Akan shit

Getting rid of dirt in Ghana

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To Mike Warren, who died on 28 December 1997 at the age of 53. He started his anthropological career with research among the Bono people of Ghana. He would have enjoyed this rumination.

There is a peculiar paradox in the Akan culture of Ghana. It has to do with people's manner of dealing with human faeces. On the one hand, they are extremely concerned with cleanliness and removing dirt from their bodies. On the other hand, the way they actually get rid of human waste is so inefficient that they are continuously confronted with what they most detest: filth, in particular, faeces.

If the Akan proverb that the stranger is like a child (*òhòhoò te sè abofra*) is true, it certainly applies to my interest in Akan shit. As a child in its anal phase, I have been fascinated by toilets and faeces ever since I set foot on Ghanaian soil in 1969.

At that time, I had found a room in the house of a teacher in Kwahu-Tafo, a rural town of about five thousand people in the southeastern part of the country. I explained to my host that I wanted to take part in everything and asked him to introduce me to his way of life, which he did meticulously. The morning after my first night in his house he took me to the public latrine. People prefer to go to the toilet early in the morning so it was rush hour. About ten people were waiting outside. When it was my turn I entered the place. A penetrating stench hit me in the face. The floor was littered with used paper. Squatting people stared at me. I felt terribly uncomfortable, walked past them and left the place. I told my host that I did not have the urge, which was very true. I never returned to the place. I asked an American missionary with a real water closet if I could use his facility.

Altogether I have stayed more than three years in Kwahu-Tafo. I have tried to practise participant observation to the letter, as an anthropologist should, but visiting the toilet has remained my major weakness. In 1994, when I revisited the town to conduct research among elderly people, I settled in the house of someone who had his own latrine. I asked him if I could use it and he generously gave me a key saying that I should not give it to anybody. The use of this toilet was a privilege. Only some grown-ups and his own children had access to it.

There were good reasons to restrict the number of people using his toilet. The bucket, which was emptied once a week, would soon be full and the place would become a mess. I discovered the place *was* a mess, at least in my eyes. Several times I found the bucket overflowing. Flies loved the place as did chickens who entered through holes in the door and the walls. The ever-present pieces of used paper, either tissue or newspapers in all languages, added to my repulsion. Separating the faeces and the paper is a general feature in Akan toilet culture. The paper is deposited in a separate bucket, basket or tin, but the wind, animals and careless people cause much of the paper to end up somewhere else, both in the toilet and in its immediate surroundings. A few times I saw my landlord or someone else from his compound burning the paper.

At that time, in 1994, I brought a Ghanaian sociology student with me to the field as a research assistant. He stayed in the room next to mine and I felt I had to show solidarity with him concerning toilet use. I thought I could not ask the priests at the Catholic mission if I might bring another customer to their toilet. That situation gave a new impulse to my determination to overcome my toilet phobia and become a more complete participant.

It did not last very long. I soon started to cheat on my assistant and secretly use the priests' toilet. I cleverly combined occasional visits to the Catholic mission with visits to their toilet. My bowels cooperated, which again shows to what extent natural urges can be tamed to obey social and cultural conditions. As soon as I approached the priests' place, I felt the urge coming.

I never revealed my unfaithfulness to my research assistant. I felt too uneasy about it. It was indeed a serious breach of confidence which, I feared, would damage our relationship and the work. He, too, did not like the landlord's toilet and started to visit the toilet of the Technical School, a walk of about ten minutes. So again toilet use disappeared from my participant observation but it made the phenomenon the more intriguing. After all, we are most attracted to the things which continue to elude us.

If there is anything dirty in Mary Douglas' sense of the term, it is human faeces. In my own culture, their place is in a 'no man's land', a territory unseen and untouched by human beings. Human faeces are hygienically handled by technical devices which make them disappear almost immediately, first under water, then underground. They leave no trace, not even their smell.

Only the faeces of small children are an exception. They are allowed to stay a bit longer above the ground and even pass through human hands, mostly those of their mothers, although cleverly designed diapers make it more and more possible to avoid contact with children's faeces as well. In general, one could say, however, that the faeces of children are less 'dirty' than those of older people.

The faeces of sick and elderly people who have become incontinent or cannot visit the toilet are more problematic. They require professional treatment. The fact that we need a special category of workers, nurses, to deal with that type of faeces confirms that they are really dirty. By assigning a profession to remove them, we make sure that they remain far from everyday life. They are restricted as much as possible to certain places and handled by 'specialists'. The system seems to work.

It does not work in Kwahu-Tafo and I assume in most other places in Ghana. In itself, this is not surprising. There are more things in Ghana which do not work very well: schools, hospitals, trains and electricity. Some roads are bad and some factories do not function

Note on transliteration
The Twi character Ɛ has been printed here as *è*, and as *ò*.

Warren, D.M. 1974. *Disease, medicine and religion among the Techiman-Bono of Ghana: A study in cultural change*. Ann Arbor: University Microfilms International.

well. These problems, some say, are mainly due to poverty and 'under-development'. Poor sewage and a defective toilet system in particular, one could argue, are caused by the same problems. Nevertheless there is also reason for surprise. That they have not developed a more efficient system of getting rid of faeces is puzzling if one takes into account their concern about dirt.

Dirt is a key concept in the Akan perception of the human being. Dirt is something unwanted, something one should get rid of. Ideas about dirt and cleanliness pervade the entire culture. There are several terms which refer to dirt. *Efi* is dirt which, according to some, comes from outside and attaches to the body, to clothes, to objects, or to a house. It has a temporary character. A man coming from his farm is dirty (*ne ho ayè fi* or *ne ho wò fi*) because of the work he has been doing. It is not his habit to be dirty. A child playing in the mud is dirty, as is a yard which has not been swept.

Atantaneè (lit. nasty or hateful things) is dirt which is more detestable. Most people use the term for dirt coming from inside the body: vomit, phlegm, menstruation blood, urine or faeces. When a latrine is dirty with human faeces, people say: *Èhò yè tan* (lit. there is nasty). *Pòtoo* (dirty) can refer to both types of dirt, from inside and from outside the body. A very deprecatory term is *oburu ne ho* (he is dirty; lit. his body is fermenting) or *oburu ne fie* (lit. she lets her house ferment). Such a person is called *obufoò*, a habitually dirty person.

As in most languages, terms of 'dirt' assume much wider meanings. They are metaphorically applied to social, moral and esthetic phenomena. Dirty = ugly = unattractive = nasty = bad = uncivilized = shameful = not respected. Examples from Christaller's Twi dictionary illustrate this: *Efi aka no* (lit. dirt has stuck to him) means that someone has defiled himself morally, for example by committing evil or breaking a taboo. *Ne yere de fi abèka no* (lit. his wife has brought dirt to stick to him) means that his wife has disgraced him. *Efi*, someone said, spoils things; it makes one vomit. So *efi* produces *efi*.

Atantaneè is made from the root *tan* which means ugly. Someone commented that it pains the eye when one looks at it. *Tan* is also the term for 'to hate'. Hateful, nasty, shameful, they are one and the same thing. If someone has the habit of being dirty, people say *Ommu ne ho* (lit. he does not respect himself). Telling someone that he is dirty is a serious offence. Warren (1974:80) cites fourteen such abuses in his study about the Bono Akan. The last one is the most interesting: 'You stink like the armpit of a white man' (*Wo ho bòn sè oburoni motomu*).

The strong emphasis on the different use of the right and the left hand shows the same concern about dirt. The left hand is reserved for 'dirty' activities, such as cleaning oneself after using the toilet, holding the penis while urinating, cleaning dirty things (e.g. a chamber pot), blowing one's nose, etc. Even in love-making, someone revealed to me, he switched from the right to the left hand when he touched 'unclean' parts of the body of his partner. It was an 'automatic' reaction.

Conversely, cleanliness (*ahoteè*) is the pre-eminent metaphor to express positive appreciation. Clean = beautiful = attractive = good = civilised = respectable. The most common term referring to being clean is *te*, which means 'to be open' or 'to be clear'. *Èhò te* (lit. there is open) must be understood to mean that the place is clear, free from unwanted things, dirt. *Ne ho te* (lit. his/her body is clear) is a compliment saying that the person is beautiful, attractive. In Ghanaian English, the expression 'she is neat' is almost synonymous with 'she is pretty', with the connotation that she is also beautiful in a moral sense, 'pure'. The connection with respect is always present. Cleanliness engenders respect and expresses it. *Odi ne ho ni* means 'he respects himself' as well as 'he keeps himself clean'. Another term for being clean is *pò*, which literally means 'to rub', 'to scrape'. *Wapò*, he has scraped (himself), refers to someone who is neat, polished, in the sense of civilized.

In summary, bodily cleanliness stands for physical and moral attractiveness, whereas dirt symbolises physical and moral decay. Dirt, or rather the abhorrence of it, plays a central role in the local 'anthropology'. To say that someone is dirty, is almost a rejection of the whole person. Cleanliness of the body (the skin, the orifices, the teeth, the nails) and cleanliness with regard to housekeeping, clothing, or one's children, constitutes a basic condition for a person's attractiveness. Physical beauty and sexual attraction are commonly explained in terms of cleanliness.

Constipation

Dirt also takes a central place in the explanation of sickness. Almost half of all disease causations collected by Warren (1974:317-18) among another Akan group are related to dirt. People are very concerned with avoiding dirt in order to stay healthy. One should cover food to protect it against flies and other dirt from outside. One should wash one's utensils, sweep away dirt which will attract insects, clean the containers in which water is stored, wash one's clothes regularly, and so on. A pure body, neatly dressed, in a clean house, stands for a healthy person. Warren (1974:320): 'Daily bathing is very important... and at least two baths a day are taken, one prior to beginning the day's business and one prior to retiring at night. Babies are bathed more frequently. Clothing is kept very clean and washed and ironed frequently.'

The presence of dirt *in* the body is seen as the most important cause of sickness. If one does not go to the toilet every day and one allows faeces to remain in the body for too long, it is thought that the dirt starts to ferment and heat as in a dunghill. It may affect the blood and spread throughout the body and then try to break out of the body in other ways. Boils for example are seen as the result of dirt, and so are piles, ulcers, excessive phlegm, headaches and skin rashes.

Constipation, therefore, is a very general health problem and a typical 'culture-bound syndrome'. People start using laxatives as soon as they have 'missed' a day of going to the toilet. Enemas, too, are busily used and have become part of popular self-medication. Mothers preparing and applying herbal enemas to their babies were a common sight in some of the compounds where I stayed. When I discuss this with friends and tell them that I never think of constipation, and that, never in my whole life have I had an enema, not even taken a laxative, they are greatly surprised. I hear *them* constantly complain of constipation.

All this brings me back to the initial question: If Akan people are so concerned about dirt, and faeces in particular, why don't they have a more efficient and cleaner system for removing dirt? Voilà, the dirt paradox, the hygienic puzzle.

Sanitation in Kwahu-Tafo

There are four public toilets, each with twelve squatting holes (six for each sex), in Kwahu-Tafo. Two of them have been closed, one for about three years and one four months ago, both due to maintenance problems. It

means just 24 public facilities for the entire town. (While I am writing these lines, I hear that one of the remaining toilets has been closed as well, because it is full. Twelve toilets for 5,000 people...). It also means that some people have to walk about 15 minutes to reach a public toilet (to and fro thirty minutes).

In addition there are semi-public toilets in two schools, which can be used by both teachers and pupils. The number of private latrines (almost all bucket latrines) is unknown. The sanitary inspector estimates their number at sixty. Finally, there are about ten private pit latrines and ten water closets, one in the chief's house, the others in the Catholic mission and the teachers' bungalows of the Technical School.

It is impossible to say how many people are in fact using the public toilets. Estimates vary from one third to 80 per cent of the population, which in absolute figures would be 1,500 to more than 4,000. Unknown is also the number of people who don't use toilets at all but are easing themselves in the 'bush' at the edge of town or on the way to their farm. Some people defecate into a plastic bag and dump their faeces with the bag somewhere out of sight. If we take a conservative estimate of 40 per cent, it means that every day about 2,000 people use 24 holes, almost ninety per hole per day. Taking into account that both toilets are closed from about 9 p.m. to 5 a.m., one can conclude that the holes are occupied every five minutes. On the average both public latrines would receive about one thousand visitors per day. When I discussed this with the caretaker of one of the latrines he estimated a number of only about two to three hundred. He based his calculation on his income per day. Whatever the exact number, it is not surprising that there are queues early in the morning as most people prefer to ease themselves before they start the day.

I asked several people why they preferred to go to the toilet early in the morning in spite of the inconvenience of having to wait in rather unpleasant circumstances. According to some, the preference for the early morning hour has to do with their dislike of dirt. They want to start the day with a 'clean slate' so that they don't have to worry about it any more during the rest of the day. After using the toilet they take their bath and are clean. Another consideration is that the food one takes in the evening is digested during the night. As one lady said, 'Before you put in new food it is better to take the old one out'.

For elderly people the way to the public toilet seems particularly painful. It may be far and the conditions do not befit their status of respected elder. Most elders therefore use a private latrine, either in their own house or in that of a kind neighbour. They are also likely to avoid the morning rush hour if they have to go to the public toilet.

People ignore each other on the way to the toilet. Greetings are withheld; a remarkable phenomenon in a culture where one could – and some do – fill the day with greeting people. Ignoring each other seems an effective proxemic device to reduce the unpleasant presence of others, not very different from the way people in my society ignore each other in crowded places like the tram and metro. People themselves have another explanation for not greeting one another on the way to the toilet: 'If you greet someone, the person may ask you a question and another question and delay you "too much". You may get in trouble and disgrace yourself.'

A more plausible interpretation of the silence on the way to the toilet was provided by an anonymous reader of this essay. A 'very distinguished Akan scholar' had once told him that, when he was a resident in an Oxford college, 'he found it almost impossible to force himself to respond to friendly greetings from fellow students as he crossed the quad to the loo in the morning. He had to prepare himself for what for him was a cultural ordeal. An Akan can tell from the way a walker holds his cloth if he is socially visible, i.e. shat and bathed, or invisible, i.e. belly full and unwashed.'

Visiting a public toilet is not 'free'. The caretaker of the toilet takes twenty cedis (about one U.S. cent) from each visitor. In that way the old coins which have lost nearly all their value are still useful (the same amount is charged for a bucket of water from the public tap). Today I visited the only toilet which was functioning. The caretaker was a man who had taken the place of his sister who usually did the job, but who had gone to farm. He was sitting in a small kiosk and had a pile of cut newspapers in front of him. He handed each customer one sheet and received twenty cedis. If they brought their own paper, he said, they would pay only ten cedis. Each day he had to pay 3,000 cedis to the sanitary inspector. He could keep what he earned above that amount. Funerals and other busy days were golden times for him. The closure of the other latrine also should have been a great advantage, but I did not notice that the traffic was very busy, perhaps because it was approaching ten in the morning.

The sanitary situation was much better than I remembered from my 1969 experience. The place was relatively clean. The caretaker inspected the place several times a day and cleaned it when necessary. When we went around we saw one hole that was really filthy. He apologised and said he would clean it immediately. The paper was burned right at the entrance.

The sanitary and cultural conditions surrounding the private bucket toilet also deserve our attention. I suspect that the earlier description of my landlord's private latrine also applies to many other ones in the town, although neither I nor anyone else ever conducted a systematic survey of them. For 800 cedis a month (about half one US dollar) the buckets are emptied every week. That sometimes buckets overflow may be due to the fact that the owner failed to pay his monthly dues or that the work force cannot cope with their task. The buckets are emptied in the night by a man from the North. Formerly these workers came from Sierra Leone and Liberia. That is why they are still called *Krufoò* (Kru people). *Krufoò* earn 50,000 cedis, about US$30 per month, according to the sanitary inspector. I suspect that they get some extra rewards from the different houses they serve, but my informant declined to talk about this.

No Akan native of the town would ever think of performing this kind of dirty and poorly paid work Neither would they be willing to do this work if it were well paid. ('Even if they paid me ten times as much.') The work is extremely unpleasant. The *Kruni* carries a container on his head in which he empties the bucket. He has a broom to clean the bucket and a lantern to find his way. The bucket is behind a small door on the outside of the house. He has to carry the container for a long distance to a dumping place on the outskirts of the town.

The *Krufoò* are literally 'people of the night'. They are the personification of the Akan horror of shit and have to make themselves and their load invisible. Just opposite the window of the room where I am now staying is the bucket of the neighbour. Once a week I wake up when the *Kruni* comes to empty the bucket,

not because of the noise he makes – he moves as silently as a mouse – but because of the stench drifting into my room.

It is unlikely that there will be any *Krufoò* in the near future. Those who are doing the work are getting old and no one wants the job any more. Their children attend school and have other ambitions. I heard the story of a *Kruni* in a nearby town whose son was in university. He asked his father to stop the work, but the old man replied: 'My son, this is the work I have always been doing. With the money of it I sent you to school. I have only a few years to go, so let me continue the work.' In Kwahu-Tafo there is only one *Kruni* who can hardly cope with the work. He is getting old and there is no successor.

The backstage of a hospital

In 1991 I was admitted to a hospital in the capital, Accra. I had severe diarrhoea and was becoming dehydrated. They put me on a drip, but I was still going to the toilet almost every hour. That's how I got to know a less known area of the hospital, something which Goffman has termed 'backstage', an area which is not supposed to be seen.

The ward was the front stage, fit for visitors (and doctors). A door led to the backstage, a corridor with several 'bathrooms'. The toilets were in terrible condition. The floor was flooded with a mixture of water and urine. The toilets did not flush. Used toilet paper had to be deposited in a rusty bucket without a lid. The flies were many and concentrated their attention on the paper in the bucket. I knew my disease was extremely contagious and figured that more patients would soon suffer from the same problem as me.

Meanwhile a female doctor in Kente cloth, decorated with a golden necklace and bracelets, was making her rounds on the front stage. It was a Sunday. She looked very clean, neat and beautiful. I realised the absurdity of her cleanliness in this place where the filth of the sanitary conditions probably made many people sicker than when they first arrived. I wondered how someone trained in the science of hygiene could tolerate such conditions. I could think of only one explanation: she and all her colleagues refused to think about it. She never entered the backstage with its dirt and also forbade her thoughts to visit the place. Her beautifully groomed presence indicated that she had succeeded in creating an area where dirt could have no place.

The language of shit

'Shit' is a common exclamation in English as are its equivalents in French, German, Russian, Polish, Spanish and several other languages. In my own language Dutch, the English 'shit' is commonly used by the younger generation to express feelings of disappointment, irritation, but also of surprise. It is not a serious term of abuse: after all, human faeces are not detested as much as in Ghana. We have dealt with them in a very efficient way, they are made to disappear smoothly out of our midst, so we don't mind so much if they make a reappearance in our language. We are not worried, they don't threaten our lives.

In Kwahu-Tafo, it is different. It is very dirty and abusive to use the Akan equivalents. If someone says '*Ebin*' (shit), it expresses an extreme measure of disapproval. The word is as taboo as the thing itself. Abuses containing 'shit' are so bad that I find it almost impossible to write them here. *Mene wo so* (I shit on you), *Meta wo so* (I fart on you) or worst of all: *Mene w'anom* (I shit into your mouth). Yet you hear them often, because there is a lot of shouting and noisy fighting in the town and people look for the most offensive terms to use against one another. I heard my neighbour 'shitting into someone's mouth' yesterday when a violent quarrel erupted in the house. Even mothers, who love their children very much, at times scold them in the most offensive terms, using the above abuses.

Euphemisms for going to the toilet (which in itself is metonymic for going to shit) are used in all languages. We have the 'bathroom', the 'geography of the house' and many other indirect references in English. We have them also in my own language, Dutch. At the same time I should stress that it is not over rough or impolite to mention the activity directly. '*Ik ga poepen*' is fairly common and can be used in the family context. '*Ik ga schijten*' (I am going to shit) is a bit rough but acceptable among relatives, friends or close colleagues.

It is different in Twi, the language of the Akan. *Merekò ne* (I am going to shit) does not sound nice at all. Very close friends may say it in a joking way. I have never heard it being used in a normal context. Only euphemistic expressions, are employed such as *Merekò baabi so* (I am going to a place), *Merekò dua so* (I am going up the tree; referring to the old toilet of tree stems over a deep hole), *Merekò gya m'anan* (I am going to leave my leg), and *Merekò tiafi* (I am going to the small house) which are the most common ones. Less common are *Merefa kwan* (I am going to take the road), *Merekò yi mmirekuo mma* (I am going to remove/catch the *mmirekuo*, birds in the bush), *Merekò to abaa* (I am going to throw a stick), *Merekò efi kèseè* (I am going to the big house). The person who gave me all these idioms did not include the term he used himself when, after so much talking on the subject, his bowels wanted to join the conversation and he had to rush to the toilet in the Technical School, about ten minutes away. He said: *Merekò block* (I am going to the block). Two days later he said: *Merekò school aba* (I am going to school and will soon be back). Some expressions are mostly used by the younger generation: *Merekò ntòmò* (meaning obscure), *Merekò hu mu* (I am going to blow inside) and *Merekòtwa me to* (I am going to cut my bottom).

I remember at least one proverb which uses 'to shit' (*ne*) shamelessly: *Wo nkoa didi a, wo nkoa ne* (If you eat alone, you shit alone). Someone explained to me that formerly it was not a pleasure to go out in the night to visit the toilet way out in the bush. There could be wild animals or witches. It was better to have some company. The fact that *ne* is used in a proverb does not necessarily mean that the term was less offensive in the past than it is now. The proverb itself is an abuse. The one that uses it is annoyed with the one to whom he directs the saying. He criticizes him, saying that the problem is the consequence of his own 'stupid' mistake.

The proverb refers to a past when getting rid of faeces did not cause great problems. Towns and villages were small, the bush, the other, uninhabitable world, was always nearby. People dug a hole and spread beams over it. It was a convenient, efficient and relatively clean method. They used a corncob (*brodua*) to clean themselves. When the hole was filled up, they closed it and dug a new one.

Why?

I asked Obeng Boamah, one of my research colleagues and my main informant, why people in Kwahu-Tafo, who are so fond of the newest technical devices, use such primitive and defective methods to get rid of their

faeces. Why are there hardly any pit latrines in the town? Why, I asked further, did they give such a low priority to toilet facilities while they were so extremely concerned about dirt and abhorred faeces?

It was poverty in the first place, he answered. People can't afford to build good toilets. 'Bullshit', I replied in English. Even if you are poor you can build a simple and efficient pit latrine next to your house. There were also technical problems, he added. In some places, when you dig a hole, water will enter. In other places rocks prevent you from digging a hole. It still did not answer my question, of course. Why did so many people give the highest priority to getting rid of bodily waste, and the lowest priority to doing it efficiently and cleanly? The 'hygienic puzzle' remained.

I remembered the neat doctor in gold and Kente when I was suffering from diarrhoea. Maybe, I suggested, you are so afraid of shit that you do not only want to remove it from your bowels but also from your heads. You don't want to think about it and you don't even tolerate it near your house. The fact that you have to pass through dirty places and faeces is a consequence which you simply put out of your mind. You don't greet anybody on your way to the place, you pretend nobody sees you and you see nobody. You go silently, as a thief in the night, and forget about it: a mental solution for a very physical problem. After all, the shit paradox is indeed only a paradox, it *appears* to be a contradiction. On closer look, it is perfectly logical. But Boamah was not convinced.

When we finished our conversation he had to rush to 'the block', as I just mentioned. When he returned, he explained that his rush was due to Alafiaa Bitters, a light laxative he had taken. The day before, he had attended a meeting in a nearby town and had not had the opportunity to visit a toilet. Since he often suffered from 'constipation' he had taken the laxative. It reminded me of another inconvenience involving the public toilet. Sitting there with constipation while the crowd waited outside must indeed be uncomfortable, apart from the fact that it is a not pleasant place to dwell. He had never read a book in the public toilet but he does sometimes read a newspaper – or the piece of paper to be used in a moment – because one gets used to everything. □

How chimpanzees have domesticated humans

Towards an anthropology of human–animal communication

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Cognitive anthropology examines the linkage between the evolutionary history or phylogenesis of cognition and the history of intelligence. As such it addresses the initial question of the relationships between evolution, cognitions and cultures. If it can be tempted by the simple step of applying cognitive sciences to natural sciences, it can also take on the role of founder discipline in the renewal of the cognitive sciences. From the example of talking apes, I shall try to show how an anthropological approach can refresh a question which beforehand had been considered to be purely psychological; and to throw light on some of the fundamental mechanisms at the interface of cognitive processes and cultural forms of behaviour.

Two ways of conceiving cognitive anthropology

There are two ways of envisaging cognitive anthropology. The first is for the anthropologist to rely on a ready-made field which is available in cognitive psychology. This step supposes that cultural phenomena present a diversity which can be reduced to simple rules, that they derive from cognitive properties intrinsic to human beings, and that bringing these rules and properties to the fore is fully satisfactory as a way of accounting for culture. The search for universals thus becomes central, and ethnoscience represents an ideal to aspire to. Culture is hence considered as a 'value added' to a cognition that one can find by means of a comparativist approach in which the exhaustive elaboration of a lexicon is central. A recent tendency which diverges from this cognitivist approach relativizes the importance of language, and considers that models such as connectionism developed in artificial intelligence are powerful alternatives to explore. Bloch (1991) is a good example of this. This approach is unpersuasive when it claims to do without a notion like that of 'signification', which is traditionally deemed essential in discussions of culture.

A second tendency opts for an independent role for anthropology in the constellation of the cognitive sciences, and refuses to be a sidekick. Inverting the customary perspectives, it plays down the importance of the neurosciences and formal models of cognition, considering that the necessary conditions are rarely sufficient ones. It is not because our cognitive behaviours require a nervous system that its functioning constitutes the ultimate explanation of our activities. The results of the cognitive sciences anchored in the neurosciences concern essentially the cognitive processes at a lower level, for instance, in perception, in the ontogenesis of movement, or in the acquisition of speech (which it is wrong to equate with the acquisition of language). The extension of this approach to more complex cognitive processes is currently practised with variable success, with satisfactory results obtained only from neuropsychology. But the reason for the difficulties encountered is intrinsic and not trivial: the cognitive sciences are incapable of addressing what arises from the generation of meanings. Theoreticians such as Bruner (1990) or Harré (1994) see here a major handicap inhibiting the cognitive sciences, and call for a 'second cognitive revolution' which would restore a central place to narration in the apprehension of the cognitive phenomenon; that is to say, would attribute real importance to the accounts which subjects give of what is happening and with which they construct their own identity. In this