1 Hunter-Gatherer Anthropology and Language

Tom Güldemann, Patrick McConvell, and Richard A. Rhodes

1.1 Introduction

Foragers are often portrayed as "others" standing outside the main trajectory of human social evolution, which began with the Neolithic Revolution. In some forms of this narrative, foragers are static, left behind in the tide of history by their dynamic cousins, the farmers.

In anthropology and archaeology, the pillars holding up this view are being undermined as studies revealing dynamism and cultural change among foragers claim more attention. In particular, key tenets of the conventional narrative, such as the "wave of advance" of farmers that marginalizes and eventually eliminates foragers, are being reconsidered (Bellwood and Renfrew 2002). In regions such as Southeast Asia the conventional wisdom that there is a huge economic, social, and demographic gulf between farmers and foragers is being questioned (Fix 1994; Gibson and Sillander 2011). It has come to light that there were forager societies that did not fit the stereotype of small, isolated bands. They were, in fact, organized into large-scale, complex polities (Arnold 1996). Add to this the fact that the literature in this debate has paid far too little attention to the Western Hemisphere. At the time of contact, North and South America were home to large numbers of forager groups, many in long-term relationships with neighboring agriculturalists. Even more telling, agriculture continued to expand in North America up to the time of first contact (Galinat 1985: 277), leaving a picture, not of a dynamic unidirectional spread of agriculture, but of a much more subtle system of groups moving into agriculture with a lingering significant role for foraging, especially hunting and fishing. As the Western Hemisphere transitions are much more recent, the mechanisms are much less speculative. The dynamic balance between forager groups, agricultural groups, and groups in transition is clear. Conversation around the mechanisms of transition at work in the remote past of the

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4 Tom Güldemann, Patrick McConvell, and Richard A. Rhodes

Neolithic could benefit greatly from a serious look at North America, where the more recent time frame allows us to see that there was both the adoption of agriculture by some and its abandonment by others. The fact that the process was not complete in North America at the time of contact allows us to see the balance of power between groups with very different calorie acquisition regimes. In particular, we see that the change was gradual over the course of centuries. Such a gradual shift cannot be obvious at the remove of seven to ten millennia.

The basic overview of North American subsistence at contact has long been known and is uncontroversial (Driver and Massey 1957; Driver 1969). Moreover, there was a well-established precontact transcontinental trade network that brought materials from the coasts to the interior and vice versa (Driver 1969). The most prominent of those networks, the Hopewell Interaction Sphere (Seeman 1979), has been thoroughly studied and continues to be a topic of interest (Sarich 2010). What is significant for us is that these trade networks linked native polities with different subsistence regimes. Even though the onslaught of overwhelming numbers of Europeans has radically changed the dynamic, there are still places in the Western Hemisphere where such balances continue to exist (see Epps, Chapter 22).

Studies of language and language change can contribute to this change of perspective on foragers, as the chapters in this volume show. Forager languages are not different in kind from farmer languages (Bickel and Nichols, Chapter 3), and the kinds of changes they undergo are likewise parallel. Foragers expand and migrate into new or abandoned areas, taking their languages with them (Rhodes, Chapter 20), forming the treelike structures well known in comparative historical linguistics. This makes analysis and reconstruction of forager languages using standard methods possible, a fact well known among linguists since Bloomfield's (1925) seminal paper on the reconstruction of Algonquian. It is not useful to dichotomize farmer and forager languages. Categorizing farmer languages as being based primarily on such migration and phylogeny and forager languages as being based primarily on stasis and diffusion of linguistic elements is dubious at best (e.g., Nettle 1999; for a critique see McConvell 2001). In fact, both types of processes are found in both types of economy. Among foragers themselves there is a range of different levels of contribution of phylogeny and diffusion (Bowern et al. 2011).

Understanding the patterns of prehistoric change through linguistic prehistory, including that of foragers, can illuminate the overall prehistory of continents and regions. This can be combined with and complement the evidence of archaeology, genetics, and other disciplines. The focusing of efforts on farmer language expansion in recent times (Bellwood and Renfrew 2002) and the popularization of this view (Diamond and Bellwood 2003) led to

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Hunter-Gatherer Anthropology and Language

neglect or even denial of forager language expansion. But a sober evaluation of readily available evidence makes it truly impossible to deny that forager languages also spread. This evidence is abundant in the history and linguistic prehistory on all continents. The received position may be recasting the framework to include forager language spreads (Bellwood 2014), but this book shows that forager dynamism is more widespread and complex than the received view accepts.

While the end of the last ice age may have been the backdrop to the invention of agriculture and animal husbandry in some places, it also had very marked effects on the hunter-gatherer populations who did not make this transition during the period from 13,000 to 7,000 years ago. As the glaciers retreated and the world climate grew warmer, hunter-gatherers were able to move into a wider variety of foraging environments, utilize a wider variety of species and occupy regions that would have been effectively uninhabitable in the Pleistocene (Richerson et al. 2001; Kennett and Winterhalder 2006: 3).

These population movements in the early Holocene went hand in hand with the expansion of languages. In some cases this was the "initial colonization" of some areas or at least the reoccupation of regions sparsely populated until that time. In fact, owing to the aforementioned circumstances, there is every reason to expect spreads of forager languages in the early-to-mid Holocene. In North America it is clear that those spreads continued into recent millennia, for example, the eastward movement of Algonquians out of the Columbia Plateau into the Great Lakes region, on into eastern Canada, and down the East Coast of what is now the United States (Denny 1992; Goddard 1994). Eastern Algonquians and Southern Great Lakes Algonquians took up agriculture late, mostly after those expansions (Fowler and Hall 1978: 560; Snow 1978: 58). Algonquian forager expansion has continued northwestward into the historical period (see Rhodes, Chapter 20).

But the most dramatic forager spread in North America in the historical period was the spread of the Dakhota across the Missouri at the end of the eighteenth and beginning of the nineteenth centuries. At first contact they were primarily buffalo hunters (Radisson 1961: 14, 142). With the arrival of the horse, they sought to expand west of the Missouri, where there were entrenched agriculturalists: the Arikawa, Pawnee, and Mandan. It was only in the wake of a series of smallpox epidemics, seriously weakening the Arikawa and decimating the Mandan, that the Dakhota succeeded (DeMallie 2001: 731).

Hunter-gatherers have undergone major transitions or revolutions of their own. These involved turning toward a broad spectrum of food resources, including those that are not highly ranked but are nevertheless dependable despite having high handling costs (Bird and O'Connell 2006; see §1.4 for more discussion). Developing a broad spectrum of resources was almost as revolutionary as the rise of agriculture during the Neolithic. And broadening

5

6 Tom Güldemann, Patrick McConvell, and Richard A. Rhodes

the resource base is often linked to the idea of intensification. The broad spectrum may have been based predominantly on adopting various techniques of food processing, but the motivation may well have been to provide sustenance for large ritual and social gatherings (Lourandos 1997). As Bettinger (1994) argues, the arrival of migrants may force local indigenous groups into marginal territory where intensification becomes a necessity, in spite of the fact that both groups may be foragers.

It is important to recognize that different groups of foragers emerge with different subsistence strategies, different social organizations, and different cultural complexes. This fact is particularly apparent when taking a broad view across the indigenous peoples of North America (Driver and Massey 1957). These groups of foragers spread languages and developed new linguistic patterns, even in contact with farmers. Issues of this type are crucial in Epps (Chapter 22).

This introduction first addresses the question of who should be considered foragers in §1.2. Following in §1.3 we consider the effect the concept of the Neolithic Revolution has had on forager studies. Then §1.4 discusses timelines for forager development, independent of farming. The topic of §1.5 is forager language spread, an oft-ignored aspect of forager prehistory. We then move away from prehistory to look at the features that have been attributed to forager societies and their potential relations with language in §1.6. This includes how foragers' life patterns are different from those of food producers, how analysts have divided foragers themselves into types based on their different ways of organizing aspects of society, and the importance of language in the concept of a "dialect tribe," often used in research on foragers. §1.7 returns to questions of change first raised in relation to transitions and language spreads, this time focused on social dynamics, again challenging the "static" stereotype of the forager. Most foragers have lived in close contact with food producers for many hundreds or thousands of years, and the kinds of interactions found between the two groups are explored in §1.8. Many such interactions involve the social and geographical marginalization of foragers, which is discussed in §1.9. §1.10 addresses the effects of language contact between food producers and foragers that fall short of language shift. Then §1.11 highlights unusual cases in which people have "reverted" from food production to foraging. Finally, the introduction closes with a brief conclusion.

1.2 Who Are Foragers?

The term "hunter-gatherer" is generally being replaced by "forager" in the literature. While both terms are used interchangeably in this book, we prefer to use the term "forager" in theoretical contexts. This is in part because it is shorter and simpler, but more substantively because the term *forage* goes

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beyond hunting and gathering to include fishing, a primary food source for a significant number of nonagricultural groups, notably in North America (Driver 1969), and does not exclude foragers who also derive part of their livelihood from trading. Finally, the term "foraging" "diminishes an improper emphasis on the singularity of hunting," while highlighting "the diversity always present" (Griffin 1981: 34).

How do we define foragers? Binford (2002: 116) characterizes them as "[groups who] do not organize themselves to control food production through strategic modifications in the organization of the ecosystems that they exploit." This definition is negative vis-à-vis farmers and herders, who do engage in such "strategic manipulations," but it is also likely to be somewhat inaccurate. There is significant evidence that some North American hunting cultures manage game populations (Feit 2004: 122). This could be legitimately considered a strategic manipulation of resources. The paleoethnobotanical literature crucially addresses how the use of plant material develops into full-fledged domestication (see Minnis 2003, 2004). But other sources also take a line to Binford's, defining foraging as a mode of gaining a livelihood that is distinct from food production. A useful approach can be to define food production as exerting control over the reproductive cycle of one's caloric resources.

It has been stressed by a number of writers that some foragers do intervene to some extent in the reproduction of wild food resources, for instance, by scattering seeds or replanting tubers. This could be viewed as a matter of degree. In order to approach the matter statistically, the Ethnographic Atlas (White 1986, 1990) uses calculations based on the amount of nutrition that comes from hunting, wild food gathering, fishing, farming, and animal domestication. For further discussion of such issues, see §1.3.

Apart from attending purely to the question of how food is obtained, other aspects of foragers have been highlighted in the literature. These include in particular aspects of their exchange practices and ideology, such as food sharing and egalitarianism (Barnard 2002). Barnard suggests that universal kinship – the practice of assigning kinship terms to all members of the community and associated groups – is a feature of hunter-gatherers. It is not clear whether these features are exclusively associated with foragers or more widespread including small-scale farmer and herder groups also. For further discussion see $\S1.6$.

Other characteristics are often seen to be closely associated with foragers. One is high mobility of residence ("nomadism"). But the correlation, nomadism with foragers and sedentism with farmers and pastoralists, is weak (for some discussion and references see Ember [1978] and Ember and Ember [2010]). The fishers of the American northwest coast, for instance, are only partially and seasonally mobile (Suttles 1990: 4). Conversely, some cultivators and herders are highly mobile. The size of the community among

8 Tom Güldemann, Patrick McConvell, and Richard A. Rhodes

hunter-gatherers is often reckoned to be small, but again many farmer groups are also small. If these demographic characteristics were more robust it may be possible to compare them with features of language, such as degree of language contact phenomena, which may correlate with numbers of contacts with other groups.

As stressed previously, foragers are diverse along several dimensions, due to social changes they have undergone internally or due to their relationships with other groups, be they farmers or pastoralists. In the latter case there are contrasts between foraging people who have lived in a world composed largely of foragers until the last couple of centuries, those who have been in long-term equilibrium with agriculturalist neighbors, and those who have been long encapsulated as minorities in a world of farmers, pastoralists, and large polities. These differences can have significant effects including effects on language, such as forager groups shifting to speak the farmer or pastoralist languages (McConvell 2001). Between the ends of the spectrum lie intermediate cases, a number of which are illustrated in this book, where the languages are in a mutual steady state of contact without spread. The range of activities engaged in by different forager or borderline forager groups also exhibits considerable diversity, including hunting, gathering, fishing, and occasionally systematic trading. Another dimension of diversity is coastal – seafaring vs. terrestrial orientation.

The "borderline" cases include:

- (a) Reliance on marine and other aquatic resources that "correlates positively with permanence of settlement, group size, levels of hierarchy, degree of stratification, restrictions on access to resources and form of domestic organization" (Pálsson 1988: 202). Such sedentary foragers are a far cry from the nomadic bands said to typify foragers.
- (b) Nomadic agriculturalists, such as slash-and-burn farmers in the Amazon, New Guinea, and other places. As well as having a propensity for movement in some cases, they also often rely quite heavily on hunting and gathering for their diet, so that it becomes difficult to allocate them unambiguously to the farmer or forager category. It has been suggested that in the Amazon, self-identification as primarily farmers or foragers is at least as important as a balance of subsistence activities. Epps and Stenzel (2013: 19–21) describe the dichotomy between River People and Forest People in the Upper Rio Negro, which divides them roughly between farmers and foragers (primarily hunters) respectively. Other writers cited in this source have emphasized complementary exchange between these groups that is similar to the symbiosis found between farmers and foragers elsewhere, e.g., in Central Africa.

However, despite their distinct identities as farmers and foragers, in their subsistence practice the Amazonian groups all tend to mix modes to an extent.

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This raises questions about the linguistic correlates that have been proposed by Brown (Chapter 4) comparing foragers and farmers/horticulturalists with regard to differences in their taxonomic structures for plants, and how they fare when applied to such borderline cases. Epps (2013) in an Amazonian regional study writes, "The Vaupés languages shed new light on the relationship between subsistence pattern and ethnobiological nomenclature: comparative evidence supports the basic generalization that hunter-gatherer systems have fewer binomial terms (specific/varietal levels); but language contact may level differences in flora-fauna terminology, primarily via calquing of binomials – even while subsistence differences are maintained."

Some speech communities who were made up of foragers have changed more definitively to become farmers or herders. But in some cases the change has gone in the reverse direction. These changes are sometimes accompanied by language shift, but not always. If there is a shift it is to a language associated with the new subsistence strategy. However, when there is no language shift or when the stable outcome is bilingualism, the original heritage language inevitably undergoes a transformation, at least in the vocabulary related to subsistence activity, through borrowing or coining of new terms. Attempted reconstruction of such changes in historical linguistics has been used in detailing and dating phases of transition to new forms of subsistence (cf. Ehret 2011).

Of course, over the last few hundred years, many forager groups have come to rely less on hunted and foraged food, since they have generally been incorporated into wider economies. In this book, we allocate groups to the forager category, taking as a reference point ethnographic descriptions at first colonial/scientific contact. And, since ours is a linguistic study, historically attested foraging groups are not considered if there is a complete lack of linguistic data. Güldemann and Hammerström (unpublished manuscript) deal in more detail with the languages considered under the rubric of "forager languages" regarding their classification and geographical and demographic characteristics.

1.3 Social Evolution and the Neolithic Revolution

The dominant paradigm in the scientific study of prehistory in the twentieth century was the Neolithic Revolution – the revolution being the move away from foraging to farming and herding. It is the centerpiece of most schemes of social evolution.

The paradigm shift to the notion of a Neolithic Revolution brought along a presumption that many other features of society necessarily change with the change to agriculture. The anthropology of the 1960s saw such things as concepts of property flowing from the Neolithic change in production.

9

10 Tom Güldemann, Patrick McConvell, and Richard A. Rhodes

The easy dichotomization of calorie acquisition into foraging on the one hand and farming and herding on the other which the metaphor of "revolution" suggested turned out to be unrealistic in a way similar to how the other social evolutionist schemes of the nineteenth century were received. Ideas of property, for instance, did not arrive with the Neolithic Revolution, although this view is widely held (Trigger 1998). Evidence from language helps to erode some of these questionable ideas (Kelly 1995: 163). One might expect that expressions of possession and property were very different in forager and farmer societies if an entirely new set of concepts was ushered in by the Neolithic Revolution. In fact, there is no such huge difference between the way forager languages deal with these ideas and the way that others do. If differences exist they are generally more subtle than one might expect.

The notion of the Neolithic Revolution as a watershed in social evolution can be useful because it throws forager societies into relief and enables us to focus on their special characteristics. However, in practice, it often leads to a singular focus on the rapid and precipitous changes and a corresponding neglect of the less dramatic changes throughout the long period of forager prehistory, worthy of investigation in their own right. That is, the Neolithic is seen as the motor of dynamism par excellence that has led to the mistaken corresponding assumption that there is little major change or dynamism among forager/huntergatherer societies.

This assumption has affected widely accepted views of linguistic prehistory as well. Dixon proposed the "punctuated equilibrium" view that most of prehistory is dominated by an equilibrium state in which massive diffusion is the prime mechanism of change, wiping out evidence of families formed by bursts of divergence called "punctuations." His hypothesis relegates the role of the comparative method in investigating divergence to relatively recent "punctuations." Nettle (1999) took Dixon's model and married it to the "Neolithic Revolution" model, attributing the long equilibria primarily to foragers and the "punctuations" to the expansion of farmer and herder languages (see McConvell 2001 for a critique). In recent years, however, the pendulum seems to have swung back, and both "punctuated equilibrium" and the attribution of cultural stasis and immobilism to foragers are now less in vogue (Bellwood 2013).

The portrayal of the agricultural revolution as the key transition in a unidirectional and unilineal evolutionary scheme has been challenged, e.g., by Layton et al. (1991), who see possibilities of "evolution" in the opposite direction from agriculture or herding to foraging, and emphasize the prevalence of mixed agriculture-foraging economies known as low-level food production. Certainly this "devolution" from food production to foraging has occurred, possibly even on a large scale (see Chapter 21 by Hill on the Great Basin United States and Chapter 6 by Güldemann on southern Africa). The common use of

Hunter-Gatherer Anthropology and Language

11

the term "devolution" in relation to this phenomenon underlines the dominance of the belief in unidirectional evolution embedded in the discourse about these matters.

1.4 Timelines for Foragers and Forager Languages

While debate still rages over the factors leading to the invention of food production, most authors allow that its timing, at the end of the Pleistocene and beginning of the Holocene eras, was no accident. After millennia in the grip of the most recent ice age, the world became a wetter and warmer place. Plants and animals became more abundant. More diverse species were found in a much greater variety of places. This huge transformation led to the invention of agriculture and animal husbandry in Eurasia in the period 13,000 to 7,000 years ago, but it also had very marked effects on forager populations themselves.

First, foragers were able to occupy regions which would have been uninhabitable, or virtually so, in the Pleistocene, so they moved into a wider variety of foraging environments and utilized a wider variety of species (Richerson et al. 2001; Kenett and Winterhalder 2006: 3). In some cases, this would for all intents and purposes be the "initial colonization" of some areas or the full colonization of formerly sparsely populated areas. Those involved in these migrations would probably have been some of the groups who were on the edge of such "fallow" areas and by virtue of having spent some time foraging in those areas would have been preadapted to them. The most likely to expand in a "wave of advance" across these regions would have been those who had developed technologies, and forms of social organizations to cope with the new challenges. It must be remembered that the early Holocene had a fluctuating and volatile climate throughout the world, and in particular the marginal environments being reoccupied were highly unpredictable in climate and therefore resource availability. Sea level rise in the early Holocene would have caused movement inland and probably conflict. Rather than all the groups on these new frontiers expanding simultaneously and equally successfully, certain groups are likely to have had specific proclivities and advantages that propelled them over large areas to form widespread subgroups and families.

There is a second historical development that would have affected a world exclusively populated by foragers. In an attempt to better explain the adoption of agriculture, Flannery (1969) proposed the notion of a "broad spectrum revolution" before the onset of the Neolithic. His proposal was based on robust archaeological indications that pre-Neolithic foragers in a number of areas changed their type of foraging. The major result was a reliance on a new subsistence base that came from a wider food spectrum more equilibrated between high- and low-value resources. Such a shift in strategy not only

12 Tom Güldemann, Patrick McConvell, and Richard A. Rhodes

allowed a forager group to make more effective use of an area it had already settled, but also facilitated their expansion into regions with fewer high-value resources. Groups with such strategies would have outcompeted groups with a more "conservative" foraging mode. In other words, the expansion of forager groups at the expense of others in the early Holocene is highly likely to have occurred. Again, such population expansions would have gone hand in hand with the expansion of languages.

These observations cast doubt at one possible reading of the farming/language dispersal hypothesis and similar approaches to prehistory. Although scholars such as Renfrew, Bellwood, and others may not necessarily deny the possibility of widespread language spread on the part of foragers, they still bracket forager language shift, calling into question the agency of forager societies – a point that chapters in this volume directly contradict (Hill, Chapter 21; McConvell, Chapter 16; and Rhodes, Chapter 20).

[forager] language shift was surely always localized under Neolithic social conditions. Bellwood (2011: 375)

Their huge emphasis on farmers being the bearers of widespread new language families invites the conclusion that the geographical scale of forager language spreads and possible resulting phylogenetic diversification are viewed as qualitatively different from those of food producers. According to Renfrew the abstraction from individual historical cases and the generalization of an apparent correlation to population types is at the very heart of the hypothesis:

The approach [viz. the farming/language dispersals hypothesis] has the undoubted merit, whatever the final outcome of the discussion and debates currently underway, of lifting the discussion out of and beyond the specifics of each individual case of a particular language family, and looking rather at the more general processes involved in the formation of language families, and at the correlates between the linguistic and the social or historical processes involved. (Renfrew 2003: 3)

Before embarking on the farming/language dispersals hypothesis Renfrew worked with what he called the "demography/subsistence model" in which he assumed that:

a new group of persons (speaking a different language) will not find it easy to become established within the territory in question unless it has available to it something which will allow it to compete successfully, in terms of subsistence procurement, with the existing population. (Renfrew 1989b: 118)

It is worth noting that this view does not, in fact, follow from any specific subsistence type. It is totally compatible with the foregoing observations that foragers with different strategies could compete with one another for territory and the more successful spread their languages in a way similar to that Renfrew envisaged for farmers. It has even been proposed that purely material/economic