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Anatomia funcional na perspectiva indígena: Adaptação ontológica ou mudança de paradigma?

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GT23 - Novos modelos comparativos: investigações sobre coletivos afro-indígenas

RESUMO

Em 1991 o CPI-Acre ofereceu um curso sobre anatomia funcional e cuidados biomédicos para um grupo de jovens, os quais eram destinados a se tornarem agentes indígenas de saúde. Os participantes viajaram de diversas áreas indígenas para o capital do estado, Rio Branco, onde tiveram um treinamento intensivo centrado na dissecação de um cadáver e de órgãos humanos e animais. A comunicação trata das implicações ontológicas e epistemológicas desta participação para os participantes, através da análise dos relatos de jovens Huni Kuin (Kaxinawá) sobre o curso e sobre as suas experiências de aprendizagem da anatomia e da biomedicina. Esta análise tem como enfoque o engajamento dos alunos com o cadáver, no decorrer do curso de anatomia (que durou dois meses) e, posteriormente, na segunda metade do treinamento, com os resultados da sua aprendizagem, ao serem aplicados em postos de saúde na cidade de Rio Branco, e quando voltarem para as suas áreas indígenas.

As experiências de aprendizagem dos jovens agentes indígenas de saúde são exploradas na luz de uma discussão da noção da pessoa Huni Kuin, tema tratado pela autora em publicações anteriores (por exemplo, McCallum 2001). A personalidade (*personhood*), para esse povo amazônico, se pauta num entendimento do corpo como o resultado de um processo ao mesmo tempo material, espiritual e social – ou seja, a pessoa é vista como cumulativa. Essa visão age como premissa ontológica central no que diz respeito às práticas pedagógicas e de cura, ao tratamento dos corpos no processo reprodutivo, à noção de gênero, e à abordagem Huni Kuin do processo de doença e morte (McCallum 1996).

Os médicos que conceberam e organizaram o curso se empenharam em trazer para os alunos uma visão do corpo vivo saudável como um sistema funcional que integra uma série de sub-sistemas (circulatório, digestivo, nervoso, reprodutivo, etc.). Eles apresentaram o corpo morto como matéria inerte que ilustra as estruturas e a integração desses sub-sistemas. A sua metodologia de ensino enfatizou os aspectos experienciais e a prática de dissecação, em vez de se pautar numa pedagogia discursiva, o que ia ao encontro da própria filosofia pedagógica indígena. As referências ontológicas e filosóficas dos mestres biomédicos de anatomia reportaram diretamente para a época iluminista e especialmente para um paradigma cartesiano dualista que separa corpo e alma, matéria e espírito. A primeira vista, a pergunta que se destaca em relação à

participação dos alunos indígenas nesse curso emerge da etnografia do corpo Huni Kuin como cumulativo (não dual) e indivisível. Será que as premissas ontológicas dos participantes Huni Kuin sofreram um abalo a partir do confronto cotidiano com o cadáver e os órgãos, mediado pelo contato físico e pelos instrumentos – em especial, o microscópio – guiados pelo olhar positivista e materialista dos médicos? Trocas com os informantes se remetem aos temas tratados recentemente em baixo da rubrica de “multinaturalismo” amazônico, como as relações e transformações entre vivos e mortos, animais e humanos, e pessoas e entidades de outros planos cosmológicos.

Para tratar dessas questões e temas, a comunicação aprecia as dinâmicas intersubjetivas ocasionadas pelo treinamento em anatomia, e explora a busca para significados ocasionadas pelas descobertas e surpresas enquanto conviviam e lidavam com o cadáver, a tecnologia, os professores e o ‘novo’ saber, relatados pelos participantes. A etnografia revela a capacidade destas pessoas, que nasceram dentro de um *weltbild* amazônico enraizado na visão e nas práticas multinaturalista, de constituir significados novos para si mesmo, sem escapar dos limites de um domínio de segurança ontológica. Explora a noção de que no decorrer da aprendizagem e as experiências subseqüentes, os alunos reorganizam o seu saber, mas não sofrem uma mudança profunda nas bases ontológica e epistemológica das suas práticas culturais e sociais.

Palavras Chave

Pessoa Cumulativa, Antropologia do Corpo, Multinaturalismo, Ontologia, Povos Amazônicos, Kaxinawá

INTRODUCTION¹

Recent ethnographies of ‘intermedical’ or ‘intercultural’ processes involved in the training of indigenous people as health agents in Brazilian Amazonia throw up a picture of tension, conflict, and misunderstanding, as well collaboration, appropriation, and co-optation². The direct engagement occasioned by these programs between indigenous Amazonians, who are born into a particular ontological tradition, with biomedical reasoning and practice is a relatively recent phenomenon. Such engagement was once largely restricted to contexts where non-indigenous health professionals, missionaries (and sometimes anthropologists) treated sick indians, but since the last decade of the twentieth century, programs aimed at instilling a biomedical habitus into indigenous practitioners have become more common³. This paper concerns a pioneering program aimed at training indigenous health agents offered by the CPI-Acre⁴ in 1991.

The paper explores the following questions: What difference does it make, to an indigenous Amazonian, to learn functional anatomy as a preparation for acquiring skills in medical practice from teachers who are rooted in a biomedical worldview? Does he suffer a shaking of his ontological foundations when urged to embrace a paradigm shift, that is, does the experience modify his perspectivist worldview, his understanding that corporeal diversity is but a mask for a common transspecific personhood? (The view that natural beings are multiple, but culture is singular, so that all beings partaking of transspecific personhood act from a human perspective?)⁵ How can such a theory of life, matter and organic form survive intact in the face of the relentless critique provided by those who, grounded in enlightenment reason, come armored with a powerful arsenal of technologies and instruments, such as the microscope, the hypodermic needle and antibiotics, weapons that serve so well their way to truth/power? This paper seeks to explore some of the issues raised by this scenario, through discussion of the experiences

¹ Earlier versions of this paper were presented at the SALSA Conference, 22nd-26th June, 2011, Belém, Pará, in the thematic session, “Bodies, objects, and other subjects (Corpos, objetos e outros sujeitos)”, chaired by Els Lagrou; and at a seminar at the Department of Anthropology of UNB in October 2010. I thank participants for their comments.

² See Biserra 2006; Novo 2008;

³ For studies of relations between health professionals and indigenous peoples, see for example Kelly Luciani 2003; Buchillet 1991.

⁴ An NGO, the CPI-Acre - the ‘Pro-Indian Commission of Acre’ - was set up by an anthropologist in the Brazilian state of Acre in the late 1970s. See McCallum 2010.

⁵ These questions, phrased according to the epistemology of representation, also concerned Gallois 1991 and other contributions to that collection. On transspecific personhood and perspectivism see Viveiros de Castro 2004; 1998; 1996. Lima 2005; Vilaça 2002, 2005; See also Lagrou 2007.

of Huni Kuin (Cashinahua) students who took part in the first three month course of the CPI-Acre's training program.

These questions do not pose an epistemological problem, that is, they cannot be solved through an attempt at cultural translation between two systems of 'representations' of 'natural facts' (for example, of the body or of health-illness processes)⁶. Rather, the discussion that follows is sympathetic to the view that language and other forms of practice are instrumental in constituting reality and further, that anthropological interpretation should take as central the role played by experience in this creative process. (Good 1993). Further, following Toren (2009), this process is understood to occur inter-subjectively and over time⁷. By acknowledging that meaning generation is conditioned by the experiential micro-histories of subjects and embedded in lived social relations, analysis is led away from a radical ontological position, in which translation or even dialogue might be seen as impossible⁸. In this way the focus shifts to ontogenic processes involving a constant play between epistemology and ontology, rather than subscribing to a "Clash of Titans" approach, where two ontologies seem to disallow each other and translation appears to be blocked⁹.

At stake is the notion that one person's ontological reality is both constituted by and constituting of other people's ontological realities over time. Thus, no single ontology can be involved in making sense of the world, since the process is always lived in relation to the way others are also constantly making sense of their surrounding environment. It follows that the substance of social interactions between persons raised in distant and distinct ontological traditions may comprise both creative misunderstanding and spurts of communication. It may even involve - dare it be said - real dialogue. It is central to this apprehension to contemplate the processual and inter-subjective aspects of the junction of ontogenies.

⁶ At least since Greene (1998) the inadequacies of simple epistemological view to understanding what he termed 'intermediality' in Amazonia have been clearly noted, as has the creative and purposeful appropriation of language and practices founded in biomedical ontology. On the problem of representation, much has been written, but see for example Rabinow 1986;

⁷ See also Toren 1999; 2002.

⁸ On ontology in anthropology, see Viveiros de Castro 2003; Henare, Holbraad, & Wastell 2006; Carrithers et al 2010. In the context of Amerindian studies, see for example Viveiros de Castro 2003, 2004 and Fausto & Costa (in press) for a more general discussion

⁹ Thus the generation of meaning (or the process of making sense of experience and the lived world) is not seen as grounded in purely conceptual ways of 'world-making' (*pace* Holbraad in). On the relation between ontology and epistemology, see Pina-Cabral & Toren 2009.

The ontogeny of knowledge about the body (and, in this medical context, about how to intervene in the body to cause certain practical effects), is not, therefore, a matter of concurrence or disagreement between two theories, two worldviews, two hypostasized conceptual systems¹⁰. Rather it is about the process that occurs when distinct ontogenetic modes are brought to bear upon each other in historically specific inter-subjective encounters.

HUNI KUIN CUMULATIVE PERSONHOOD

In 1991 about 3000 Huni Kuin (Cashinahua) lived in scattered indigenous areas and settlements in Acre state and about the same number across the border in Peru, and struggled to retain and strengthen their autonomy, in the face of colonialist forces¹¹. Formally, Huni Kuin social organization revolved around an exogamous moiety system compatible with Karia-type classification and an alternate generation namesake system¹². Children were created and raised as processual beings to whom personhood and thus humanity came as the incremental and incorporated (literally, as ingrained in the flesh) result of experience, both induced and accidental. The expression ‘cumulative personhood’ appropriately describes this approach¹³. It should not, I note, be taken as an alternative to the notion of ‘transpecific personhood’; this latter expression captures an important aspect of the constitution of living humanity, but not (from the perspective of the people anthropologists actually do get to know) its entirety. In short, cumulative persons should also be ‘real’ persons.

For the Huni Kuin real (*kuin*) persons (*huni*) are produced by a long and multi-experiential learning process, during which words heard and meanings apprehended, smells inhaled, plant and animal properties absorbed, substances ingested, sights and other visions imprinted in the inner eye, during hallucinations, dreams, or fevered imaginings, all contribute to the formation of the body and its store of knowledge. This is differentially infused in its organs and is associated with one of several souls (*yuxin*)

¹⁰ See Tambiah (1990) for a discussion of the questions of commensurability and cultural translation.

¹¹ For discussion and references on the Huni Kuin struggle for autonomy, see McCallum (2010).

¹² Kensinger 1995; D’Ans **XX**; McCallum 2001

¹³ Pace Gonçalves (2007) and Vilaça (2005:453), the ontological and sociological consequences of individual personhood in Melanesia, for which ethnographic region Strathern 1988 coined the expression, are so far-reaching that it seems dubious to me that it may profitably be applied to Amazonian ethnography of personhood and humanity. Nevertheless, Vilaça’s point about the trans-cosmological and trans-historical nature of persons in the Amazonian case is taken. I prefer to heighten emphasis (as the Huni Kuin do) on the point put by Taylor, that people seek to stabilize bodies, rather than make too much of their instability.

Cumulative persons take distinct gendered forms depending on experience (McCallum 1996; 1999; 2001; Kensinger 1995; Lagrou 2007). The powers of non-human beings such as spirits and other outsiders are regularly obtained through ritual and commercial means, as a part of the constant constitution of embodied living humanity which depends on this knowledge. Huni Kuin skills are then put them into action in the production of sociality. The process whereby knowledge and thus gender is instilled, which can only occur in the dimension of the inter-subjective relations between real people (not any other kind of being), and only as a result of lengthy histories of such relations, may be deemed ‘cumulative personhood’¹⁴. At death, the body’s knowledge and souls must be made to separate and disperse (McCallum 1996a).

The Huni Kuin approach to the body and to life and death processes clearly run counter to “the powerful realist claims of modern biology” that are the basis of “enlightenment convictions about the advance of medical knowledge” (Good 1993:21). In mainstream Brazil, such views are normally seen as held by primitives who belong to a bygone stage in human cultural and social evolution¹⁵ and who are ripe for educational transformation to bring them into the modern era. The biomedical educational experiment I partially documented adopted just such a rationale. It took the form of a project to ‘enlighten’ pre-moderns. In the face of the calamitous state of health services for indigenous peoples, the CPI-Acre (*Comissão pro-índio do Acre*) contracted a medical doctor, Dr. X, to organize a program to train forest people as health agents. In collaboration with Dr.Y, a specialist in anatomy and professor in a university in Southern Brazil, Dr.X organized an anatomy course in July and August 1991. I observed classes then; and in the following year, on my return to Acre, I interviewed the Huni Kuin participants.

Before the start of the course, Dr.X and Dr.Y called me over and asked if they might ask me a few questions concerning my “beliefs” about health and the body. After I answered them, to the best of my abilities, Dr.X turned to Dr.Y with a satisfied air. Ignoring me, he said “You see? There is superstition everywhere!” Then he changed the subject, leaving me confused and with the sensation of having been treated as an object

¹⁴ Cumulative personhood is not a substitute for ‘transpecific personhood’, an undifferentiated subjectivity or humanity shared in principle by animals, people, spirits and other beings. Viveiros de Castro 2006 emphasizes the almost formal, content-less nature of the latter – treated as “pure point-of-view” and contrasts it with the breathing, feeling subject of Amerindian experience that perceives out of a very particular body.

¹⁵ On these ethnocentric distortions in mainstream Brazilian evolutionism, see Cesarino 2008.

or worse – a native specimen under the scrutiny of science. To borrow (transductively) from Viveiros de Castro (2002): ‘The doctors used their culture: I, the native, was used by mine’¹⁶. The moment served to make clear to me that the attribution of ‘culture’ understood as ‘beliefs’, to a native, is an act that not only asserts the latter’s inferiority, but can also powerfully instigate a sensation in him or her of a cultural emptying-out, a draining of meaning or content, of reduction to an automaton talking into a void. Such an act disrupts any potential for dialogue, of course, as the existential ground is pulled out, so to speak, from under the feet of the native thus contemplated¹⁷.

As I pondered over fieldnotes and interview transcriptions to write this paper I was struck that at no point did the actual natives involved express similar sentiments about their experience: and rather than suffering an existential earthquake, they talked as if they had been and still were on quest.

OF CADAVERS AND THEIR AGENCY

The inter-subjective encounters documented here were mediated by an object that may be attributed the status of an agent of knowledge: that is, the cadaver. This efficacy was the result of a conscious decision by the course director. Dr.X explained to me the pedagogical philosophy and the curricular content of the anatomy course. He emphasized that it sought to empower students to act independently – and contrasted his course to a FUNAI program of which he had been part some years earlier. To do this, the students

¹⁶ In the original, ‘The anthropologist uses his culture: The native is sufficiently used by his’ (Viveiros de Castro 2002:114- my translation).

¹⁷ In the article cited, ‘The relative native’, Viveiros de Castro (2002) doubts the very possibility of dialogue. For him, the problem of communication between two broad ontological domains is phrased, in Deleuzian terms, as emerging from a mismatch between two immanent planes that subjects constitute symbolically for themselves. The (im)possibility of contact or direct translatability lies at this deeper level, one that can be broadly referred in Wittgensteinian language as the space where distinct *Weltbilds* or world pictures meet and clash. A *Weltbild* is constituted by foundational pseudo-propositions which disregard and precede truth and falsehood. They are not testable, as propositions are (or should be) in Enlightenment epistemology. To put it more simply, it is not a question of what the facts are, but what matters to the subjects concerned within the factual world. When doctors or indigenous persons know the world and act upon their knowledge, they begin from these deep and encompassing ontological bases, which shape their way of being, knowing and communicating in the world. But if this is the case (that what counts is what matters to the subjects), then the possibility of real conceptual communication is still open, not least because in an inter-subjective context subjects may consciously collaborate in a shared ontogenetic process. Elsewhere, Viveiros de Castro (2009) seems to step away from the pessimism expressed in the earlier (2002) article, arguing that cultural translation, involves, rather than induction or deduction, ‘transduction’.

should begin their three months of study with a focus on Functional Anatomy, he said, when explaining methods and objectives. I paraphrase his clear and precise exposition:

“A base de medicina desse tipo é um entendimento de **estrutura** em relação à **função** (quer dizer, anatomia funcional). Quero que os alunos entendam onde os órgãos do corpo estão localizados e qual a sua função. Não precisam conhecer anatomia com grande precisão, pois não praticarão cirurgia. A importância desse conhecimento é que visa capacitá-los para a realização de diagnósticas corretas. A primeira coisa a apreender é a estrutura, ou seja, as relações entre as partes. Em seguida, se deve entender a função – para que serve aquele órgão. Por exemplo, indagado sobre a função do estômago e do esôfago, um estudante pode responder: “Serve para armazenar comida, no primeiro caso, e para levar a comida até o estômago, no segundo.” Desse modo, os alunos aprendem os princípios da anatomia funcional, sabendo que isso é a base para toda sua prática médica futura.

Alem de estrutura e função, tem-se como tema a fisiologia, ou seja, os processos que tomam lugar no corpo - por exemplo, o estudo dos movimentos e ritmos das paredes musculares do estômago, como parte da **função** do estômago. Para os agentes de saúde indígena, um treinamento adequado para prática da medicina não precisa incluir um módulo separado sobre fisiologia, porque a anatomia funcional já subsume a fisiologia.

È muito importante que os alunos aprendem através da prática – do tocar, sentir, olhar, cheirar. Quero que eles desenvolvem **por si mesmos** os conceitos básicos da prática medica.”

Thus Dr.X detailed a double theory: about the human body, on the one hand, and about his pedagogical methodology, on the other. Further, he outlined the limits of a medical knowledge deemed appropriate for the future health agents. This was to be acquired through a pragmatic experiential process, and not as a result of the absorption of discursively transmitted information. The living human body is understood as a whole whose movement depends on the integrated functioning of the parts which compose it. The basis of life is thus the structure supporting this integration, accessible through studying functional anatomy. In sum, the medical knowledge to be obtained concerned

the systematic aspects of the body in life, which were to be made visible through a profound relationship with a dead body¹⁸.

The core practical component of the course was to be the dissection of two corpses - one female and one male - and the bodies of both humans and pigs and other animals. . The table below summarizes the course structure, as outlined by Dr.X

Week	Activity
1	Abertura – Aula inaugural de DR.Y
	Os AIS – Descrever os principais problemas de saúde nas suas áreas de origem
	Desenhar um mapa da sua área de origem
	Escrever um texto e fazer desenhos sobre o corpo e suas partes
	Discussão Geral (painel) sobre o curso
2	Trabalhar com modelos (em resina, feito por artista,) de um corpo com o interior exposto; e com o modelo de esqueleto de um esqueleto; e com diagramas e desenhos do interior do corpo.
3-8	Dissecção – de órgãos, cadáveres
8-12	Trabalho prático em um posto de saúde (diagnóstica e tratamento, supervisionado por um médico)

According to Dr.X, humans learn through contact with reality. The use of texts as a resource for medical education should be secondary. They serve to support practical learning in which students discover the truth for themselves through a process of hit and miss. Students need to solve problems alone, receiving little guidance, and then only during the crucial moments. To learn correctly, he said, you must first make mistakes and find your own way. His main objective was to facilitate the development of **concepts**. Dr.X wanted the health agents to arrive at the **correct understanding** of the human body through tactile, sensory and above all visual exploration. He was acerbic about those who act as if sitting and listening to a teacher talk half-understood "truths" would imbue pupils with this correct understanding.

¹⁸ On making the body visible through dissection, see Good (1993), chapter 3.

Thus, the CPI, through Dr.X, aimed to put into operation a teaching methodology based on a phenomenological theory of learning, aiming at a concrete goal: a rational understanding and 'scientifically correct' apprehension of the human body. Implicit in this objective was the assumption that from it would flow the correct understanding of health and disease - to be developed in the latter part of the course, (the month to be spent in clinical health posts in Rio Branco). In other words, an empirical understanding of the human body would result from a direct contact with different body systems *in natura*, a contact to be existentially experienced by students. In this sense, the greatest agent in the transformation of students into true 'children of reason', would be the corpse itself. Although Dr.X was proposing an innovative approach with regard to the formation of AIS (which to my knowledge has not been applied in other training courses), his vision was perfectly compatible with the practices adopted in medical schools all over the world, where the anatomy laboratories take a central place (Good 1993).

EX-SUPERSTÍCIO

I observed the first weeks of the course and then left Rio Branco. After three months the newly formed agents returned home and began to apply their new knowledge. In an interview recorded in January 1992, six months later, I asked Zeca, Huni Kuin health agent from the Purus, about participation in the course. Below is a summary of his description of the experience (originally mainly in Portuguese, not Huni Kuin).

Na primeira semana começamos a estudar a anatomia fazendo desenhos, olhando modelos. Depois trabalhamos com animais, estudando quatro sistemas do corpo humano: o respiratório, o circulatório, a urinária e o digestivo. Sobre filosofia [fisiologia]. ... Fomos estudar como funciona, no respiratório como respira através do pulmão, na urinária, como a gente digere o liquido do alimento e como o rim é um filtro, e o liquido vai para a bexiga; no circulatório, como a sangue circula no corpo. Estudamos sobre os órgãos do corpo humano, suas funções – a função do sistema urinária é separar o liquido - o que é bom vira sangue, o que não é, vira xixi. Sangue serve para lubrificar o corpo - nosso corpo é como uma maquina – (e sangue) é para a gente sentir bem.

[Zeca then spoke in greater detail about valves, large and small intestines, the physiology of digestion and of circulation, and remembered watching a film about the sexual reproductive system, etc.]

Para estudar a anatomia – a gente trabalhou mais com os animais e menos com o cadáver. Com rato, porco. Chegaram dois professores do Rio e a gente estudou com eles, sobre os animais, sobre como funcionam os sistemas.

I asked Zeca if he had studied the bodies of animals when hunting. Was it not the case that a hunter knows the body intimately through butchering slaughtered animals? Zeca denied this. He said the hunter ‘não valoriza os sistemas dos corpos dos animais,’ and added:

‘Com esse curso a gente admirou bastante. Vi muitos nomes de algum órgão, objeto. A gente aprendeu de outro nome. Só que não aprendemos tudo – no próximo curso vamos entender o sistema nervoso’.

I asked how to translate the term 'system' into Huni Kuin, but we could not think of a proper translation. However, Zeca insisted that the Huni Kuin have the idea of system. I asked if the exogamous moieties, Duabake and Inubake, could be considered an example and Zeca agreed. He further elaborated on my suggestion. "It is the system of differences" he said, "differences between those born, between children - strong and weak, more nervous, more calm, more white, darker. This is a type of system." We continued to discuss the idea of system, and he added "Also there is the Indian system of coexistence, characteristic of Indian culture." To describe this system, he spoke of work organization and the relationship between men and women, among other topics. But I drew the conversation back to the course for health agents.

As I detailed above, the objective of the course was to enable participants to form 'right' concepts about health and illness, and then treat their patients in a rational way, based on scientific knowledge, obtained through empirically validated observations. During our conversation, Zeca abstracted a concept of the body from his experience, speaking of the body as a material integration of various systems composed of organs with different functions. This concept served to think about health and disease as states of a body seen as a meta-system. Using this reasoning, Zeca said: “*Nukun yura peki*, (our

body is good/healthy) é quando o sistema do corpo está bem. *Nukun yura txakaki* - (our body is bad/sick) - é quando o sistema do corpo está doente.”

TRANSFORMATION?

Had Zeca experienced some form of ‘paradigm shift’, a shaking loose of key aspects of his *weltbild*? Had the teachings of the anatomy course and the clinical practice that followed, changed his view of the human body? There is no doubt that approximation with the cadaver plays a key role in transforming the way medical students apprehend life and death processes and comprehend biology. In ethnographic studies of the role of the anatomy lab in medical education, students report a profound change in the way they understand the body (Good 1993:73). Unlike the Piro woman whom Gow reports as disagreeing openly with a schoolteacher about the cause of children’s diarrhea, the participants in the course actively engaged with their teacher’s theories¹⁹. They wanted to learn from them, not contest their views. But of course such open declarations as Zeca’s and my observations about this engaged attitude say nothing of deeper ways of seeing, based on all that these young men had previously known and experienced. Changes doubtless occurred, but unfortunately (my research time was limited) I was not able to accompany them and gather information on what followed their return home.

One might say, in a perspectivist vein, that a multiplicity of bodies perceived through a single perspective linked to a singular culture is the effect, in ontological terms, of a world picture (*weltbild*) that constitutes this “imagined world” as real. This world comes into being and is knowable through ‘controlled equivocation’ or ‘the invention of culture’, one might say. But, more precisely, does it make a difference to conceive bodies as ‘meta-systems’? Does it alter the parameters of Zeca’s and his cousin’s ways of “inhabiting an imagined world”? (Can we say a *weltbild* transforms?)

From Zeca’s perspective, his understanding had been deepened, not shattered. He insisted that the Huni Kuin had a notion of system, even though not named. (And the discovery of a proliferation of anatomical names seemed to add to the world of objects, rather than transform it.) The evidence of bodily systems had been before his eyes when

¹⁹ For discussion of this case see Viveiros de Castro 2002; Vilaça 2005.

as a hunter he had butchered his prey, but he had lacked a teacher to point them out to him and utter their names. For Zeca, like other indigenous Amazonians, the world is riddled with mis-information and lies, and truth is a precious commodity. What is really so is best apprehended oneself or by those one trusts, in direct experience. This is a theory of knowledge as open to innovation, critique and adaptation. The kind of knowing that a cumulative person can achieve is neither set nor closed within a constraining circle of symbolic logic.

Yet when talking to Zeca I was haunted by the ghost of my hard-won understanding of Huni Kuin cultural logic, as well as a visceral rejection of the ethnocentric presumptions attached to the enlightenment reasoning infusing the training program. I knew that in the logic of cumulative personhood, it is necessary to separate the body's *yuxin* (souls) from the flesh on death in order to then send them to their proper final destinations. I wondered what ill-effects proximity with the cadaver might have on the students. So I asked Zeca how the agents had dealt with contact with human corpses. He said that one of the Yaminahua students had become sick and withdrawn from the course because of this contact. However, distancing himself from such weakness, Zeca told me: 'é coisa da cultura deles. O cadáver fez mal a ele' So I asked whether he himself had not felt threatened? He replied:

“Não. Acho que é só carne mesmo. Na nossa cultura o espírito é nosso olho – o *yuxin* sai do olho – sai assobiando [na hora da morte]. É o espírito que faz medo. Si a pessoa é mal, o *yuxin* fica vagando, tentando [pertubando] os outros. ... O pajé cantava para o espírito ficar longe, existia isso (Quando chega lá no seu destino – gritam Bunadibu' – La dentro da terra (He says *nai* (Sky as destiny) is a White invention – era so 'terra mesmo').

Most Huni Kuin I knew understood the body to incorporate multiple souls. Zeca denied the existence of a *yura yuxin* (body soul) and insisted that the eye soul (*beru yuxin*) was the only soul attached to a body (which might explain his alleged lack of fear of the cadaver). For him, it seems, to say it was just meat, “so carne, referred to its status lack of memory, subjectivity or agency – its status as an ex-human²⁰. Yet at the same

²⁰ Compare with the Yanomami, as described by Viveiros de Castro (2006):328.

time, as we discussed the cadaver, he recalled feelings with respect to dead kin familiar in the literature on funerary endocanibalism (McCallum 1996a). These generally arise as a response to the *yura yuxin*, which is a product of memory engrained in flesh. He said:

“O ritual de comer os mortos – (é) o modo de muita saudade e muita emoção. Eles sentiam mais bem – se enterrava, sentia mal. A família deles sentia melhor (uma velhinha me contou tudo isso) - e eu mesmo eu sinto – eu entendo por mim mesmo – eu tenho pena, eu gosto muito do meu filho”.

To Zeca, one of the most revealing moments during the anatomy course was when he began to use the microscope²¹. The microscope revealed to Zeca something hitherto unknown and hidden within the matter of the body: its celular nature. He spoke of the composition of human blood as a multiplicity of things: "We saw a forest", he said. His teachers explained this visual experience in terms of the material theory of infections by 'microbes' during the last module of the course. (A theory already known in broad outlines to Huni Kuin). When I pursued the matter of yuxin with Zeca the theory surfaced in his explanation of his views on the matter. Specifically, I asked him about the *pui*, *isun* and *xeta yuxin*, (faeces, urine and teeth yuxin, respectively). He responded with a discussion of these "ancient" ideas (his words) in terms of the theory of microbes.

“O Pui Yuxin & Isun Yuxin é “tipo micróbio” Antigamente eles pensavam. No meu sentimento acho que é assim, [algo que tem a ver com micróbios]. Ainda não vi nada disso. Acho que é porque uma pessoa disse e os outros começaram a contar. Eu ouvi disso mas eu não acredito não.”

I also spoke to Maná (Joaquim) about dreams and about hallucinations occasioned by *nixi pae* (ayahuasca). For Joaquim, *nixi pae* visions do not provide a view onto or journey into a real world: “A visão não é verdade”, he said. The “mirações”, like dreams, reflect the day-to-day worries of the dreamer or the ‘mirador’. Thus, when discussing the view that the *yuxin* exits a person’s body when she or he is hallucinating or sleeping, to

²¹ This moment recalls the transformation in the teaching of anatomy after the invention of this instrument and its application by Marcelo Malpighi in eighteenth-century Italy to the study of tissue taken during autopsies, said to have caused a revolution in medical theories. REFS.

travel to other times and places, he told me “*Yuxin é pensamento, é intenção*”. Yet even Maná, a consummate skeptic about other people’s claims (whether Huni Kuin or otherwise), reverted to older theories of the body in further thoughts on the matter. Thus he pondered about the moment of awakening, when a dreamer, before returning to full consciousness, passes through seconds of confusion, and suggested that the confusion is the result of the return, to the body, of the sleeper’s wandering *yuxin*. Here logical coherence seems to give way to a deeper rooted chain of reasoning – emerging from the pseudo-propositions of a deeply rooted and anti-enlightenment *weltbild*, if you will.

CONCLUDING REMARKS

Ultimately, my conversations with Zeca and Joaquim concern inter-subjective dynamics. They illustrate the capacity of people born within an Amazonian *weltbild* or ontological régime to constitute new meanings for themselves in exchanges and experiences such as those that took place with me, or during the course, without stepping outside the limits of a realm of ontological security. Dialogues with Nawa (non Huni Kuin) as well as discussions between Huni Kuin play a part in this constitution of meaning, as do interactions with objects such as cadavers or body parts. In an ontogenetic sense, these exchanges may be said to constantly reorganize knowledge rather than shift its ontological bases²². There is no evidence to suggest that biomedical education introduced any major cosmological (ontological) upheavals to my Huni Kuin inter-locutors.

In his book *Medicine, Rationality and Experience*, Byron Good follows Cassirer in insisting (against a simplistic empiricist epistemology) that language mediates relations with the ‘real world’ and is constitutive of biological reality. With respect to the problem of translatability of medical knowledge he proposes use of an hermeneutic that encompasses both practice and experience. Rather than examining the relationship between symbols in themselves, he writes, one must look at the ways symbols are made to work in action. Thus, adopting this approach, one should examine the ways that specific ontological approaches are related to specific theories of knowledge as this occurs in *praxis* and in discourse. In other words, how they work during the experiential

²² The way that these HK explained difference between paradigms to me involves applying a chronology, reflecting upon changes occurring during their own personal histories (Inkamuru) or upon generational or experiential differences. Thus they expressed a clear view of internal differences among HK, to distance themselves from the views of their former selves, or from those of their elders or relatives back home.

process of living, doing, speaking. So, we must think beyond the distinct ontologies of the diverse natives (doctors, indians and others) under scrutiny, to see how their related native epistemologies clash, approximate each other, in practice, both discursive and otherwise, rebounding upon ontological régimes and reconstituting them, within the frame supplied by a focus on ongoing experience that encompasses its past and present unfolding. The ontogenetic process involves the dynamic unfolding of the tense interaction between ontology and epistemology, a process that could be seen as involving the ongoing alternation of figure and ground (Toren & Pina-Cabral 2009). The backwards and forwards between dialogue as comprehension and exchange of words and acts as misunderstanding infuses a creative tension into the process whereby subjects generate new meanings and understandings for themselves – and others.

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