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From the limits of the "replacing model" to the "*co-existing model*":

- Myth
- Science
- Social Representations
- Collective Cultural Memory
- Thémata

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The dynamic view of the social representations built on the tension derived by the "*coexistence*", rather than the "*split*" between rational and irrational, true and false, modern and traditional, scientific and pre-scientific (and even magic or mythical) forms of thinking is one of the fascinating aspect of the theory of social representations in understanding the social genesis, circulation and transformation of everyday thinking, between knowledge and beliefs, science and common sense.

Its heuristic value becomes immediately evident and powerful face to phenomena, which purely rational and cognitive models are impotent to explain, when they expel any irrational elements of the social mind as simple bias and mistake to be eradicated.

Indeed, since its conception, the notion of social representation was faced to the ancestral dimensions of "myth", incorporated into the Durkheim's (1898) conception of **"collective representations"**. In most of the cases, the literature simply tends to stress the divergence between the static concept of collective representations, compared the dynamic and contemporary one of social representations, emphasizing the "***replacement" model***, where *social representations* simply substitute the *collective representations,* as the present replaces the past, the science replaces the common sense, the history replace the myth, etc.

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We can find an effort to exemplify this evolution moving from the Durkheim static view of **"collective Representations"** to the Moscovici's dynamic view of social representations (FARR, 1993; MOSCOVICI, 2001) in the Flick's (1988) model, which is organised according two basic dimensions:

-a ***vertical dimension*** shifting from "*collective*" (in terms of cultural heritage and supra-individual collective patrimony) to "*everyday life*" (in terms of the social space for knowledge elaboration and inter-individual exchange among ordinary people);

- a ***horizontal dimension*** shifting from the past to the present, in a diachronic temporal succession, where *myth and religions* are replaced by the *Scientific knowledge*, which is influenced by *ideology*, and where the pre-scientific *common sense* is replaced by *Social Representations*. These fall into an era dominated by the *science*, but are intertwined - in a circulating space for knowledge production, diffusion and stock – with mutual influences between scientific knowledge and social representations. These latter influence *everyday knowledge*, which is influenced both by *ideology* and even by residual power in the everyday life of ancient "*myth*" and *religions,* belonging - according to this model – to the pre-scientific era of cultural production.

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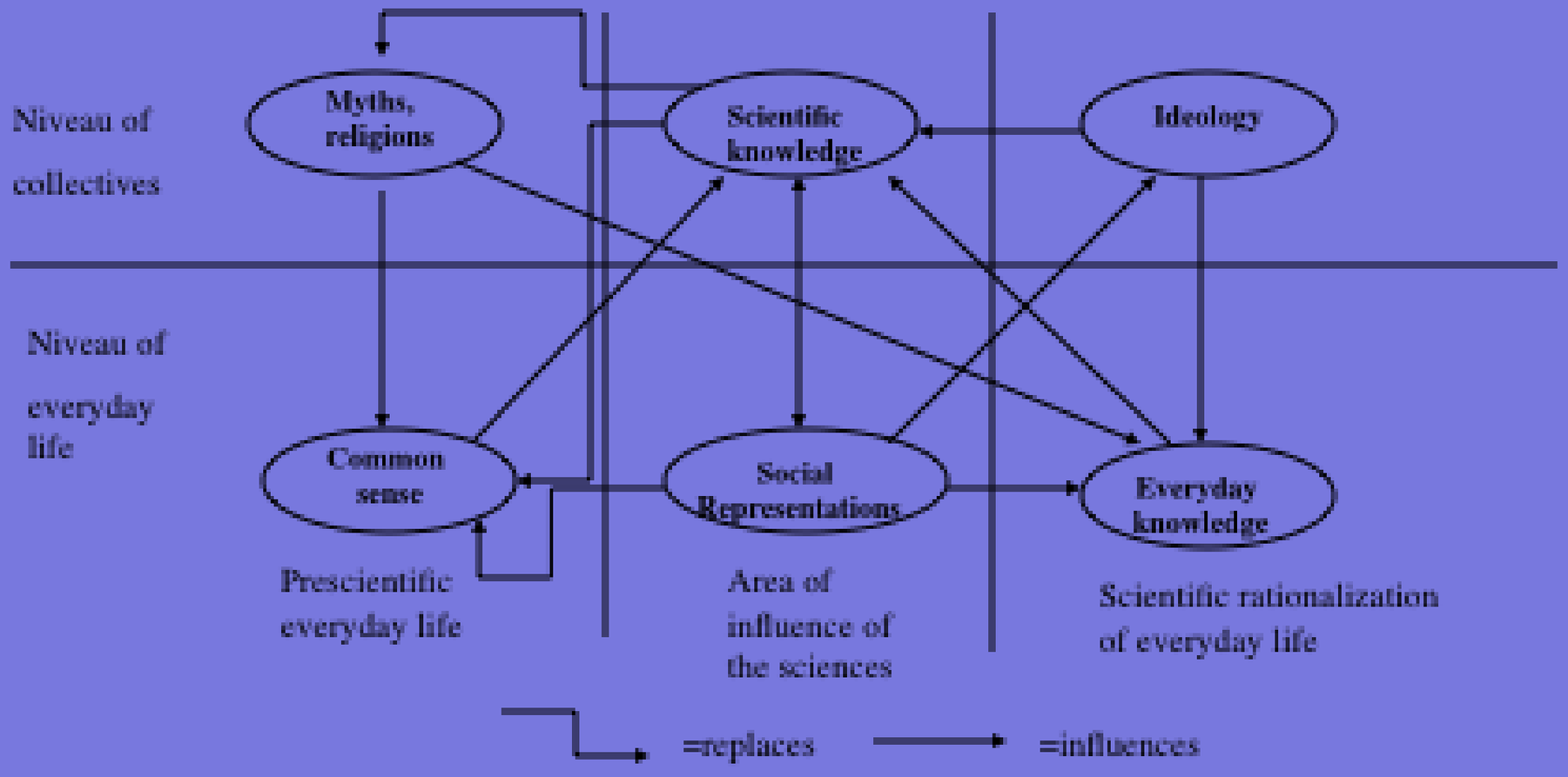
Forms of knowledge and their relations

Uwe Flick (1988). *The psychology of the social*, Cambridge University Press



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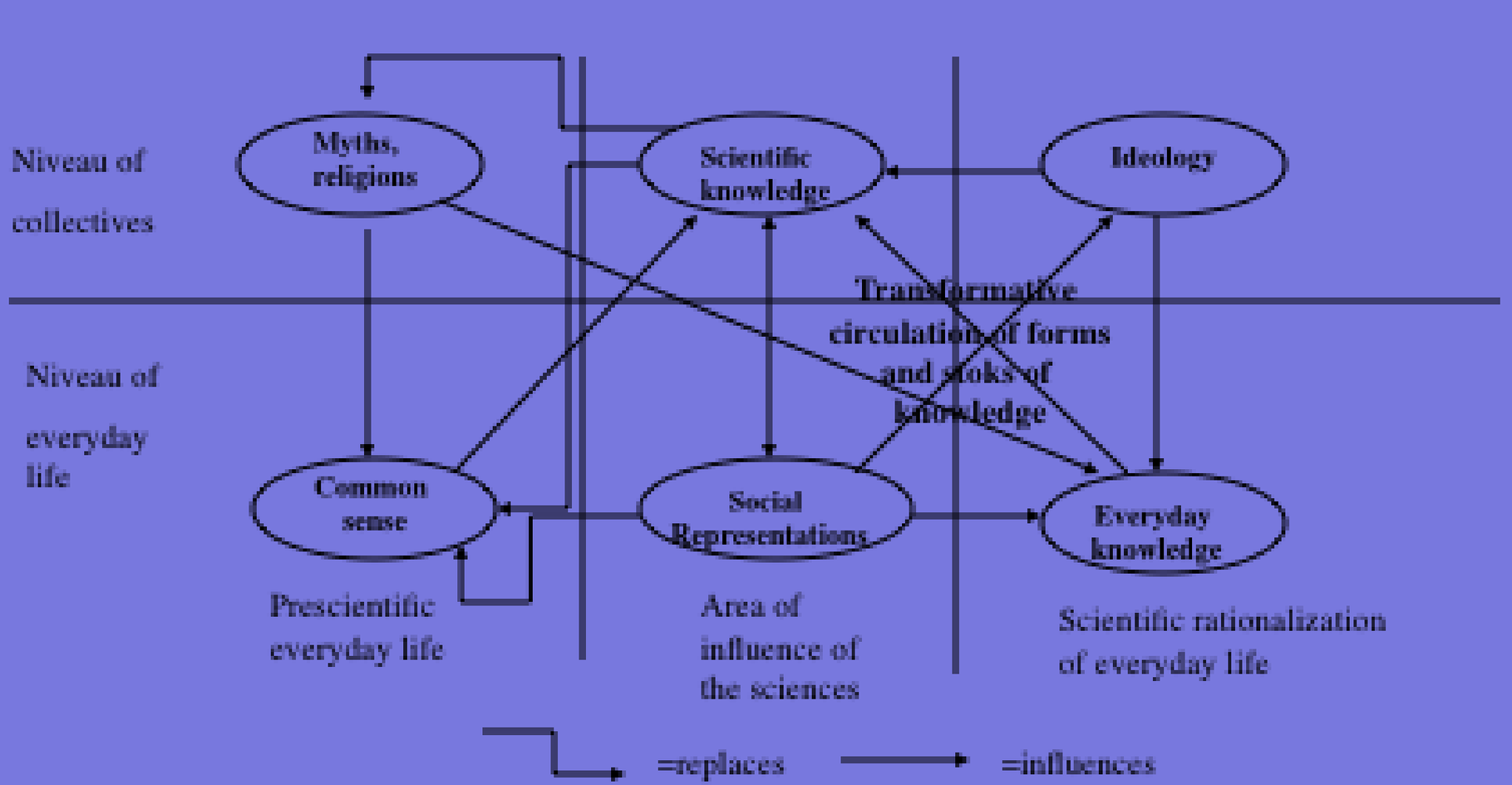

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First of all we should be aware that Moscovici does not approach the crucial issue of the common sense-science relations only from the perspective of *social psychology* (as most of his commentaries do), but also as an intellectual who has significantly contributed to the ***history of science.***

His interest for the process of science building and for the dynamic of **creative rather than re-productive thinking** (not so far from his interest between minority-majority influence) is neither marginal, nor less concerned for science as he is for common sense.

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MAIN QUESTION:
Is there a *"split"* or an *"inter-related"* model between :
- science and common sense or everyday knowledge,
- collective representations and social representations?

Our thesis is that:
differences and ***discontinuity*** are not the same, and the former cannot implies necessarily the latter, nor justify what we have called the "*replacing" model*.

The difference between science and myths does not necessarily imply that science has replaced the myth, if it is rue that a pre-logical mentality exists among the civilized people (MOSCOVICI, 1991, 1993) and different forms of *symbolic* and *stigmatized* thinking co-exist (MOSCOVICI, 2002).

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- "*The Psychology of Scientific Myth*" MOSCOVICI, 1992

We live, and this has to be declared aloud, in a world in which myths are overabundant and freely proliferate. Their vision fascinates us, we speak their language. (MOSCOVICI, 1992: 3)

Despite the extraordinary progress and diffusion of the sciences, the myths that one assumed to be relieved of have not been eliminated but are actually prospering.(…) The thermal death of the universe, the duality of left and right brains, neuronal Man with a capital M, the death of father: se know that these are not scientific discoveries but myths and derivations rather than deviations from the formers. As for myth-makers in the modern world, a fine bunch of Nobel Prizes could be found among them. All this can give offence, I know. Let us confess that things would be easier if one could say that there are the myths, which recede on the one hand, and science, which progress on the other. Here, the poor popularizes and the man in the street elaborating myths; there, the scientists fighting them. But we have to face facts. The same man produce in one and the same motion both scientific discoveries and myths, a paradox which psychology takes up. (ibidem: 4)

If we strongly believe that we are liberated from myths, this is because they are based on the same premise as science, but they do not respect the limits fixed by it. (ibidem: 5)

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"*The history and actuality of Social Representation*"

MOSCOVICI, 1998

- (…) it seems to me legitimate to suppose that all forms of beliefs, ideologies, knowledge, including even science, are in one way or another, *social representations*. (….)

- the postulate of an elimination of beliefs and common knowledge by science as a *telos* of individuals and cultural development must be renounced. In this sense, in a social sense, science and common sense – beliefs in general – are irreducible to one another insofar as they are ways of understanding the world and relating to it. Although common sense changes in content and ways of reasoning, it is not replaced by scientific theories and logic. It continues to describe the ordinary relations between individuals, it explains their activities and normal behaviour, it shapes their transactions in everyday life. (Moscovici, 1998: 235)

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Not only Moscovici has never intended to adopt a *replacing model*, when he has analysed the different ways of functioning and validating the knowledge produced *through, by and for* the "*reified universes*" compared to the knowledge built *trough, by and for* the "*consensual universes"*.

More important in doing so, **he has rehabilitated the ordinary knowledge to the status of knowledge**, expunging from it the inferior status and even dis-value implicitly or explicitly attributed to it compared to science in the era of modern rationality.

Common sense, therefore, is not the "mistake" of the science, the chain of the bias of a "naïve scientist" or "cognitive miser", who is condemned to fail in order to economise cognitive resources (as in the metaphor so dear to the social cognition paradigms); on the contrary it "remains at the base of all cognitive processes"

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Social Representations A definition

".... a **specific form of knowledge** - common knowledge -, whose contents show the operation of generative processes and socially marked functions.

More broadly, it refers to **a form of social thinking**.

The **social marking of contents or processes** of representations refers to **conditions and contexts** in which those representations reveal themselves in **communication** and through which they circulate and to the **functions** those representations serve in interactions with the world and with others".

Jodelet, 1984

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The notion of ***THEMATA*** is crucial for understanding the articulation inspired by the "coexisting model" of Myth, Science, Social Representations and **Collective Cultural Memory.**

It has been proposed as central in the study of Social Representations by Moscovici (1993, 2000) on the basis of the philosopher of science **Holton's (1982)** conception, and developed by **Moscovici and Vignaux** (1994, 2000), as a whole of primary conceptions, of strength-ideas, of archetypes, deeply rooted in the social memory of a group, revealing themselves in the common notions highly anchored and shared within a certain culture.

> **Thémata** are quite enduring and stable cognitive units which shape particular scientific representations and transform them.(....) What does the experience tell us? It shows that an object in the broad sense – thus madness, identity or AIDS - enters the field of our exchanges on condition that we consult the register of thémata so as to pick up the one - anomaly, deviance, contagion - that allows us to represent it to ourselves, nothing more. Once the object is hooked on a thema which is radically unutterable, because its only content is potential - I say potential, not tacit or implicit - it becomes the actual content of a representation when it gets anchored to a context, a network of meanings. To be anchored means that it has a reference and receives a determinate semantic value". (MOSCOVICI 1993: 162-63)

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The "*cognitive poliphasia*":

a heuristic concept supported by empirical evidence.

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- Last, I cautiously suggested the hypothesis of cognitive polyphasia. Basically I thought that, just as language is polysemous, so knowledge is polyphasic. This means in the first place that people are able in fact to use different modes of thinking and different representations according to the particular group they belong to, the context in which they are at the moment, etc. No further investigation is necessary in order to perceive that even professional scientist are not entirely engrossed in scientific thought. Many of them have a religious creed, some are racist, others consult their "stars", have a fetish, damn their experimental apparatus when it refuses to work, which is not necessarily quite rational. And just as some studies have shown, when asked to explain some ordinary physical phenomena, they even make use of Aristotelian physics instead of Galilean physics they learnt at school and which they trust. If these various, even conflicting forms of though did not coexist in their minds, they would not be human minds, I suppose.

> (…) First individuals are not monophasic, capable of only one privileged manner of thinking, with other ways being accessory, pernicious, even useless survivals of earlier ones. Second in our psychological theory, we suppose, as did August Comte, that eventually one single form of thought, that is, science, will prevail and the rest will die out. Such is the law of progress and of rationalization. Now there is no reason why, in the future, only one form of 'true' thinking should predominate, logos being definitely substituted for *mythos*, since , in every known culture, several forms of thinking coexist. In short, cognitive polyphasia, the diversity of forms of thought, is the rule, not the exception." (MOSCOVICI, 2000: 241-2)

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Looking behind the surface:

- **Looking behind the surface: the representation of madness 30th years after the de-institutionalisation of the psychiatric asylums**

- **Madness (as *thémata*)** and **Mental illness** are privileged objects for studying the ***mythical* and *symbolic dimensions* of *social representations*** linked to the ***collective* and *social memory***

A follow-up of a wide program (de Rosa, 1987,1995)

realised in the 1980s 90s over a population of nearly 4000 subjects

founded on multi-perspective approach:

a. Historical perspective

b. Evolutionary perspective

c. Comparative perspective

d. Cross-Perspective