Introduction

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This introduction seeks to kill two birds with one stone. On the one hand, we want to introduce the volume at hand, and, on the other, there is an entire book series to follow, which we also want to do justice to in this introduction. The book series 'Person, Space and Memory in the Contemporary Pacific' encompasses ethnographic publications on the South Pacific region, which are a result of interdisciplinary collaboration by psychologists, geographers and cognitive scientists. This is one reason our introduction focuses largely on this region. Nevertheless, this introductory volume contains, apart from several examples from the South Pacific (Papua New Guinea, Indonesia, Vanuatu, Philippines), contributions which deal with other regions of the world (Japan, Azores, Africa). However important it may be for our book series to establish regional similarities and differences for the areas of Melanesia, Micronesia, Polynesia and Aboriginal Australia and to accumulate ethnographically located knowledge about one area, it is an equally important concern for this volume to overcome territorial borders, together with disciplinary borders, in order to achieve a holistic and more accurate description of the research targets 'local actors', 'emplacement and landscape', and 'memory' in this project.

This achievement is mainly due to the involvement of cross-cultural psychology and social geography, as well as a range of anthropologists who already work, by the nature of their subject, in a cross-disciplinary way on topics such as agency and tradition, personal narrative, human–environmental relationships, anthropology of landscape, anthropology of the senses, and psycholinguistics. We will begin this introduction by describing the overall difficulties of anthropological research in today's Pacific and then go on to describe the three topics mentioned above in detail and summarize latest developments. This is where the authors of this current volume will appear because they successfully managed, as we will see, to come to terms with some of the major difficulties of anthropological research as well as suggesting new approaches and ways of solving problems.

Finally, we will address the topic of multidisciplinarity, which has always been a major concern of our own research and will now be addressed in this volume as well as being realized successfully in the upcoming series, so we hope.

Posing the Problem

Anthropologists now acknowledge that what they formerly treated to a large degree as distinct cultures, relatively bounded and contained units of

enquiry, are dynamic sites where a multiplicity of processes intersect. We are conscious of the fact that cultures have at no time been isolated entities and many classical ethnographies have taken dynamic approaches, which investigate interaction and change, or the relations between groups, and groups and colonizers; nevertheless, interactions have reached a new level with regards to frequency and latitude. Indeed, it has become common to argue that anthropological research and ethnographic writing must take into account that – in the past and in the present – we all live in a creolizing world. Yet it remains difficult to study relationships between local contexts, phenomena and global processes without creating a false dichotomy between 'the local' and 'the global', for there are multiple globals, too. Never have notions of society, community, ethnic conflict, displacement, culture and personal identity been so intensively rethought within the social sciences (Friedman 1994; Hannerz 1996; Olwig and Hastrup 1997; Werbner and Modood 1997; Lockwood 2004; Harrison 2005); and nowhere are these trends and difficulties more apparent than in the study of the highly mobile populations of the Pacific, where people move – as work migrants, refugees, students and displaced people – through a region being transformed by the effects of the production and consumption of commodities, and a globalized mass media transmitting images, moral concepts and ideas.

In general terms, the massively increased mobility of populations and their cultures has meant that the reciprocal indexation of topology and culture, and territory and nation has become the focus of critical analysis. Critiques directed at the 'incarceration' of cultures in fixed places (Appadurai 1988), the metaphor of the 'localness' of cultures (Clifford 1988), and the latent functionalist search for cultural stability and localized equilibriums (Malkki 1995), all stress the need for more dynamic, process-oriented theories of culture, identity and space, while the anthropologist is, increasingly, confronted with a multiplicity of voices and actions in particular places (Appadurai 1996), and the multilocality and multivocality of culture (Rodman 1992, 2001). As a response some have begun to explore the notion of ethnoscapes – geographical regions that are represented less as physically specifiable entities than as constructed settings that signal particular modes of sociality (Gupta and Ferguson 1992).

In the contemporary Pacific, migration and displacement on a regional, national and transnational level have contributed significantly to mobility (Fox, Bellwood and Tryon 1995; Small 1997; Cohen 1997; Spickard et al. 2002; Morton Lee 2003; Marshall 2004; de Wet 2005), and their effects have often been construed negatively, by an anthropology focused on territorial 'anchoring', as the 'uprooting' of people involving the loss of tradition, culture and identity. These movements, however, have raised questions about the relevance of the conceptual boundaries erected between 'town' and 'country', between 'centre' and 'periphery', or between 'us' and 'others'. And as processes of urbanization and internationalization have proved to be opportunities for the movement of cultures, so they can open

up new horizons for the study of space, identities and interethnic relations (King and Connell 1999; Modell 2002). Particularly significant here is the claim that displacement necessarily creates placements, or novel forms of localization and positioning. According to Epeli Hau'ofa, for example, transnational migration has contributed to the expansion of 'local' cultures – today, more Samoans are living in Los Angeles, and more Cook Islanders in Auckland, than on their islands of origin; suggesting that the so-called 'small nations' of the Pacific region may be becoming larger even as they become part of the 'global village' (McLuhan 1994), set, presumably, in a shrinking world (Harvey 1989).

Moreover, novel experiences of other places in the world can be had on the spot – if in a totally different manner. Consumer goods flow relatively freely to even the most remote villages, as do transmissions from distant radios and – often – television and the internet (World Wide Web). The effect of these flows is augmented by the efforts of the Pacific's young nations – sometimes comprising hundreds of language groups – to achieve a certain internal homogeneity through national institutions that have village-level manifestations, in the form of schools, churches, stores, civil servants or judges (Foster 1995). Here, nationally prescribed school books (postulating a common national history), national newspapers and the Bible all play a role.

Globalization and standardization, which consist in a multitude of different forces influencing the regional in various different ways, have not only resulted in a certain uniformity but – and to the surprise of many – also in new forms of cultural difference. Old and new ethnic, religious and political groups appropriate ideas, images and values from the mass media and create creolized cultural forms by synthesizing them with inherited and 'invented' traditions. Two features of this process are important: first, local actors do not experience new forms passively, but as active, discriminating and creative agents (see Ton Otto's discussion of agency and tradition in this volume); second, exposure to new experiences varies greatly, depending not only on region but also on the gender and age of individuals. If, in former times, experience and knowledge were handed down from older to younger generations, often according to gender, mass media and national institutions now tend to focus on younger, mostly male, actors. This raises the question of access – by location, power relations and sociological category – to these new forms of knowledge (Leavitt and Herdt 1998; Meusburger 2000; Trommsdorff and Nauck 2005). Moreover, migrant Pacific Islanders, individually or collectively, create, and seek to consolidate, new identities. The (re)claiming of identity symbols and property rights is central to a great many political struggles in the contemporary Pacific. As diffusion will also meet resistance, we also have to ask how traditional knowledge is defended against the influences of the outside world. This is substantiated by the ongoing copyright debates about many oceanic cultural achievements (Brown 1998; Clifford 2001; Leach 2003b; Hirsch and Strathern 2005).

Yet questions remain about what exactly happens at the local level, and how the effects are produced at the emotional and cognitive level of particular actors. In effect, little is known about this issue. Until now, research has mainly concentrated on the macro- or culturally specific aspects of globalization, while neglecting actual actors and their perspective of social change in their own local context. How do ethnopsychologies, or the local concepts of person, change under the effects of globalization? Are they shifting towards a capitalistic and Christian individuality? How do differentiated experiences of the globalized world and multilocal cultures affect ideas of personhood and belonging in a specific landscape and place? Is identity transformed by the freedom to select a certain lifestyle? How are individual decisions relevant to concepts of identity and personhood influenced by different experiences? How do cultural and personal memories work? How did the life histories of people change and who is mainly affected? Does the experience of new worlds, the experience of difference, lead to a heightened reflection about one's own culture, and to transformed temporal perceptions of changed relations between past, present and future? How does awareness of the fact that one is part of a nation, a worldregion or a transnational culture influence a sense of collective identity vis-à-vis the 'other'?

By examining the forces of 'globalization' – which itself is subject to local variation (i.e. globalism is different in Guam and Papua New Guinea) – as they manifest themselves and operate at cultural, biographical and cognitive levels of local actors, we try to find answers to the posed questions. These attempts to find answers must be based firstly on long-term fieldwork on site and secondly on the integration of cultural research with psychological methodologies, linguistics, geography and cognitive science. The analytical rubrics for this study are human agency, space and landscape as well as memory. Through this renewed perspective three research traditions are connected:

- the research on ethnopsychologies combined with practice theory and processual ethnography;
- an anthropologically informed geography of space and landscape;
- cognitive science, particularly the cognitive psychology of memory, perception and mental models.

Local Actors

The anthropological investigation of the concept of the person in non-European societies began with Durkheim and Mauss. Mauss describes a historical process featuring a developmental sequence from the 'social personage' to the psychological and individual person and, then, to the individual as a self-conscious and autonomous entity. According to these classical authors, humans should be regarded as 'total social facts' (*fait social total*) that comprise body, individual and collective consciousness

fashioned principally by social processes. Western ethnopsychologies portray the person as an individual whose behaviour is explained in terms of inner motives. More generally, this tendency to ground all psychological matters in the individual person is closely connected to personhood in the West (Morris 1994).

Other ethnopsychologies, by contrast, construct personal identity, action and experience in ways that are not necessarily congruent with Western concepts. While we may assume that the phenomena of intentionality and self-awareness are constants, the sociological 'person', the psychological 'self' and the biological 'individual' are usually construed as culturally defined; and, while these three terms are imbued with a certain ambiguity, they remain the starting point for exploring concepts of the person (White and Kirkpatrick 1985; Harris 1989; cf. Hermans 2002). Consider, for example, Marilyn Strathern's analysis of exchange relations in Papua New Guinea, which is based on a distinction between the Western person as being a single and separated individual and the Melanesian person as being a related and even divisible person, a knot in a network of social relationships (Strathern 1988; cf. Leenhardt 1947; Kuehling 2005). We also note Andrew Strathern and Pamela Stewart's statement (2000) about the complexities and variations in the use of the central concepts of person, self, individual; their introduction of the term 'relational individual'; and the need to think about these in relation to newer concepts, such as those of permeability and partibility. Not a 'dividual', i.e. dividable, but a dyadic concept is discussed by Stasch (2002). Within this model the person is represented more as an element of a dyadic partnership than an entity.

In the definition of Harris (1989), a 'person' is a human being who acts within the cultural norms. Here, the person need not be a living human, but can be an ancestor or an animal that acts and therewith influences people's lives; on the other hand, a human being without social capacities can be regarded as a lesser person, non-person, or former person. Fajans (1985) describes in her Melanesian example the development of personhood as the progressive acquisition of social properties as food giver (and not only as food receiver) – and the dissolution of the same personhood with age. As a newborn, an infant is regarded as natural, one who has not yet gained social behaviour: he or she is not a person. An older person is dissocialized because he or she becomes dependent on receiving food again.

A further perspective for the exploration of concepts of person is to focus on other aspects beside the social component such as soul, body and child conception (Strathern 1996; Eves 1998). Keck (2005) describes the person as being composed by several elements: a human body, an impersonal vital energy, the two spiritual aspects 'breath-spirit' and 'shadow-soul', the quality of social relationships (cold, cool and hot), a personal name and a melody for identifying the person. A single element can act on the others and thus, for instance a disturbed social relationship can affect the body and manifest itself as illness. Leach (2003a) clarifies the direct physical relationship between humans and *habitat*, and on yet another angle the

investigation of gender illuminates the person concept, because, as Barlow (1995) shows, an analysis of gendered lifecycles reveals the contrast between an abstractly conceived human existence and culturally charged concepts of persons as gendered (cf. Bonnemaison 1986). Some of these angles are taken up by the authors of this volume, and others have been added. For example, psychologist Gisela Trommsdorff (Chapter 3) explores the topic of agency from a different perspective, by discussing to what extent theories on agency depend on cultural belief systems, and what the implications of these cultural belief systems are for other agency beliefs. Here she refrains from the easy classification of 'independent' and 'interdependent' culturally constructed ideas of the self, but rather views the self in all cultures as incorporating both aspects in various degrees while the different selves become more or less accessible in different contexts.

Two other authors try to tap directly into culturally formed understandings of agency by analysing informants' narrations about themselves and others. While Andrew Strathern and Pamela Stewart (Chapter 5) take a closer look at the representations of the 'exotic' in a Papua New Guinean society, Stephen Leavitt (Chapter 4) searches for suppressed meanings and culturally compelling scenarios in personal narrative.

Processual ethnography focuses on the dynamic relationship between structures of power, social interactions, cultural dispositions, lived experiences, and individual agency based on the understandings of Bourdieu and Sahlins. Two of our authors have also worked with a processual approach and offer their thoughts on anthropology's take on tradition (Otto and Pedersen 2005; see Ton Otto's Chapter 2) and the recursive nature of human-environmental relationships (see Katja Neves-Graça in Chapter 8). It can be advantageous when approaches rely also on the analysis of diagnostic events, those 'that reveal ongoing contests and conflicts and competitions and the efforts to prevent, suppress, or repress these' (Moore 1987: 730). We assume that experiences of displacement, novel commodities, images and institutions can situate individual agents in a liminal position, a temporal and spatial borderline between familiar and as yet unfamiliar culture-specific structures, between past and present 'homes'. Those local actors who undergo such experiences alone or earlier than others of their culture often become cultural brokers, possessing an everyday knowledge (which is not always linguistically encoded) that enables them to follow everyday routines different from those to which they were once accustomed.

What is local (no matter where 'home' is) exudes continuity and familiarity – becomes part of the durable dispositions inculcated during the earliest years – exactly because it is highly repetitive, redundant, practical and often acquired in face-to-face interaction; it also has a strongly emotional aspect (Rodman 2001; see also Margaret Rodman's contribution in this volume). Here, first, formative experiences are made. In many contemporary contexts, however, the local is not bounded and

autonomous, but rather a kind of arena where many different influences come together, resulting in hybrid, or creolized, cultural forms. Consequently, Zygmunt Bauman (1992) proposes connecting the actor not to a system but to a flexible sense of habitat, to habitats of meaning; Friedman (1998) uses the term 'Erfahrungsraum' (experiential space) coined by Mannheim; while Lave (1988) writes about 'settings of activity'.

Accordingly, some have argued that the concept of a complex culture should yield to the concept of a flowing cultural complexity (Barth 1993). Viewed in this way, culture is a set of specific dispositions acquired by individuals in the process of learning, and of mutual construction of identities through cultural and social encounters, distributed in complex ways across individuals of a population.

Considerations such as these lead us to endorse the challenge to the sociocentric, collectivist understanding of culture, and the related assumption that the carrier of a culture is a purely social unit. We agree with Bloch (1991), who has criticized this 'oversocialised' model of the individual, and contend that the notion of a uniform and homogeneously distributed culture within collectivities becomes problematic (Boster 1985; Wassmann 1993; Borofsky 1994) once we notice that their members have highly distinct experiences, different access to knowledge, that their biographies vary deeply (Gewertz and Errington 1991) – especially, but certainly not exclusively, among people who have spent significant periods in places beyond those normally counted as 'home'. Yet, even in common worlds, single lives differ (Keck 1998).

Emplacement and Landscape

The concept of person in Pacific societies is not only defined through local ideas about the person, their constituents and social environment, or by innate mechanisms of perception and remembering in mental schemata, but also by the topological environment. In many societies of the Pacific, people's sense of who they are as persons derives from their position within a genealogy and – this is the point we would like to make – their relation to landscape. Landscape can be, 'read' as genealogy or can be understood as historically experienced and constituted (Keesing 1982; Weiner 1991; Gow 1995; Bamford 1998).

The metaphor of landscape, taken from art history, has now become a theoretical term of art in the anthropology of space and place. The term originally referred to timeless, framed, idealized paintings; in more recent anthropological literature, however, landscape is understood as cultural process. Numerous studies of native conceptions of landscape published in the last few years indicate that knowledge and the memory of social relations are keyed to place (Bender 1995; Hirsch and O'Hanlon 1995; Feld and Basso 1996; Stürzenhofecker 1998; Telban 1999; Bender and Winer 2001; Wassmann 2001; Stewart and Strathern 2003; Kahn 2004). More broadly, the term 'landscape' refers to the dynamics of lived histories, the interpretation

of time, relationship and person, kinship, history, identity, gender relations and emotions; thus, it postulates an anthropomorphic interpretation of the environment (Fox 1997). The inclusion of a parallel notion of seascape in field investigations has also proved a crucial contribution (Pomponio 1992), as have studies on the relevance of acoustic information (Feld 1982; Gell 1995) or the associative strength of smell (Engen 1991; Beer 2000b).

The use of space, patterns of settlement, and above all, the symbolism of spatial arrangements are classical issues (Durkheim and Mauss 1963; Widlok 1999; cf. Meusburger and Hennings in this volume). The traditional focus on cosmological themes and their instantiation in architectural schemes is also reflected in an extensive ethnographic literature. A related tradition focuses on the symbolism of domestic space, and continues to attract attention (Bourdieu 1977; Fox 1993), with a new emphasis on the 'built environment' (Lawrence and Low 1990) and the interactional use of domestic and public spaces.

Space becomes place through the memory of persons, and memory is constitutive of personhood. According to the ecological psychologist Graumann (2002), space has to be appropriated by a person in different modes: appropriation occurs over time, by marking, naming, defining, categorizing, and evaluating space as appropriate or inappropriate, owned or free; by locomotion, resulting in paths and roads; by cultivation; by conquest of foreign land; by building, constructing and setting. Through these and other means, space is personalized and becomes lifespace, becomes place. On the other hand, and necessarily, personhood is emplaced, and thereby spatialized. Whereas space is a term for abstract geometrical extension that makes no reference to any human activities, place, in contrast, has a strongly experiential connotation and is mediated by our memory.

Orientation in space can also be seen as part of a problem-solving process (Frensch and Funke 1995; Widlok in this volume). Where do I find what I search for? How do I find a way to move from my present to the desired location? This problem solving occurs as an interaction between a certain task and a specific person. In routine situations, the person has no problem but a routine inscribed in the habitus for doing the task. In nonroutine situations, meaning new or unforeseen, problem solving involves finding new solutions to the given task, yet this necessarily depends on the use of preexisting cognitive resources, and, therefore, on cultural schemata and other aspects of the habitus. Thus, creativity and innovation under novel cultural circumstances always involves the use and transformation of preexisting cognitive resources. By the logic of the relationship between habitus, personhood and place, the creative reconstitution of the place leads to a reconfiguration of the habitus.

While we are interested in all these issues, our main aim is to explore how space is perceived in non-European cultures. Spatial conceptualization is constrained by the nature of the physical world, as well as by the nature of human psychobiology with its visual system and upright posture. These environmental and cognitive constraints form the basis of current models of

our conceptualization of space. Mainstream cognitive science seems to hold that, universally, humans take an anthropomorphic perspective on space, and use the kind of egocentric constructions familiar from European languages. These suggest that a person's body stands in the centre of the universe and that spatial coordinates radiate out from it. The Piagetian child struggles to extend this framework across the environment, learning slowly about the constants of the world beyond his perception. This idea of one's own body as the centre of the universe, and the conviction that what is called the egocentric (relativistic) conception of space is 'more natural and primitive' (Miller and Johnson-Laird 1976: 381), are deeply rooted in Western traditions of scientific and philosophical thought (Kant 1768; Piaget and Inhelder 1967; Levelt 1989).

However, cross-cultural psychological and linguistic evidence raises questions about these perspectives and one may suspect that cultural factors have been underestimated. Thus, many languages lack egocentric words like left/right, in front/behind or on top/below (of the body) (Gumperz and Levinson 1996; Senft 1997; Wassmann and Dasen 1998, 2006; Bennardo 2002; Levinson 2003). Non-Indo-European speakers often conceive humans as not located in the centre but, rather, as part of the environment. Therefore, orientation is referred to in geocentric, not egocentric, terms: on the basis of fixed external points which correspond approximately with our cardinal system (e.g. uphill/downhill; sunrise/sundown; to the mountain/to the sea, etc.). It is known that these systems, used in opposition to our cardinal points, also have an effect on the micro level: in Pacific everyday life, one asks for 'the rice bowl over there at sunset', or asks a child before sleeping to turn his head 'uphill'.

Therefore, we need to learn how space is encoded linguistically and cognitively by local actors and investigate how this affects their understandings of their lived environment. This task has been taken up by the last three authors of this volume and they describe and critique in detail research methods and results of the experimental 'Space Games' (see Gunter Senft's, Joachim Funke's and Thomas Widlok's contributions). One resulting question was, for example: Are one's own concepts of space 'exported' or are they adapted to new localities? The Yupno in Papua New Guinea 'take along' their geocentric system of orientation with 'upriver/downriver' to the town of Madang and there equate the main road leading to the sea (downriver) with the Yupno river – but turned by approximately 180 degrees (Wassmann 1994). And there exist many more examples where other Pacific people either duplicate or adapt their system of orientation when abroad.

Memory

Within the context of cognitive theory, human experiences and thought are understood as information processing. In addition to perception, mental representations, and memory, it is important to render evident those

processes through which people are enabled to acquire a mother tongue and to internalize the sociocultural specificities of the particular society in which they are enculturated. The latter themes are elementary to anthropological knowledge as a central concept within the discipline. According to Bloch, 'anthropologists' concerns place them right in the middle of the cognitive sciences, whether they like it or not, since it is cognitive scientists who have something to say about learning, memory and retrieval' (Bloch 1991: 184).

The definition of cognition used by anthropologists is often extremely sociological. Jean Lave (1988) sees cognition as originating in social practices of individuals. As Clifford Geertz put it: 'thought is, in a great part anyway, a public activity' (1973: 45). Perhaps all this may seem commonplace but it is striking how often anthropologists' theories of thinking, meaning, memory and retrieval have not been compatible with those of cognitive scientists.

In everyday interaction with our environment we experience a constant flow of new impressions that increase our efficiency in processing further information. This position assumes an information-processing mind by means of which information that we require to be part of our environment is encoded, stored and retrieved.

> Without the possibility to process information there cannot be life nor evolution, no understandable perception of objects or situations, no conceptual understanding, no language, no culture, and also no identity .... Without memory we could not even think, since without internalized schemata, concepts and categories, there is no basis for mental representation (Reimann 1998: 146 [our translation]).

Memory is constitutive of personhood and is a central aspect of cognition (Baddeley 1997). Our memory is not uniformly organized. Different tasks are performed by different systems: the modal, the short-term memory and the long-term memory. Atkinson and Shiffrin (1968), who were the first to formulate a cognitive psychological model of memory, proposed that these three elements correspond to three distinct locations in the brain (localized representations). Insofar as culture is a phenomenon of memory, through which we organize our knowledge of the world, we are interested in exploring the concept of long-term memory. In turn, we understand long-term memory as containing several subsystems. Memory testing is an increasingly complex research area, thus it is becoming more important for anthropologists to differentiate between different levels or subsystems for their research. As Edgar Erdfelder and Martin Brandt suggest in their contribution in this volume, memory psychologists need to take greater care in choosing appropriate methods of memory measurement, as well as in the interpretation of the data from memory tests, because in cross-cultural research a seemingly obvious thesis often influences the interpretation of results strongly and may lead to the wrong answers.

The procedural memory contains knowledge in the form of implicit rules of behaviour which cannot be expressed through language but rather are enacted through practice (for example, try to explain to someone how to ride a bicycle). Implicit memory is constituted by abstract principles which organize an array of perceptions into seemingly coherent patterns. The origin of these patterns emerges from repeated associations of closely related everyday experiences (Schacter 1992; cf. Whitehouse 2001). These experiences are habitual, embodied, and they match Bourdieu's notion of *habitus* of the body (habitual set of dispositions). Squire, who has studied the underlying structures of the brain, contends that:

> Non-declarative memory includes information that is acquired during skill learning (motor skills, perceptual skills, cognitive skills) habit formation, simple classical conditioning including some kind of emotional learning, the phenomenon of priming and other knowledge that is expressed through performance rather than recollection. (1992a: 233)

And Schacter formulates about the same topic: 'Implicit memory is an unintentional, nonconscious form of retention that can be contrasted with explicit memory, which involves conscious recollection of previous experiences.' (1992: 559).

The anthropologist Borofsky (1994) speaks of 'knowing' (how to do) that is contrasted with 'knowledge', the so-called declarative knowledge (knowing that). According to Tulving (1985), the declarative memory consists of episodic and semantic memory, where information stemming from personal experience (always linked to place and time) and universal knowledge are stored.

Information from recurrent, appropriately structured daily episodes may develop and solidify through time into so-called mental cultural models or schemata (Strauss and Quinn 1997; cf. Bartlett 1932; Piaget and Inhelder 1967; Minsky 1975; Schank and Abelson 1977). Schemata are mental models that organize the acquisition and storage of knowledge in stereotypical and prototypical sequences of thoughts and actions. They are presupposed, taken-for-granted models of the world that are partially shared (although not necessarily to the exclusion of other alternative models), and they are organized in ways fundamental to the way human beings think, remember and forget (Squire 1992b; Squire and Kandel 2000; Schacter 2001). These schemata may be of two different, equally basic forms: proposition schemata and image schemata, to use Lakoff's terminology (1987). In both forms we may think of them as simplified worlds, from which the complex, comprehensive knowledge is reconstructed spontaneously. Much of our knowledge in the schemata is fundamentally nonlinguistic (Eysenck and Keane 1997), having the form of neither sentences nor words. There are neurological constraints on the storage of schemata that influence what and how we think. Moreover, since basic dispositions that inhere in these schemata have considerable inertia – *hysteresis* is Bourdieu's term – their

modification and adaptation tends to be slow – but they adapt continuously to new experiences made by the actor and because of that they interpret subsequent experiences in a different way.

A promising new field of work, albeit under debate, for both anthropology and cognitive psychology could be the new PDP models (parallel distributed processing), that is, the connectionist or neuronal networks, which were developed as computer models by Rumelhart and McClelland (1986; McCloskey 1991; Bechtel and Abrahamsen 2001). The human brain and its composition of billions (10^{10}) of nerve cells, so-called neurons, serve as a model for neuronal networks. Connectionism has no serial process of analysis carried on along a single line by a single processor. Instead, connectionism suggests that we access knowledge, either from memory or as it is conceptualized from perception of the external world, through a number of processing units which work in parallel and feed in information simultaneously (distributed representations). Information received from these multiple parallel processors is analysed simultaneously through already existing networks connecting the processors. Knowledge is not located in specified parts of the brain, but stored in these pathways of connections (synapses) between the neurons or processors. Again, there must be a significant number of social interactions and positive assessments in order that some connections get a higher 'weight' and so become stabilized for a period of time. In this case, they resemble schemata or cultural models. This packing works very well for quick and efficient operations in familiar domains, but occasionally the network can also be unpacked into linear sentential sequences which can then be put into words. This uncertainty and dependency on know-how from our everyday life, that is, on cultural phenomena, makes these models attractive for anthropologists (Shore 1996).

The ways in which cultural knowledge is organized in memory has fundamental implications for anthropology.

> If an anthropologist is attempting to give an account of chunked and non-sentential knowledge in a linguistic medium (writing) she [sic] must be aware that in so doing she is not representing the organisation of the knowledge of the people she studies but is transmuting it into an entirely different logical form [i.e. the verbally articulated form]. (Bloch 1998: 15)

The notion of 'cultural memory' goes beyond the notion of tradition, belonging to an external dimension of human memory. The cultural memory can be stored externally and intermediately, such as in specialists, experts, shamans, griots, priests, 'old crocodiles' or in systems of notations such as knotted chords, *churingas*, or in writings. Here, memory works as data storage. Experts need to be instructed and to control the diffusion of knowledge. Certain people can be excluded from this knowledge or receive only parts of it. Thereby, emplacement is the most basic medium of mnemonics. There are memory places and even landscapes can serve as a medium for cultural memory. How best to access these memory places is

the topic of Susanne Kuehling's contribution in this volume. She proposes the use of different qualitative anthropological methods in combination with more quantitative geographical experiments (see Chapter 10).

Thus the question is how a place is perceived and experienced, how an impersonal geography (at home or abroad) gains significance and can become 'home' (Myers 1986; cf. Augé 1995). In this struggle to find one's roots, a sense of place is not so much about residence in a locale as about belonging. 'The poetic power of place' (Fox 1997) is often based on the knowledge of names of places, or the power to name them. A landscape-based cosmology is one way in which Aboriginal identity has been maintained, especially since the European colonists and the Aboriginals created such divergent landscapes out of the same pieces of geography. Landscape is a mnemonic for past generation (Morphy 1995).

A different field of memory storage is explored by the anthropology of senses. Here, as Bettina Beer contends in this volume, a whole new access can be created to culturally relevant and emotionally connected memories. Her access point are smells, which trigger very different memories and feelings in different cultures, as the examples from the Philippines and Papua New Guinea illustrate (see Chapter 11).

Whether in Europe or elsewhere cultures seem to be increasingly hybrid and dynamic. People move and make new experiences, and new images and values arrive even at the most remote village. But as people reject or adapt the varying 'globalisms', from Guam to Goroka, their experiences differ. It is the particular interaction and experiences with these 'new worlds' that this book series is concerned with. Local ethnic psychologies may change in just the same way as individual life histories. Concepts of person and agency, space and landscape, as well as memory therefore have to be reconsidered. We plead here for precise local studies whereby the local is understood as the realm of experience where different influences meet. The contributions of this volume make excellent use of the three aspects listed above – of person, space and memory – as tools for analysis and categories in which to think about change, at a level of detail not known before. Therefore, we trust that not only readers with an anthropological background, but also geographers, linguists, psychologists and representatives of cognitive science will find this volume and the following series appealing and useful for their own research.

A Personal Last Word[1]

There is no doubt: multidisciplinarity is the trend today.

We suggest research on the concepts of person in changing Pacific societies, with the units of our analysis being local actors, emplacement and memory – all this in combination with a cooperation between anthropology, human geography and cognitive psychology. This implies that – whenever possible – researchers from different disciplines should work together on the studies proposed.

They extend from the side-by-side working of different disciplines uniting in poly-disciplinary research to bringing together disciplines, establishing contact, and cooperating, as, for instance, in the cross-disciplinary communication at scientific conferences, in joint research projects or joint institutes. Alternatively, a common paradigm is developed that bridges several disciplines – transdisciplinarity as a research requirement dictated by the increasingly more complex developments of problems for whose solution the knowledge of any individual discipline is no longer sufficient. Coordinated cooperation can, finally, also mean thinking that spans several academic fields, and leads to a standardization of the comprehension of phenomena by trying to combine the partial explanations of various disciplines. Research is organized in a multidisciplinary manner whenever a research problem exceeds the framework of an individual discipline – as in our case – and whenever the scientists from the individual disciplines complement each other and cooperate.

'Classical fieldwork' was crucially defined by Bronislaw Malinowski, a youngish European who, between 1915 and 1918, lived for a total of two years as a 'single' in the village of Omarakana on the Trobriand Islands. As a one-man enterprise, he compiled extensive ethnographic material and at the same time confided his frustrations in his diary. This 'lonely wolf' image influenced generations of male and female anthropologists with regard to the organization of their fieldwork. 'Ethnographers have been trained to think of themselves as the single instrument of data collection, analysis and presentation' (Schensul et al. 1999: 86–87).

But anthropology has changed, not least because its 'object' has also changed: it has become a 'shifting anthropological object' (Olwig and Hastrup 1997). With increasing frequency, research today is being initiated by the indigenous communities themselves (Tuhiwai Smith 1999) – in part as a reaction to European colonialism and the associated question of the authorship of knowledge or as an expression of turning back to one's own traditions in the sense of cultural resistance. There are Trobrianders today who themselves work as anthropologists. Even though the single fieldworker is still the rule, we observe that anthropologists increasingly work in teams, either as married couples, as teams of anthropologists, interdisciplinary groups, or together with indigenous researchers (Mishra and Dasen is one example found in this volume).

As to teams of researchers, the most frequent (though not always the least complicated and best-functioning composition) appears to be the husband-and-wife team, either consisting of two trained scientists or of a male or female anthropologist and the accompanying partner, with or without children (Flinn, Marshall and Armstrong 1998).

> Fieldwork as a husband/wife team worked extremely well. Some of this may have to do with our particular circumstances. Whereas I was doing anthropological fieldwork for a Ph.D., Lind was taking an extended break from her career as a senior medical administrator. The competition that might have

> arisen between a husband/wife team both of whom were intent on carving out anthropological careers from the same fieldwork, never arose….The advantages of doing fieldwork together in this way was not only that we could share ideas (and arguments), but the various periods of fieldwork themselves could be reflected on retrospectively with someone who understood its complexities, poignancy, mistakes and humor. (Personal communication, anthropologist Michael O'Hanlon)

The linguist Gunter Senft notes:

> This situation again improved immensely when in 1989 we returned to Tauwema with our children, two and four years old at the time. Without Barbara and without the fact that only with children were we respected by the Trobrianders as proper adults, I would not have had access to multitude of information. (Personal communication, linguist Gunter Senft)

Apart from these private considerations one could name several convincing scientific reasons in favour of a man-and-woman-team during fieldwork, particularly if both are trained anthropologists. The anthropologist Pierre Lemonnier has said:

> Fieldwork experience as team: good and helpful. … Anga are such people that you do need to have two (M and F) anthropologists if you want to have an idea of what's going on. To take the most obvious domain, it would be totally impossible for a female anthropologist to take part in and witness the secret part of the male initiations. A female anthropologist cannot enter the forest at that time: hence the absolute necessity to have a male colleague working at the same time to be able to talk about these sort of rituals. Symmetrically, as far as I know, no male anthropologist ever paid attention at what the women were doing during the male rituals. And that's why Pascale's finding about the key-role of women-mothers-sisters during the Ankave initiations are so important. If Pierre had been alone, he would probably have carried on with the entirely wrong idea that Anga male initiations are a men's story. (Personal communication, anthropologist Pierre Lemonnier)

But let us turn to the cooperation of researchers from different disciplines. Multidisciplinarity, with its multiple social and institutional complexities, is not really something new. One of the first major multidisciplinary field studies in anthropology was the well-known 'Cambridge Anthropological Expedition' (1898–99) to the Melanesian Torres Straits islands. Today the increasingly strong demand for cooperation is a result of the particularization of the disciplines themselves, of the growing specialization in one's own discipline and the steadily accelerating expansion of knowledge that can no longer be managed.

We would like to conclude with reflections on our own interdisciplinarity experiences, which could highlight the problems with potentially incompatible approaches and disciplines.

The Guam '*lytico-bodig* Project' was created in cooperation with the National Institute of Aging–Mayo Clinical Study of Neurodegenerative Disorders in Micronesia. In these large-scale projects, anthropologists are employed as 'staff' together with scientists from other fields.

> Opportunity waits on Guam to reveal the cause of an obscure malady. On Guam, Chamorro natives suffer *lytico-bodig*, an endemic, paralyzing disease that resembles Lou Gehrig's, Parkinson's and Alzheimer's disease, sporadic neurodegenerative diseases affecting millions of the world's aging population. For forty years foremost physicians have sought the silent cause of this common disease on this small tropical island in the far western Pacific. … This is your opportunity to be part of the discovery, in the same village Magellan discovered four centuries ago.

With this advertisement in the A*nthropology* N*ewsletter* of the American Anthropological Association published in May 1992, the group of researchers stationed in Guam was looking for a medical anthropologist. On the island, neuroscientists had been seeking intensely – and to this day in vain – with the help of a variety of medical and quantitative epidemiological methods after the cause of this neurodegenerative disease.

In this project dominated by biomedicine, anthropology was only a small and – compared with 'hard-facts'-producing medicine (at least that was the conviction of the doctors) – somewhat 'exotic' and rather 'vague' science represented by a young researcher (Verena Keck) from Europe with far from excellent knowledge of English who, moreover, obstinately insisted on living in one of the affected villages instead of visiting the villages from a more comfortable university apartment, i.e. from an Americanized world – as the numerous doctors flown into Guam for a short time usually did.

> I worked particularly closely with a neurologist who also lived in Umatac, I was able to accompany him on his rounds of the patients and had access to all the medical histories and the results of the previous research. Our working together didn't end with the time we had spent in Guam either but was continued with meetings in Europe, the U.S.A. and Indonesia as well as with joint lectures on the occasion of conferences of neurologists. It was – and still is – difficult writing publications together; so far the outcome is a series of unpublished manuscripts. At the point where it came to scientific writing, the differences between disciplines and customs, for instance how an article is to be structured, sometimes manifested themselves with quite some tensions. (Verena Keck)

But smaller multidisciplinary teamwork can also make sense, and it is certainly a lot easier to organize. In numerous cases of working together it is the anthropologists who invite representatives of neighbouring

disciplines: they have already been in the field longer, they know the language and they have familiarized themselves with the culture.

> Being in the position of a professor who cannot get away more than two or three months, outside of teaching semesters, I could not have started new field sites by myself, because it takes too much time. Being able to move into the field where an anthropologist has already established the groundwork, has all the connections, etc. is of course a great solution to this problem. Also to determine which topics are interesting for a common study. (Personal communication, psychologist Pierre R. Dasen)

We would like to add a fictive conversation: a psychologist and an anthropologist converse in the field. This is to illustrate the collision of different research agendas and methods and to lead us into the volume's first chapter, which presents the differences between the two disciplines systematically. The conversation is based on minutes recorded from memory during the fieldwork of Pierre R. Dasen (PD, psychologist) and Jürg Wassmann (JW, anthropologist) in the Yupno Valley, Papua New Guinea, some years ago; similar talks also occurred during subsequent joint fieldwork in Bali. The discussion has been going on for some time and the tone of the conversation is slightly tense but still friendly.

PD: You are continuously trying to find an ideal-typical presentation of the system [of the Yupno culture]; what's missing is the occupation with actual everyday life. For instance, in West Africa [where I did fieldwork before] there are real artisan villages. I could observe the people there while they were working and ask them direct questions.

JW: Here, there just don't happen to be any specialists, and what is produced, anyway? String bags, arrowheads, perhaps. And during the day the people are scattered all over the place. Some are gardening, others hunting in the bush. Good. In the evening they're all in their houses. But these are pitch dark. What am I supposed to be able to watch there?

PD: It's true that the Yupno are very individualistic. But because of this, we also have the chance of obtaining individual answers. The disadvantage is, of course, the general 'speechlessness' when faced with us since they are not used to talking about their own cultural behaviour.

JW: One simply mustn't ask direct questions, but must carefully delineate specific subjects for the people, we have to listen and e.g. write down the relevant vernacular key words so we can later ask more directly.

PD: In addition, the answers are much too uncertain and we can't react to them quickly because your knowledge of the language is still too limited. Also, many questions (e.g. about 'multiplication' or 'subtraction') can't, apparently, be posed adequately because the respective words don't exist.

JW: We have noticed that the men all count a bit differently, another example of individualism. Good. Nevertheless, I'd rather sit for hours with a single informant – he trusts me and he talks.

PD: No! You have to question a lot of people, collect samples, for example, we still need ten old women for counting.

JW: Impossible! How am I going to find ten old women? They won't come, because they're afraid to give answers. They have the feeling that they're being 'tested'. And you know very well that women don't do any counting in public because of social rules. Look, in the attempt to classify 'hot' and 'cold' objects they ran away. They found the whole thing absurd.

PD: It went quite well [with male informants] with the numbers.

JW: Yes, but they're not particularly important to the Yupno.

PD: I find it simpler if one first knows which cognitive problem one wants to examine and, accordingly, then looks for a 'suitable' culture: for conceptions of space, for example, I go to Australia, this is a suitable place to study geocentric space; for problem-solving regarding handicraft, I go to Mexico – that makes sense.

JW: Not at all. First of all, I want to describe a culture; as far as I'm concerned, the individual variations in everyday life too. In any case, that with which the people are concerned, otherwise they just don't come [into our house] at all. The methods [of psychology, for example] are therefore only an aid. The Yupno tell me themselves what presents a problem.

PD: I am more interested in investigating fundamental topics, such as orientation in space or the relationship between language and cognition. But in order to do this I have to be able to do tests or other tasks and these may well be strange for the Yupno, or even considered to be childish or even insulting, I am aware of that and that is why we want to proceed in a playful manner [referring to the 'space games'].

JW: These tests, my impression is that these tasks are disturbing my confidence relationship with my informants; we have to find other solutions!

(And so it went on for quite some time.)

Note

1. Some materials in this section have been adapted from the article, 'The Final Requiem for the Omniscient Informant', published in *Culture and Psychology* 1995 1(2): 167–201, and the chapter 'Interdisziplinäre Projekte und Teamarbeit', published in B. Beer (ed.), *Methoden und Techniken der Feldforschung* (Berlin: Reimer 2003), pp. 203–23, with the permission of the editors.