

Cognitive Culture Studies – Where science meets the humanities

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By proposing the subject of my paper I must have been following the Romantic Idea of universal poetry and of the total art, some kind of rare blue flower of interdisciplinarity. Or I simply tried to honour my teacher Dieter Wuttke and his science of culture – as we say in German – based on Warburg’s example and establishing a scientific approach “Dazwischen”, in-between (Wuttke 1996). Some of the arguments certainly came to mind due to the crisis that the humanities have been suffering in Portugal and all over the world in the last decade, a kind of “A la recherche de la science perdue”. But of course I am aware of all the limitations that good will alone imposes on thinking. That is why I fortunately did not promise to show a way toward the unification of science and the humanities, but just their encounter.

In this sense I would like to answer two questions: 1. Why could Cognitive Culture Studies be a place where science meets the humanities? And 2: How could Cognitive Culture Studies be a place where science meets the humanities? Nothing in my arguments is new, but I just try to bring together what I think to have learned from some of the colleagues who kindly joined our conference – and from some who unfortunately could not do so.

The first question seems to be difficult, but it is not. Cognitive Culture Studies could be a path toward the unification of science and the humanities because cognitive and culture studies deal with the same subject. Of course this is not true for every kind or branch of Culture Studies and for every kind or branch of Cognitive Science, but there is a wide zone in which issues that belong to both fields meet. If you consider one of the famous introductions to Culture Science by Aleida Assmann you easily identify at least three (of seven) chapters as dealing with “cognitive” subjects (in a clinical sense), namely “Body”, “Memory” and “Identity” (Assmann 2006). And if you compare this introduction for instance with Alexandre Castro Caldas’ book in Cognitive Studies on “The legacy of Franz Joseph Gall”, you will recognize that “Language”, “Sign and Media” also belong to the overlapping interest of both researchers (Castro Caldas 2000). There are two more chapters in Assmann’s book that deal with two fundamental notions in human science, so that we expect insights on them from Culture as well as from Cognitive Studies: The notion and category of Time and Space.

Of course there are different ways to deal with the subject, since culture and cognition themselves are multi-dimensional realities. In his semiotic model of culture Roland Posner has distinguished three dimensions: the mental, the material and the social dimension of culture. The social dimension deals with institutions and society, the material with texts and works, and the mental dimension with perception, norms and values (Posner 1991). We are very used to finding the first and second dimensions represented in two different schools of Culture Studies, namely in the so-called German tradition of *Kulturwissenschaft* (founded by Georg Simmel, Aby Warburg, Walter Benjamin and Ernst Cassirer) and the so-called Cultural Studies, developed mainly by Stuart Hall and his Birmingham School. As far as I see, there is no leading school or tradition for the mental dimension of culture. And even less explored is the area where the three dimensions overlap. A cognitive culture approach could be an answer to this situation, strengthening a holistic perspective where distinguished interests have established separate fields of study. In this sense, sciences and the humanities would meet in the way they accept and establish a common field of study and develop a common interest in describing and explaining relevant phenomena in this field.

The second question, how this could be done, is quite more complicated – and I would not even dare to propose a definitive answer. But I would like to suggest four areas of research and study as well as one principle that could be useful to do our first steps onwards to a meeting of science and the humanities.

The first area of studies I want to suggest is Culture as “joint attention”. I borrow the term from Michael Tomasello’s research on the human adaption for culture (Tomasello 1999: 513), because it allows us to acknowledge right from the beginning the social dimension of culture – even if we look at it from a cognitive perspective. Culture is shared and social by definition. This sharing is different from just staying together or even imitating the other. Sharing counts on the individuality of the other and on the other’s intention. The first moment is communication, the second is learning and the third is culture and all moments go together in a constant process. Comparing it to non-human primate social learning and cognition, Michael Tomasello states the difference of human learning and cognition as the new:

The new form of social cognition that started the entire process involved understanding other persons as intentional agents like the self, and the new process of social-cultural transmission involved several forms of cultural learning [...]. These new forms of cultural learning created the possibility of a kind of ratchet effect in which human beings not only pooled their cognitive resources contemporaneously, they also built on one another’s cognitive resources over time. (Tomasello 1999: 526)

With these observations we gain three fruitful insights in and for culture studies. First of all, we can situate Culture and Culture Studies in the context of Evolution and thus of Biology. The important point is that Culture is not detached from

Evolution and Culture Studies are not out of Biology so that they can be seen together. Culture is a natural state of evolution – and thus its study should account for that. Karl Eibl’s research on the origin of poetry is a good example to prove the richness of such an approach. His book “Animal Poeta” (Eibl 2004) reveals the building blocks – as he calls it – of a biological theory of literature and culture. The exploration of a “Non-World” (Eibl 1995: 12) through playing, literature and art is a cultural concretion of a biological opportunity. Cognitive culture studies are aware of the biological foundation of culture.

The path from evolution to history is indeed learning. The importance of learning is the second aspect that emerges from the foundation of culture in the capacity for “shared intention”. Cognitive culture studies are concerned with learning as the fundamental process of cultural sustainability and development. It is not by chance that cognitive science found a broad acceptance in the field of education. The new and human cultural evolution “created artifacts and social practices with a history, so that each new generation of children grew up in something like the accumulated wisdom of their entire social group, past and present”, as Tomasello put it (Tomasello 1999: 526). Consider just for a moment that Cognitive Culture Studies could ask for the accumulated wisdom in contemporary culture (or in some of its artifacts and social practices) and you suddenly discover that culture studies become necessarily a critique of culture – perhaps in the Adornian sense of the word. This is the path Manfred Spitzer and some other German researchers took in the study of Cognition (Spitzer 2002).

In Leonard Talmy’s “Cognitive Culture System”, “education” is present as well, namely in the process of patterning through which the individual assesses “certain kinds of regularities, patterns, and norms” (Talmy 2003: II, 378f.). Talmy’s point is “that there has evolved in the human species an innately determined brain system whose principal function is the acquisition, exercise, and imparting of culture” (Talmy 2003: II, 373). Talmy’s Cognitive Culture System is the third point I would like to make concerning culture as “shared intention”. It is an excellent instrument to describe the process of assessing and sharing culture, working in the most different kinds of concrete realization. His description of “what is universal across cultures and what varies, of what is innate and what is learned” (Talmy 2003: II, 373) helps to overcome both false determinism and vain arbitrariness. Future culture studies will need it in order to establish their own scope and boundaries.

I shall come to my second area in cognitive culture studies now, which is much easier to explain. It follows the line of evolution to history, but focuses on the question of memory. Memory is the research field that links culture and cognitive studies most directly. There is a wide range of work done in both disciplines establishing a set of terms between “implicit” and “explicit memory”, of “short or long term”,

“semantic” and “episodic” or “working memory” and “sensorial memory” on the one hand. On the other hand we find distinctions between individual, collective (social or communicative) and cultural memory, symbols, agents and formation. There is of course a third discipline dealing with memory, namely Computer Sciences, in particular the branch of artificial intelligence, which, up until some years ago, seemed to be a kind of silver bullet of knowledge.

I would just like to point out one issue in this field of memory that seems quite urgent to me. I take it from Merlin Donald’s book on the *Origins of the Modern Mind* (Donald 1993) and from his further articles: namely the role of external memory-storage for human memory and culture. What is going to happen to cultural learning when its means get faster and better day by day? How will the mind change when it can count on external service “at the distance of a click” – as we say nowadays? Cognitive Culture Studies will have to follow the issue critically – both in terms of its cognitive as in terms of its cultural implications.

The key-point in the issue is perception and conception which seems to me a third area of Cognitive Culture Studies and I will follow Mark Turner’s famous suggestion to call it *The Literary Mind* (Turner 1996). Following his ideas on the *Origins of Thought and Language* the task – taken as general topic – is the description (and analysis) of the way we think. Of course there are quite a few ideas on that, but maybe it could be helpful to join once again a stricter cognitive point of view to the experience of cultural historicity. We soon discover that literature and art are not just a non-world, as Eibl suggested, but they are ways of conceptualization, which are irreplaceable for understanding. Cultural artefacts, and particularly art works, are not just another way of representing reality; they are a special way of conceiving reality, in the first place – and by that they actually establish this reality. The way through perception and conception is not only a constructive process in terms of *ception* – as Talmy called it (Talmy 2003: I, 139) – but it is constructive in terms of reality as well. When someone criticised his portrait of Gertrude Stein for not looking like her, Picasso is meant to have said: “No problem, it will.” (Fischer 2005: 139) Reality comes to look like its representation; it’s just a matter of time. Regardless if this sentence is true or not, 20th century’s science proved definitely that reality highly depends on the way we look at it: light as a wave or as particles, speed and position of an electron, or the definition of entropy: there is no reality in it before observation. That is why conception needs to be worked out, redefined, re-established – and one cultural process of doing so is art. That is why “Art in the advancement of understanding” – I am quoting Catherine Z. Elgin (Elgin 2005) – is a topic that cognitive culture studies have to deal with. Jonah Lehrer’s popular findings in his book “Proust was a Neuroscientist” (Lehrer 2007) belong to this field as well as Ernst Peter Fischer’s books on the history of science, namely “The Beauty and the Beast” (Fischer 1997; translated into English 1999)

and “Einstein meets Picasso and goes to the cinema with him” (Fischer 2005). Fischer states that further progress in science will be impossible without the help of aesthetics (Fischer 2003: 423). Working on the literary mind, on the way we think, Cognitive Culture Studies can help join aesthetic and scientific ception to a deeper insight of who and where we are. The importance of spatial stories and parable, scripts and frames, figures and geometry is culturally bounded and cognitively at place. Of course there is a direct way from “shared intention” to Lisa Zunshine’s application of Theory of Mind to the question “Why we read fiction” (Zunshine 2006), or to Patrick Colm Hogan’s “Thinking Jazz” (Hogan 2003). Any of them is double bounded in its results: enhancing knowledge on both culture and cognition.

I should now like to turn to the fourth and last area in cognitive culture studies that I would like to call “tacit knowledge” – and it will take some minutes to deal with it. “Tacit knowledge” is a kind of unrevealed treasure both in culture and in cognitive studies – and I am convinced that it can only be considered with the help of the interdisciplinary approach that we suggest. “Tacit knowledge” has to do with the imprinting of regularities, patterns, and norms that we talked about when we referred to “shared intention” in our first point. The process of cultural acquisition opens a certain range of options that configure up to a certain point our way of thinking. The argument is not a deterministic one; on the contrary, the aim is to increase awareness on those elements that unconsciously act upon our thinking. If we do not take these elements into account, it is much easier to confound our own way of thinking with the only one.

“Tacit knowledge” has been a frequent argument especially in business and administration studies. One of the best known authors in this area is Geert Hofstede with his famous books on – quoting a recent title – “Cultures and Organizations. Software of the Mind” with its promising subtitle “Intercultural Cooperation and Its Importance for Survival” (Hofstede 2005). We are of course not defending Hofstede’s classification and ranking of nations and cultures through the indexes of Power Distance, Individualism, Masculinity, Uncertainty Avoidance and Long- or Short-Term-Orientation. But we recognize in his books (as well as in many others written with the same aim to characterize behaviour through cultural imprinting) the importance of those limits and configurations that are wider than the limits of the individual and smaller than the limits of humankind – and an attempt to render these limits and configurations visible, conscious, and thus treatable or even manipulable. This is an important point: such limits and configurations are not just given, they are learned and involved in a permanent process of reconfiguration that can be observed and should not be ignored.

Other terms have been applied for that: mentalities, for instance, or *Denkkollektiv*, to use the expression introduced in the thirties by Ludwik Fleck (Fleck

2008). Richard E. Nisbett and colleagues even spoke about the *Geography of Thought*, analyzing (or establishing) the ways “How Asians and Westerners Think Differently ... and Why” (Nisbett 2003). Radically questioning the academic tradition, Nisbett found himself exposed to a disturbing alternative: “If the scholars in the humanities and other social sciences were right, then the cognitive scientists were wrong: Human cognition is not everywhere the same.” (Nisbett 2003: XVI). His *Geography of Thought* tries to explain in which sense both are right: cognition generally counts on a specific configuration in its cultural environment.

The term “tacit knowledge” itself has been developed by Michael Polanyi in the fifties and gains new importance through cognitive studies, as an instrument to know more about cognitive culture realities. Michael Polanyi writes:

Tacit assent and intellectual passions, the sharing of an idiom and of a cultural heritage, affiliation to a like-minded community: such are the impulses which shape our vision of the nature of things on which we rely for our mastery of things. No intelligence, however critical or original, can operate outside such a fiduciary framework. (Polanyi 1974: 266).

For Polanyi education within this framework prepares not only acting within it but it also anticipates future attitudes. In a world of permanent change, interaction between what has been learned and what emerges builds up continuously: “every time our existing framework deals with an event anticipated by it, it has to modify itself to some extent accordingly” (Polanyi 1974: 103). “Tacit knowledge” is not static but in a permanent change and yet counting on the anticipating power of the acquired framework: no experience without condition, no experience without implication.

Douglas Hofstadter developed the interesting idea of a “Strange loop” (Hofstadter 2007) to describe what this means for the concept of the individual or – as he calls it consciously referring to the older tradition as a “soul“: the permanent interaction of experience and reflection, of self-awareness and external observation reaches out as a significant effect: in the end, everything is both experience and conception, both framework and outcome. Cognitive culture studies should attentively consider this close relation.

Culture as the intimate relation of experience and conception is full of “self-set standards” and “unproven beliefs”, as Polanyi pointed out. If we want to avoid cultural essentialism or dogmatism, it turns out to be important to count on this and not to despise or ignore it. “We should be able”, writes Polanyi, “to profess now knowingly and openly those beliefs which could be tacitly taken for granted in the days before modern philosophic criticism reached its present incisiveness.” (Polanyi 1974: 268)

This awareness or “profession” is even more important when we consider how much tacit knowledge and culture affect decision making. This is quite a wide and recent debate that is gaining visibility in several disciplines. I would like to

mention Gerd Gigerenzer's research on the intelligence of the unconscious in his book about *Gut feelings* (Gigerenzer 2007). The recent discussion of the subject may, in a certain sense, be the result of the increasing complexity of decision making. "Gut feelings" seem to be a reliable guide to decision in all kinds of situations, especially when their complexity inhibits a formal and rational process of evaluation.

Gigerenzer refers to Polanyi's famous sentence "We know more than we can tell." The unutterable is necessarily present in decision making. The first important point is that any kind of cultural (or other utterance) does not just occur in our mind, but always in a specific situation. That is why cognitive studies alone cannot find answers to certain question of cognitive processes: "to understand behaviour, one has to look at both the mind and its environment", concludes Gigerenzer (Gigerenzer 2007: 75). Our cognitive, conscious or logical reasoning cannot (always) control but a small part of real factors involved in complex decision making. That is why we need certain rules of thumb- as Gigerenzer calls it – to overcome complexity. These rules of thumb allow us to find a decision not although they ignore certain information but because they do so.

Decisions and options are made not on the basis of an overall calculation, but following criteria of relevance and attention. Relevance and attention are framed, consciously or unconsciously – and thus they are the result of the process of shared intention and cultural learning as described before. There is no objective criterion for relevance and no guarantee for attention. It has to be worked out, through the permanent process of cultural communication. That is why we should not count on them arbitrarily or even take them for granted. Relevance and attention can be redirected, bypassed, seduced or even mislead. Once again we reach the point where cognitive culture studies are necessarily a matter of criticism.

This issue of critique can be drawn in the line of several purposes. I already mentioned Hofstede's "Cultures and Organizations" and I should mention the famous book edited by Lawrence E. Harrison and Samuel P. Huntington "Culture Matters" and mainly Mariano Grondona's "Cultural Typology for economic development" (Grondona 2000). But these examples should not mislead our conception of "Cognitive Culture Studies". What is at stake is a better and deeper understanding of how cognition and culture necessarily interact – and not an immediate utilitarian application of this understanding. We should not confound learning with the acquisition of skills – and thus we should not leave Cognitive Culture Studies just to its application on growth (and greed) in economic development. The deep and inseparable interaction of cognition and culture is about much more than that. It is about how provenance and projection find together.

We cannot be without culture. We can be against a certain type of culture, against "certain kinds of regularities, patterns, and norms" (Talmy 2003: II,

378f.) but we cannot live without “regularities, patterns, and norms”. To know about them, to know about “tacit knowledge” and its visible translation in rules of thumb and gut feelings, to know how cognition and culture work together in a given cultural environment and in a concrete cognitive performance, that is the great challenge for Cognitive Culture Studies.

Before I go back to the beginning I have to come to the end – introducing a principle that should be observed in each of the four areas of study presented up to now: the first dealing with Culture as “shared intention”, the second dealing with memory, the third dealing with the “literary mind” and the fourth on “tacit knowledge”. Observation in Cognitive Culture Studies is always observation of the second-order in the sense of Niklas Luhmann: Cognitive Culture Studies do not observe reality as such (in the sense of the empirical observation of the neurosciences), but it observes observations. Sometimes these things got mixed in Culture Studies. As a second-order observation Cognitive Culture Studies can render visible the proper condition of observation itself, “so that we can describe more accurately what is going on” (Luhmann 2000: 57). A cognitive approach in culture studies would help us concentrate more on how culture is conceived and less on the question of what it is about. On the other hand, the cultural dimension brings cognitive studies back to History.

Of course, considered “as an operation, the second-order observation is also a first-order observation”, as Luhmann points out, and thus it will not escape from its own conditioning. As long as it is worked out as a second-order observation it is “equipped with a higher degree of indifference against all other conceivable influences” (Luhmann 2000: 55f.), a higher degree of indifference that vanishes in the moment when the second-order observation is considered as an observation itself. All that I have said about Cognitive Culture Studies is of course second-order observation. But in the moment that I started, a low degree of indifference against all conceivable influences threw me back to this particular tacit knowledge that I wanted to share with you and that emerged from a Romantic ideal of universal poetry, the memory of my teacher and a certain dissatisfaction about the way in which the humanities moved away from science.

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