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Making Friends in the Rainforest: "Negrito" Adaptation to Risk and Uncertainty

Lye Tuck-Po School of Social Sciences, Universiti Sains Malaysia, Penang, Malaysia, tplye@yahoo.com

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Abstract

The so-called negritos adapt not just to a tropical forest environment but also to an environment characterized by perturbations and fluctuations. As with other hunter-gatherers in the region and, indeed, throughout the world, they use both social and ecological methods to enhance their chances of survival in this changing environment: socially, they have developed networks of trading and marriage partners; ecologically, they maintain patches of key resources that are available for future harvesting. As evidenced in the case of the Batek (Orang Asli), patterns of forest structure and composition are sometimes direct outcomes of intentional resource concentration and enrichment strategies.

While little of the above is controversial anthropologically, what has drawn some debate is the nature of the relationship with partner societies. Conventional wisdom posits relations of inequality between foragers and "others": foragers and farmers are often construed as hierarchical dyads where foragers supply products or labor to farmers in exchange for agricultural harvests and other trade goods. This kind of adaptation appears to be one of divergent specialization. However, there are cases, such as in the relationship between Batek and Semaq Beri, where both societies follow a roughly similar mode of adaptation, and specialization has not materialized. In sum, while not denying that hierarchy and inequality exist, I suggest that they have to be contextualized within a larger strand of relationships that includes both hierarchy and egality. Further, such relationships are part of the general portfolio of risk reduction strategies, following which access to widely scattered environmental resources, and passage from one location to another, is enhanced not by competing with and displacing neighbors but by maintaining a flexible regime of friendly exchange partners.

Keywords

Intergroup Relations, Foragers And Farmers, Adaptation, Exchange, Risk, Semang, Negritos, Orang Asli

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LYE TUCK-PO¹*

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KEY WORDS: INTERGROUP RELATIONS, FORAGERS AND FARMERS, ADAPTATION, EXCHANGE, RISK, SEMANG, NEGRITOS, ORANG ASLI.

¹School of Social Sciences, Universiti Sains Malaysia, Penang, Malaysia.

^{*}Correspondence to: Lye Tuck-Po, School of Social Sciences, Universiti Sains Malaysia, 11180 USM, Pulau Pinang, Malaysia. E-mail: tplye@yahoo.com.

In telling the story of the so-called negritos, the first problem that comes to mind concerns definition. As the articles in this special issue attest, understanding the origins and specifying the meanings of *negrito* have generated much productive research across disciplines. With advances in understanding, however, we move further and further away from the proposition that "negritos" are a unitary population, even if individual groups might retain archaic traits of early anatomically modern human colonists (Bulbeck this issue). Studies of biological and environmental adaptations allow us to place negritos in their environments (Bernstein and Dominy this issue; Bulbeck this issue; Venkataraman et al. this issue) while developing more fine-grained understandings of convergent evolution and human diversity (Bulbeck this issue; Migliano this issue). As the picture of diversity becomes clearer, it becomes harder to specify what we mean by *negrito* or *negrito populations*—in specifying the science, we lose the definition. Perhaps it is time to put this hoary term to rest (Dentan 1981).¹

The second problem for an anthropologist is relating the various ancestral populations covered in this volume to contemporary social groups. The other disciplines represented here, particularly genetics, may allow us to infer population histories back to tens of millennia ago, but such findings do not tell us much about the *process* of history, including the history of biological adaptations and the migratory and settlement choices that different groups have made over time. Historical linguistics and archaeology bridge the gap somewhat, not least by compressing the time depth of concern to 3,000–5,000 years! For this period of time, we have a clear narrative hook: tracing the spread of Austroasiatic and Austronesian languages, its links to the expansion of agriculture, and the ethnogenesis of negrito societies (Bellwood 2007). But here still we have a problem, given that material traces and language shifts cannot always be linked to the recorded history of contemporary groups.

The final problem, then, is one of methodology. The traditional anthropological response — other than to work closely with colleagues in these neighboring disciplines—is to investigate ethnohistories for confirmation of external findings. But this is unlikely to yield clear answers for negrito societies, as they are all currently or formerly mobile hunter-gatherers² who do not customarily retain cultural memories beyond a few generations.³ One can also excavate mythologies, beliefs, and practices for explicit clues to the broader past (Biesele 1993; Lye 1994; Blust this issue; Turner this issue), but given the time depths involved, the results are suggestive at best. The methodological difficulties outlined here call for caution in building analogies and comparisons from the present to the past, and vice versa. For example, the physical and social environments of early hunter-gatherers were different (lower population density, different botanical and zoological species profiles, and different organizational requirements in food procurement). Differences in climate, environment, and population distributions would also have exerted different adaptational pressures on ancestral groups (Bulbeck 2011; Bernstein and Dominy this issue; Higham this issue). But as archaeologists are well aware, material remains do not capture many aspects of life and sometimes may be too

fragmentary for meaningful reconstructions. Ethnographies of today's behavioral patterns can usefully generate testable models for broader generalizations.

In that spirit, then, this article reexamines some ethnographic contexts of negrito adaptation to the rainforest, with emphasis on the Semang of Peninsular Malaysia, broadly, and the Batek of Pahang in particular. Additional examples are drawn from literature on the Agta of the Philippines (Reid this issue) and nonnegrito hunter-gatherers in the region, including the Penan of Borneo.⁴ Specifically, I consider the social resources necessary to adapt to the forest environment. These forests are not necessarily stable environments, with or without human intervention. Perturbations and fluctuations can range widely and include long-term climatic shifts and oscillations, medium-term changes associated with El Niño-Southern Oscillation events, seasonal variability, and minor everyday disturbances. Broader political dynamics, such as wars (de Jong et al. 2007) and slave raiding in the historical period (Endicott 1983) that dispersed and displaced populations, as well as contemporary state policies of resettlement and assimilation (Benjamin and Chou 2002; Nicholas 2000; Scott 2009), also, of course, have implications for resource availability (Dounias et al. 2007; Eder 1988a; Griffin 1996a). Local variations in the food supply are linked to state-sponsored projects of land and natural resource exploitation (Hall et al. 2011; Lye et al. 2003). In Peninsular Malaysia, these have led to, among other effects, watershed mismanagement, pollution, landscape and habitat fragmentation, wildlife population declines, and the appropriation of indigenous territories for conversion to monocrop plantations, road and dam building, and township expansion (Lye 2004: 6-9).⁵ The damage is particularly felt in the lowlands, the traditional habitat of Semang peoples. Those who live within protected areas (subgroups of Batek, Ceq Wong, and Jahai) are in more favorable circumstances, while others may have lost most or all of their community forest reserves (Razha 1995). As traditional foods (especially game) become scarcer, communities may be forced into unsustainable patterns of resource use (Robinson and Bennett 2000).

Given these pressures and threats to their survival, it is perhaps surprising that negrito groups should persist into the present-day as distinct societies (Lye 1997). One perspective seems to be that they are primitive relicts who somehow "survived" as a result of fortuitous location or some happy combination of isolation and a permissive environment. The implication is that negritos are just holding on to their final refuges and that the hunting-and-gathering way of life is doomed to extinction. But as others have pointed out, one reason that negrito groups cannot be "a direct and totally static window on the Pleistocene past" is their adaptability—they have persisted by "adapting to changing circumstances and pressures" (Bellwood 2007: 132; see also Headland and Reid 1989). Without committing to any position on the cultural identity of early hunter-gatherers, the ethnographies show today's hunter-gatherers to be extremely resilient; this could almost be the new orthodoxy (see, e.g., Chan 2007; Griffin 1996b; Kent 1996; Puri 2005; Widlok 1999). The evidence suggests that the classical negrito adaptation epitomized what a resilient social-ecological system might look like, one that has strong capacity

to, in Folke's words, "cope with, adapt to, and shape change" within a general recognition that "the future is unpredictable and surprise is likely" (2006: 254).

Here I argue that negrito cultural resilience has much to do with how they "play" with the broader world, alternately moving toward and away from it. There are two strategies of adaptation: mobility, and exchange relationships with agricultural populations. While mobility—the skill to disperse widely over land-extensive territories—allows them to move away from threats and resist encapsulation, their maintenance of ties with surrounding agricultural populations may lead to greater dependency and exploitation. It is in the tension between these opposing dynamics that, paradoxically, lies the key to their capacity for resilience.

Mobility and Adaptation

As with other classical hunter-gatherers, negrito ecological adaptation is characterized by high residential mobility. Among the better-monitored groups in the Peninsula,⁶ the Batek of Pahang are largely still maintaining an alternation between periods of mobility and sedentariness. There are also Maniq groups in Isthmian Thailand that apparently are either fully or partially mobile, as well as Jahai and Kensiw subgroups that regularly travel across the border to join their relatives in Thailand (Porath 2010: 269);⁷ not much is known about the mobility patterns of these groups. Overall, detailed mobility data (e.g., those found in Bahuchet 1992; Hewlett et al. 1982) are rare these days, possibly because most recent ethnography is of sedentarized or resettled, thus accessible, groups (e.g., Dallos 2011; Gomes 2007). The Batek data provide one variation and may be useful for broader generalizations (see Lye 1997: 224–257 for more details).

Among Batek in 1995 and 1996, the average population per camp group was 36.2, distributed across two settlements and some eight different camps.⁸ The number of settlements has increased since then, but their essential character has not changed. Populations in camps and settlements still fluctuate sharply, and settlements continue to be like base camps in which to rest or store belongings before moving on to other pursuits (Lye 1997: 390-428). Traditionally, the pattern was for each group to travel within the bounds of a tributary system over the course of several months, averaging two weeks in a location. Although the camps were always within walking distance of Malay villages, distances varied up to 18 km, or anywhere up to six hours' walk, depending on how deep into its river system a group was moving. The distance between successive camps was from 3 to 6 km, or one to two hours' walk. After three or four months, roughly corresponding to the end of a season, camp groups would disband, and splinter groups would move to other river valleys, joining and forming groups anew. Movement followed the course of pathways old and new and, as with Western Penan of Sarawak (Brosius 1986), revealed encyclopedic knowledge of trails, rivers, and campsites and the locations of campsites relative to each other both in space and time (Lye 1997, 2008). That is, the Batek not only knew where old campsites were located and where prospective sites could be found, but also remembered the chronology of past campsites (or settlement histories). They have a strongly developed sense of place and identify closely with the forest (Lye 2004).

Various explanations for hunter-gatherer mobility have been offered, for example, that it is an attribute of the interplay between social-political concerns and ecological constraints. There is no need to review the classical debates here (for which, see Kelly 1995). For Southeast Asia, mobility is often linked to rainforest characteristics. Given that the rainforest has a great diversity of resources but few numbers of any species in a given location, the most effective subsistence strategy is broad-spectrum foraging. This in turn requires hunter-gatherers to move widely over a large area, traveling to resources rather than to bring them back to a central place (Hutterer 1988). For Batek, there were clear ecological reasons for some of the group movements, such as the search for widely scattered forest products and fruits, but for individuals the most commonly given reason for leaving one camp group and joining another was to reunite with friends and relatives. In line with the overall opportunism (see below), once individuals joined a group, they would participate in whatever activity was most common there. For example, people who spent most of their time collecting forest products would switch to making crafts for national park tourists when they joined their relatives in tourism camps. When they moved on, they would switch activities again.

At network level, mobility enabled the Batek to monitor environmental and social conditions and was nearly inextricable from the need for communication and collaboration. The Batek could certainly be called "information junkies" who are avidly interested to hear about conditions elsewhere in the forest and the world beyond. Important news, including news of threats, is often shared with people elsewhere by sending messengers. Collaboration would become important when people are choosing where to move to next and need to keep others informed about their plans (see below), when people in different groups decide to synchronize movements and converge at a central place (usually to do with holding shamanistic singing sessions), or when relatives signaled ahead that they intended to join a group and requested that group to wait for them (see Lye 1997: 258–297 for a demonstration of this). Collaboration would have been critical in earlier times, during the period of slave raiding (Endicott 1983) and later Malay expansion into the interior (Endicott 1997), and there was a constant fear of being ambushed by raiders or land thieves. People did not just run from threats but would have warned related groups to keep their distance as well. At any rate, mobility is adaptive in that it affords a certain readiness to alter directions and strategies, maintain knowledge of large territories, and enhance awareness of uncertainty and change. It also protects cultural autonomy by affording freedom from external control (see below). Furthermore, because it so clearly marks the people out as different from neighboring farmers, it is an identity symbol that enhances group identity formation and long-term commitment to the way of life it affords (Benjamin 2002).

Adapting to Stress and Uncertainty

Mobility affords hunter-gatherers a degree of freedom not available to agricultural peoples and may be one reason for its persistence as an ideology (Scott 2009). We can see the value of mobility in how hunter-gatherer groups respond to stress and uncertainty. Numerous studies have documented how these groups behave under stressful conditions (e.g., De Garine and Harrison 1988). They have a tendency to be "opportunistic," moving-often rapidly-into different social and economic niches when circumstances change. This is a common finding in the literature on Southeast Asian hunter-gatherers, including negrito groups (Benjamin 1973: viii; Brosius 1991: 132; Dallos 2011; Endicott and Bellwood 1991; Rambo 1979a). But, as Hutterer (1983: 176) points out, hunter-gatherers are not likely to accept new subsistence techniques unless "they are seen as desirable and advantageous in a given ecological situation." To put this in another way, opportunism does not mean they will simply abandon their way of life at a time of stress, but they may try new ways of doing things, to evaluate whether it improves their overall socialecological situation. It is part of a well-developed social maintenance strategy. In Barker's words: "It is at least as likely that in very many instances foragers were attempting to *preserve* their way of life at a time of stress, rather than deliberately seeking to transform it" (2008: 15; emphasis in original).

Surveying the literature on responses to climatic stress, Raj Puri (following Ross Couper-Johnston) shows how, as drought becomes more severe in arid environments and food staples become scarce, foragers will typically deploy a set of strategies that escalates in effort as conditions worsen:

First, foragers broaden their diet breadth to include secondary and tertiary foods, such as bitter roots and tubers that need to be processed before eating, fungi, fruit normally eaten by animals, edible leaf buds, shoots and even difficult-to-digest leaves. Secondly, making use of their mobility, they will increase their search ranges, move camp and return to areas where they know of water and food resources. As vegetable foods begin to disappear, animal foods may also begin to increase in their diet especially smaller creatures like fish, reptiles, snakes, frogs, turtles, rats, mice and insects. . . . Thirdly, foragers will move beyond the affected area, assuming the consequences of climatic variation are localized. Such a move is often predicated on preestablished social relationships with neighboring groups, who may be distant kin or historical allies. (2007: 54)

The broad outline seems to be right, but the decision-making process may be more muddled than this summary suggests. In any foraging group, there is always room for error and miscalculation, and multiple strategies can be adapted, adopted, and/or abandoned at the same time. (Choices may be more limited in arid environments.) For example, as the fruit season (their favorite time of the year) approaches, Batek subgroups will begin to weigh residential options and decide which river valley

they will disperse to (Lye 2004: 134–135). The fruit trees are not evenly distributed around the forest, with some patches being particularly rich and others not; yields are uneven from year to year; and species distribution can be quite localized (Endicott 1995: 249; Lye 2004: 133). Thus, whether the forests are of good quality or not, there is always an inbuilt anxiety about what to expect from the upcoming season (similar to the uncertainties faced by farmers and fruit growers). Unlike those in Kelantan (Endicott 1984, 1995), the Batek in Pahang do not congregate in large numbers for the fruits; the Kelantan people were largely harvesting fruits from orchards abandoned by Malay farmers in 1949.⁹ Rather, they have a certain agreement to disperse groups widely, to avoid crowding and competition. There have been cases where a subgroup miscalculated the prospects of the upcoming season, chose not to travel to the fruits, and missed out on a good harvest. Such miscalculations are surely not anomalies. They are part of the risks inherent in muddling through.

At times of stress, the benefits of moving to fruit-harvesting areas (where they can live full-time or nearly full-time off hunting-and-gathering) must be weighed against the economic viability of trade and cash-earning sidelines like tourism. Sometimes the cultural imperative wins out; other times, the desire to make money. To use Woodburn's (1980, 1982) terms, there is a trade-off between the "immediate returns" of eating fruits and the "delayed returns" of working for money. Still, what comes through is the range of options available, and their flexibility in being able to choose different livelihood options under both benign and stressful conditions.

Another way that negrito populations may have enhanced their adaptive capacity is to manipulate their environments, even to the extent of managing resource use, so that they are not dependent solely on "wild" foods. Batek replant tuber heads, continue to monitor the life of yam plants they have tended, and may return to harvest new tubers when the plants have matured, a strategy that is linguistically coded and conventional practice today (Lye 2004: 130-131). The Agta of northeastern Luzon do so as well (Griffin 1984: 116). On occasion Batek also have planted fruit trees on an opportunistic basis (Lye 2004: 123-144; see also Hutterer 1983: 176). There is other evidence of hunter-gatherer resource management in the literature, such as Western Penan management of the sago palm (Eugeissona utilis) for sustained-yield purposes (Brosius 1991:143–144) and other groups' overall care in not damaging plants in the course of a harvest (on Lanoh, see Dallos 2011: 42; on Semaq Beri, see Kuchikura 1987: 51). The point is that patterns of forest structure and composition are sometimes direct outcomes of intentional resource concentration and enrichment strategies [Hutterer 1983: 173; Rambo 1979b: 62; Schebesta 1973 (1928): 83], which in turn bring hunter-gatherers closer to self-sufficiency.

Intergroup Alliances

As often noted, extrasocietal trading and marriage partners have long been important components of negrito social worlds. But therein lies a contradiction. Where their mobility enables them to move to resources and avoid threats and stress, their ties to agricultural neighbors take them in the opposite direction, which could lead to increased dependence and exploitation.

Why negritos (and hunter-gatherers in general) should be found so close to farmers even in earlier times, when forestland was more abundant, has been much debated and has generated the controversial proposition that it is because tropical rainforests are poor in carbohydrates: "Wild starch foods, and especially wild yams, may be too scarce in such biomes to sustain independent hunter-gatherers without recourse to cultivated foods" (Headland 1987: 464). Respondents have largely refuted this: among other reasons, the "wild yam hypothesis" does not take into account the heterogeneity and diversity of the rainforests, or hunter-gatherer agency in managing their so-called wild resources (Bahuchet 1992; Brosius 1991; Colinvaux and Bush 1991; Endicott and Bellwood 1991). Ethnographers and archaeologists have commonly described forager-farmer relationships as "symbiotic" (Endicott 1984; Headland and Reid 1989; Hutterer 1988). The symbiotic model assumes divergent specialization, with foragers and farmers inhabiting complementary niches. At its simplest, the model describes proteins from the forest flowing out and carbohydrate staples from the fields flowing back in. Thus, each provides what the other lacks, and both benefit (Spielmann and Eder 1994).

Perhaps the best-known example comes from Jean Peterson's work (1978a, 1978b, 1981), also discussed in Benjamin (this issue). She suggested that Agta negritos might have exploited the "ecotones" on the edges of farmers' fields, where game populations were more abundant. As farmers cleared more forest for their fields, they expanded the hunting areas of the Agta. There is no doubt that agriculture can increase the food supply for animals, particularly in highly stressed environments. In my survey of Penan communities in Sarawak, for example, I found one community that preferred to hunt in oil palm plantations, for that is where the pigs converged. However, the majority of the Penan, including those who hunted near plantations, reported a sharp decline in game populations as a result of forest clearance. Similarly, the Batek report both increased density of wildlife near oil palm plantations and habitat disruption (changing territorial patterns) as a result of plantation expansion. Whatever the reasons (related to habitat fragmentation, animal feeding strategies and migratory patterns, and the presence of outside hunters), there is a great deal of local ecological variation, and Peterson's findings have not been confirmed as a general pattern (Griffin 1984: 111-112). I have doubts on other grounds, such as why farmers-who are often skilled trappers and hunters themselves-would not simply pick off the animals that are feeding at the ecotones of their fields rather than engage in elaborate exchanges with oft-unreliable peripatetic hunters (Griffin 1984: 111).¹⁰ In other words, the carbohydrates-for-proteins model does not explain why symbiosis should have developed between negritos and their farming neighbors.

At any rate, the use of an ecological concept, "symbiosis," to model the relationship between foragers and farmers is problematic and does not give enough credence to the historical agency of trading partners. Whether the metaphor (with its implication of coevolution) is an appropriate descriptor or not, the relationship certainly was open to abuse by the farmers. One interpretation, for example, is that the *ibay* (special friend) relationship between Agta and their Paranan partners tends to increase forager indebtedness and dependency (Eder 1988b; see also Griffin 1996a), ultimately bringing their bodies and resources "under wider orbits of political control" (Spielmann and Eder 1994: 310).

The debate is one-sided and has barely considered the possibility that farmers might have *needed* hunters near them (a point also raised in Dallos 2011: 71–72). As the prior inhabitants, negrito groups knew the landscape in a way that farmers did not and still do not (Lye 2004: 104). Without romanticizing, I am suggesting that these forager–farmer relationships may have arisen out of mutual *convenience*, with farmers providing cultivated foods in exchange for help and materials from the forest, rather than because foragers' navigational and geographical knowledge would have been invaluable to newly arrived settlers. Indeed, Schebesta [1973 (1928): 41] suggested something similar: "They [the Malays] entered the country in search of booty and wealth. In the forest they were more helpless than children. They therefore attached themselves to the Semang, lived in their encampments, cleared the forest with their help to sow crops, and married their daughters."

Viewing the relationship from the perspective of foragers, one can take the approach of Wiessner (1982), working among the San in the Kalahari, that foragers are investing in the future when they engage in such relationships. It is a form of risk distribution. By maintaining extrasocietal relationships, foragers build "safety nets" that they can use at times of extreme stress, when internal coping strategies fail and they must turn to their agricultural partners for help. I have not observed this among the Batek—who have not been under conditions of extreme stress when I have known them—but it is what the Penan Belangan of Sarawak, who no longer have access to community forests following their resettlement for the Bakun Dam—as well as Agta (Bion Griffin, personal communication), would do.

Perhaps in the interest of building more precise models, ethnographers have often limited their focus to dyadic, hierarchical relationships such as the ones described above. My argument is that in earlier times, these relationships might have been more symmetrical (see also Dallos 2011: 92–97), and just part of many different ties that mobile groups maintained throughout their range. Such relationships can range from interpersonal to group level. Today, the Batek are genuinely curious about outsiders; with their local intimates, there may be drop-in visits and a two-way stream of gossip exchange (this describes a general pattern and does not apply to all individuals). As is customary today whether in the Peninsula or elsewhere, such visitations afford opportunities to exchange economic, political, and social information (Bahuchet 1992: 233–234; Griffin 1984: 118; Lye 1997:

239–245; Turnbull 1965; Widlok 1999). As well as for relieving boredom at home, and for foraging from farmers' stores, visits affirm and maintain social ties. [They also, of course, can *further* ties: Brosius (1992) and I (Lye 1997), for example, have both described young men traveling far on courting missions.]

Whether these entanglements are ultimately positive or negative for negrito groups, then, is by no means certain. Exploitative relationships, such as the Agta's with Paranan farmers, certainly do happen. But there are advantages to being mobile hunter-gatherers-the freedom to "vote with their feet" being a key one (Lee and Daly 1999: 4). For example, while the Batek do feel exploited by Malay traders and historically have kept a wary distance from Malay society in general, they often have multiple traders that they can deal with, even today. When they felt cheated by one rattan trader, they simply went off with another that gave better terms. Penan of Sarawak have done the same thing: in their former nomadic days, Penan hunter-collectors could choose their patrons from different longhouse communities. They would sell forest products and their craftwork (fine baskets and mats) to the patrons, who in turn competed among themselves to monopolize the trade. Brosius (1987: 107, 119) argues that the Penan were in something of a seller's market and that it was the Penan's rather than the longhouse patrons' choice to maintain or dissolve a relationship (see also Sellato 1994: 59). Sometimes the threat to move away may be sufficient to change the terms of a relationship. In a slightly different context, Porath notes that "Meniq of Yala [Kensiw negritos of Thailand] would use the threat of migration to Malaysia as a bargaining chip with the Thai authorities who are pressing on them to improve their condition" (Porath 2010: 276).

The point is that mobile hunter-gatherers are able to walk away from relationships that do not benefit them. They can move away entirely and disappear from view, thus ending oppressive relationships. Through provision of credit, patrons might strengthen their grip (Sellato 1994: 88–89, 165–166). Penan had their ways of dealing with indebtedness: they "always had the option of dissolving the relationship simply by moving to another watershed, an option no longer really available to them once settled" (Brosius 1987: 106). The importance of mobility as an escape strategy, which limits the degree of exploitation by patrons, has been noted before (Couillard 1984: 98). When Penan were still nomadic, "maintaining contact with them was something of a specialized enterprise.... Finding Penan was not something that just anybody could do" (Brosius 1987: 110). Even in sedentary conditions, Penan could repudiate debts or hold off paying as long as possible. Without going into details, this is also a familiar situation with the Batek and the Agta (Bion Griffin, personal communication).

I suggest, then, that negritos have a certain interest in maintaining as many relationships with as many external groups as they can, as part of their overall self-preservation strategies. When conditions became too oppressive, they could use their mobility and geographical knowledge to escape. Negrito groups tend to be small marginal populations living on the edges of far more numerous and politically powerful agriculture-based societies. This encapsulation limits what the foragers can do. Maintaining extensive social networks might be a way for them to "enter" other people's territories when such problems as drought, floods, and food scarcity beset their own and thus might be part of an overall strategy of preparedness.

A final problem with our understanding of these relationships is that they are of fairly recent vintage (a few centuries at most). We thus have little to say about the presence around negritos of not just their stereotypical dominant Other (usually but not exclusively from settler groups) but also other farming or mixed farming-foraging indigenous groups.¹¹ The latter can be just as significant to social reproduction. The two examples that follow, one historical and one contemporary, help to illustrate the point.

In a fascinating account from the 1950s, R. O. D. Noone Intergroup Trade. (1954) described how buloh seworr (Bambusa Wrayi), the rare long-internode bamboos prized for making the inner tubes of blowpipes, were traded and transported among groups of Orang Asli in northern Peninsular Malaysia. This bamboo has a restricted distribution, growing in scattered clumps at high altitudes within the territories of certain Temiar and Semang (Kintak Bong and Jahai) groups in the main range: "Access was the subject of control by the communities in whose territories the bamboo is located" (Noone 1954: 4).12 These communities thus monopolized supply for other groups (Temiar, Semai, and Semang) to the north and south of them: "This state of affairs has resulted in a trade in Buloh Seworr spreading in all directions and covering a very wide area" (Noone 1954: 4). As Noone points out, random mentions in earlier literature (Evans 1914, 1915, 1937; Skeat and Blagden 1906) suggested that an active trade, whereby groups that did not have the bamboos or blowpipes bought them from other groups that did, had long existed.

The bamboos and/or finished blowpipes traveled from each community to their buyers along well-established trade routes. Recipient communities fell into two groups: neighbors that could buy directly at source, and people from farther afield, who may or may not have been known to the sellers and either traveled in or conveyed their orders through intervening communities. In the latter case, the trade routes would extend across several ethnic territories, thus necessitating a kind of collective collaboration to make exchanges possible. For example:

If the Kintak Bong or Kensieu want a blowpipe they will usually place the order with their neighbors the Kintak Nakil near Kroh, who will pass it on to the Lanoh near Grik, who in turn are in touch with the Temiar [suppliers].... However, by the time this order has percolated through to the makers, and the blowpipe is made and passed up the chain, some months may have elapsed. (Noone 1954: 13)¹³

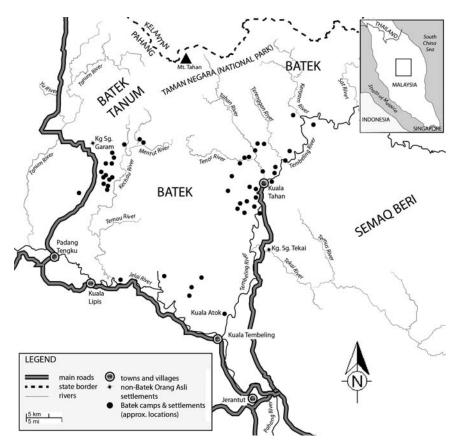
In some areas, there were shorter routes of transmission, with more direct contact between buyers and sellers. Or sellers would deliver the goods themselves: Although when he sets off . . . the vendor may have only a very hazy idea of the geography of north-west Pahang [the point of delivery], he does know the name of the man he is seeking and the name of the river on which he lives. This is enough to enable him to find his way, since he is passed from group to group until he eventually reaches his destination. (Noone 1954: 17)

These transit ways were already changing by the time Noone collected his data, due to the exigencies of the Emergency:¹⁴ "Some of [the routes] are now infrequently used because of the fear of meeting armed Communist terrorists whilst on the way, but the majority of the shorter ones are still in use" (1954: 13). However, long-distance trade persisted at least as late as 1965, when Benjamin (1987: 136–137) observed Temiar from the Plus Valley in Perak delivering orders of bamboos and blowpipes to another Temiar village in Hulu Telom, Pahang.¹⁵

Noone's account shows clearly how groups depended on each other, both for material exchange and for territorial access. Much trust was involved. In longdistance trade, sellers had to trust that people in intervening communities would pass on orders, goods, and payment. Anyone moving with products had to trust that they could do so freely. Trust would not be possible without prior familiarity, which in turn testifies to the depth of ties between communities. Noone's survey does not give us enough ethnographic minutiae to work out the finer details. It does offer a rare glimpse into the ways that people and products moved around the landscape while there was still extensive forest cover and road networks were fragmentary, and some of the contexts in which relationships developed between Semang groups (Kensiw, Kentaq, Lanoh, and Jahai) and their neighbors.

Given the rarity of the bamboo, one might expect resource-owning communities to have competed for customers, but there is no evidence of this. Possibly this was because trade volumes were low, due to the low population density in the interior. Further, there apparently was no demand for this bamboo species from non-Orang Asli, giving little incentive to increase production. Relatedly, there were no exclusive partnerships between buyers and sellers: anyone could source the bamboo from any of the communities. All this was very different from, for example, the traditional patron-client relationships that developed between longhouse communities and the Western Penan (Brosius 1987: 106–117). As mentioned earlier, longhouse traders sought to monopolize the trade in forest products. The key difference may lie in the nature of the trade good. Whereas the blowpipe bamboo was a "fixed," albeit "dispersed" (Bicchieri, in Bahuchet 1992: 208-209) resource with known locations, much like a cultivated plant, other forest products are difficult to find. In the latter case, control of the collectors and their specialist knowledge of the forest terrain would ensure supply. As for the movement of the bamboos, one might expect communities living along the trade routes to institute transit charges, or to buy for resale at a higher price; if they did, their demands were not onerous enough to provoke complaints and criticisms.¹⁶

It is perhaps pointless to speculate further on what *could have* developed. Noone's account reveals that inter-Aslian trade was qualitatively different from trade



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Figure 1. The Batek territory in Pahang, relative to those of the Batek Tanum and Semaq Beri.

with external groups, especially Malays and Chinese. For example, there is little evidence of dominance and subordination in transactions between Temiar farmers and Semang hunters. Lanoh ethnohistory (Dallos 2011: 36) indicates interethnic suspicion of other Semang foragers in the past (see below on Batek perceptions of the Batek Tanum), but this is not evident in Noone's account of trade relations. Essentially, trade was based on cooperative rather than competitive intergroup relationships. This then facilitated developing other kinds of ties and interactions, such as courtship and marriage and multidirectional sharing of knowledge (genetic and cultural-linguistic flows).¹⁷ While shipping or waiting for delivery of products, for example, travelers could break their journeys at communities along the way (Noone 1954: 15–16), thus enabling a great deal of social interaction. As discussed above, such encounters—usually glossed as "visits"—would have afforded opportunities for alliance building and increasing awareness of common threats as well. A lot of discussion has turned on the key role of trade in Peninsula

and regional history (Andaya 2008; Benjamin 2002; Dallos 2011; Dunn 1975). The conflict-and-competition model is implicit in many discussions. Dallos (2011), for example, suggests that trade not only shaped the social organization of the Lanoh but also fostered fierce interindividual competitiveness. Noone's account compels us to think of alternate frames of reference. Sometimes, negritos neither win nor lose out in the flow of trade.

Batek, Batek Tanum, and Semaq Beri. To further illustrate the egalitarian relations that sometimes obtain between groups, let us turn now to the specific ties between Batek and their neighbors the Semaq Beri and Batek Tanum. The Batek have close ties with these groups, but the latter do not have ties with each other. As Figure 1 indicates, the southern part of the Batek's territory in Pahang is roughly between those of the Semaq Beri and Batek Tanum, with the Tembeling, Kechau, and Tanum Rivers being the territorial markers.

The Batek Tanum (who are also Northern Aslian–speaking Semang) until recently were mobile hunter-gatherers, and only fragmentary information is available on them (Endicott 1974: 11; Evans 1937: 314; Lye 1999; Wells 1925: 99–100, 128–132). Their total population in 1995, according to the Department of Orang Asli Affairs (now Department of Orang Asli Development) in Kuala Lipis, was 175. Their territorial range is missing from Benjamin's map (this issue), and their language is not included in Burenhult et al.'s (2011) reclassifications (see also Dunn et al. this issue). They were misnamed "Mintil" in Benjamin's (1976) linguistic survey. They consider *Mintil* a term of abuse and prefer to be known as Batek Tanum (people of the Tanum River). If the Batek, who outnumber them almost 3 to 1, are usually pictured as living on the edges of Malay society, the Batek Tanum live on the edges of Batek society.

The people seem to have a strong sense of identity, as do the Batek, and consider themselves to be distinct. Oral history from some of the Batek suggests the first "contemporary" encounter to be about 60–70 years ago, when Batek subgroups spread out from the Relai River in Kelantan (see Figure 2) and encountered Batek Tanum people on the old migration routes to Pahang. It is not unlikely that this was part of the same population movements triggered by the murder in about 1920 of a whole group of Batek by Malays, which led the Aring Batek to disperse to the Relai and Tahan Rivers (Endicott 1997: 42). Despite what must have been strong mutual suspicion, going by the evidence today, some Batek said that it was the Tanum people who introduced them to the Kechau River valleys [where the Batek Tanum settlement of Marɛm (Kampong Sungai Garam) is located]. Others, however, denied this and asserted prior history in that area.¹⁸

Batek knowledge of Batek Tanum culture varies. Some individuals almost never move with the Batek Tanum and know them mostly from second-hand information, often highly flavored. Quite a few others (about 60 in my most recent count) have Batek Tanum ancestors and relatives and therefore more intimate knowledge of the latter's ways. Young Batek and Tanum men picked up knowledge from each other as they wandered around looking for girls and adventure. Many



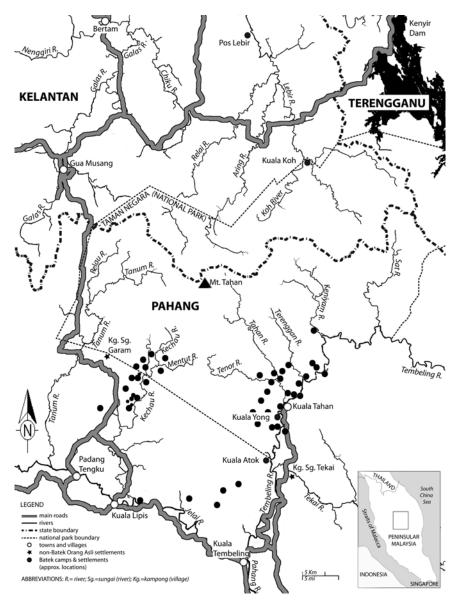


Figure 2. The major river systems of the Batek in Pahang, Kelantan, and Terengganu states.

Batek, particularly those living on the Kechau River, did have more sustained contact with the Batek Tanum: they sometimes camped and worked with them, might have relatives among them, maintained amicable relations, and continued to view them as a kind of ethno-anthropological "Other."

According to Benjamin (1976) there is a strong genetic relationship between

the languages of Batek and Batek Tanum—my word list (Lye 1999) shows many shared terms, as does Benjamin's (1976: 86-87; he suggests the split between the two languages to have occurred some time after 2,000 BP). Because of its distinctive pronunciation and intonation features, Tanum sounds like an entirely different language. I have met people in mixed marriages who reportedly never became bilingual—or who *chose* not to speak in other than their natal languages. Children, however, may alternate languages as they move between Batek and Batek Tanum relatives, depending on particular family circumstances. In one family, the Batek Tanum husband and Batek/Batek Tanum wife spoke in their own languages and accents (the latter identifying more with Batek Deq due to family movement histories). Their two sons identified more with the Tanum side — and both married Tanum wives-and spoke in that accent (I did not examine word choices). Their daughter, on the other hand, married a Batek Deq man and spoke in that accent. In another case, a small boy who alternated between his widowed Batek father and Tanum grandparents was apparently bilingual and spoke the language of whichever community he was with.

The other group with whom Batek have close ties, Semaq Beri (with a population between 2,500 and 3,000), speak a Southern Aslian language and, like the Batek, have an extensive territory. According to Burenhult et al. (2011: 265), the northern Semag Beri (in my fieldwork area) have close relations with the Batek, resulting in what they call "inter-Aslian bilingualism," while the southern group are close to Jakun (Ramle 1993: 43). Other groups that Semaq Beri have been associated with include Semelai, Jah Het, and Temoq in the south (Endicott 1975). Endicott (1975: 6) identified three different subsistence profiles among them, nomadic hunting-and-gathering, seminomadic part-time farming, and settled farming. Ethnohistorical interviews by Kruspe (Burenhult et al. 2011: 265) confirm that the Semaq Beri were formerly long-term hunter-gatherers who became sedentary farmers in response to "external pressure," thus suggesting that nomadic foraging may have been "the dominant mode for all Semag Beri in the past." Kuchikura (1987), who studied their subsistence ecology in the late 1970s, reported that his resettled villagers were indeed formerly mobile hunter-gatherers. His extensive data showed their continued involvement in forest-based mobile hunting and gathering: in over 220 days of fieldwork, he spent 120 (54.54% of total time) in the forest, on trips ranging from 2 to 25 days.

Endicott (1975; personal communication), Kuchikura (1987: 8), and I have all encountered Semaq Beri living with Batek groups (or vice versa), in Kelantan, Terengganu, and Pahang states, respectively. Kuchikura's genealogies show a preponderance of Batek-Semaq Beri marriages, due (he surmised) to the Semaq Beri's former remoteness; on the upper Lebir in Kelantan (see Figure 2), they were closer spatially and socially to the Batek than to other Semaq Beri groups (1987: 17). Close ties with the Batek continue today. In my fieldwork area in Pahang, there are Semaq Beri villages along the banks of the Tembeling River (the recognized boundary between their territories), and sometimes Batek might make camp just across the river from one of these villages (Lye 1997: 297). Intergroup visiting is frequent, but they do not habitually collaborate in work activities.

As Burenhult et al. (2011: 265) summarize, there is significant gene flow and cultural and linguistic influences going in both directions. Historically, Batek have been tolerant of exogamous marriages (Benjamin this issue). My genealogical research shows that marriages between Batek and Semaq Beri are neither uncommon nor remarkable to the Batek themselves. In a preliminary census for 2013, I calculated that about a third of the Batek of Pahang have at least one Semaq Beri ancestor, with most of this group being descended from a single Batek-Semaq Beri couple six generations ago. The Batek seem somewhat less equanimous about marriages with Batek Tanum (who were historically a reclusive group and targets of fun; see below), but there are no social and political barriers to doing so. Culturally, both value themselves as nonviolent people and seem to have the same ideology of hospitableness; that is, they do not turn visitors away.

At present there are not enough data to generate hypotheses about the directions of cultural and genetic flow. Bulbeck (this issue) hypothesizes that in marital exchange between negrito and non-negrito neighbors, the offspring's membership in either the mother's or father's natal communities would be "easier to achieve" depending on whether they looked or did not look negrito. Although each of the three groups has a stereotypical "look" (negrito in the case of Batek and Batek Tanum; non-negrito in the case of Semaq Beri), there is much individual variation in terms of skin tones, stature, and hair form.¹⁹ The Batek say that people who marry into these other societies can choose where they live, and thus, their offspring have a choice of which cultural group to follow. In the case of marriages with Batek Tanum, the hypothesis is irrelevant. My observations suggest that present-day speech differences may be one barrier to mixing between Batek and Batek Tanum. Such differences, which have provoked a lot of mockery from the Batek and highly vocal resentment from the Batek Tanum, might discourage Batek Tanum spouses from traveling too deeply into Batek territory, thus removing any kinship incentive for other Batek Tanum individuals to travel there. I know of only two or three Tanum people who have moved freely with Batek in the past, and apparently the Tanum today are discouraging daughters who are married to Batek men from traveling to their affinal territories. Thus, marriages to Batek Tanum tend to encourage Batek to live with their affines or at least close to them.

It is more possible to test Bulbeck's hypothesis in the case of Semaq Beri marriages. Again, the results are inconclusive. The Batek who married into Kuchikura's (1987) group stayed with the Semaq Beri and raised their offspring there, but he also reported that people would occasionally leave to visit their natal communities in Kelantan. He did not specify how long people stayed away or if these visits fostered new marriages. In Endicott's (personal communication) and my observations, Semaq Beri who married the Batek stayed with the Batek more often; currently there is only one Batek man—and his unattached relatives—living with his Semaq Beri affines. Offspring (like the case of the Tanum family discussed

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POPULATION MEASURE	MALES	FEMALES	TOTAL	SEX RATIO
Population at the end of 1996	180	151	331	1.19
Since November 1996				
Deaths (-)	32	34	66	
Births (+)	113	103	217	
Married in (+)	7	14	21	
Population in January 2013	268	234	503	1.15

Table 1. Population Changes among Selected Batek Groups in Pahang, Malaysia

Numbers refer to the reproductive group that I first met between 1993 and 1996 and exclude those for whom updated information is not yet available. The count of infant deaths is not comprehensive. The total estimated population in Pahang (all groups combined) was about 635 in January 2013.

above) are free to marry Batek or Semaq Beri, but since 1996 all the offspring of recent Batek-Semaq Beri marriages have married Batek, regardless of their physical features. In Pahang, the Semaq Beri communities are so close to Batek camps and settlements that people could just visit back and forth rather than relocate permanently—which is what happens. However, there are Semaq Beri who look negrito either fully or partially, suggesting that in earlier generations the offspring of mixed marriages had chosen to settle with Semaq Beri—again regardless of physical features. In general, my feeling is that marriages to sedentary or less mobile peoples do not seem to be reducing the population of mobile hunter-gatherers; rather, as in the case of Batek-Semaq Beri marriages, the marriages are helping that number to increase.²⁰

As the above descriptions indicate, these neighboring societies are important components of the Batek social world: introducing subgroups to new foraging areas, facilitating territorial access, sharing cultural knowledge, and adding to the pool of potential mates. This last is probably essential in such small populations, and with the high mortality rates therein. There is a significant reason that group exogamous marriages may be necessary: a lopsided male:female ratio. I monitored about 80% of the Batek population in Pahang from 1993 to 2013; Table 1 sets out population changes among them (data not fully confirmed). Preliminary calculations indicate that the male:female ratio can sometimes become alarmingly unbalanced, retaining its lopsidedness for decades and leading to a bottleneck in marriage prospects. The phenomenon has also been observed in Kelantan (Endicott, personal communication). There are not enough data to explain why there was a shortage of females to begin with. The reasons could be related to unknown stress events dating back to the colonial period, such as disease and epidemics brought by migrants and land colonists. (I have no oral history to indicate excessive numbers of female deaths in recent decades.)

In the 1990s, young men lamented often that it was hard to find suitable wives. By 2013, some common strategies had emerged to overcome this problem. These included more marriages of proximal convenience: to first cousins and to

the siblings of in-laws (cross-sibling marriages). Men also delayed marriage until a new cohort of girls came of age, so that there is a growing proportion of husbands 10 or more years older than their wives. This is counterbalanced by marriages to divorcées and widows, with the latter resulting in marriages between older women and younger men. Boys may also have traveled farther to court girls: to the Batek Tanum, and to their distant relatives in Kelantan and the upper Kenyam in Pahang. Among the 65 marriages contracted between 1996 and 2013, nearly a third (21) were exogamous. Of the 21 in-marrying spouses (14 females and 7 males), three are Batek Tanum and three are Semaq Beri; the rest came from other Batek subgroups in Pahang and Kelantan.

The quality of Batek relationships with these other Orang Asli neighbors is very different from their relationships with the Malays. These relationships are symmetrical, and marriages to these neighbors pose no cultural risks. Batek might talk about not trusting the Malays or warn each other not to get entrapped in the Muslim Malay world; they never do so about other Aslian groups. The latter are just part of the landscape, another kind of *batek* (indigenous people) rather than an oppressive superordinate. Though each of these three groups occupies its own space and is symbolically attached to different rivers of origin, their subsistence ecologies are very similar. All three societies follow a roughly similar mode of adaptation, and economic specialization has not materialized, which means that the complementarity factor so often discussed of hunter-farmer relations (see above) simply does not apply. Everybody hunts, gathers, trades, works for money, and farms a little bit (Benjamin this issue).

At present there are few data on the nature of such relationships. This seems like an important gap to plug. Though commercial relationships for Orang Asli are most developed with key trading partners, other relationships are necessary as well, such as for social reproduction. Other ethnographers mention or even analyze ties between neighboring Orang Asli groups (Gianno 1997), but give few data on the material content of those relationships. For example, Benjamin (this issue) has mentioned culture contact between Temiar and surrounding Semang groups but has not provided data on economic exchanges. Similarly, Dallos (2011) worked with a mixed Lanoh-Temiar community and provides substantive data on intravillage interactions but does not elaborate on intercommunity relations more broadly.²¹ Thus, in general, while we know that many Aslian groups engaged in exchange relationships with other Aslian groups, we know little of how those networks operated (such as described by Noone of the trade in blowpipe bamboos), the specific flows of materials, money, mates, and knowledge that link interconnected communities, and whether and how such ties enhance overall adaptive capacities. As mentioned above, studies have tended to focus more on hierarchical-dyadic relationships, where a strong sense of power imbalance is evident, while missing the dynamics in symmetrical ones. The same complaints apply to negrito studies.

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Conclusion

The discussion in this article suggests that it might be necessary to analyze negrito adaptation using larger units of analysis, such as networks and landscapes encompassing multiple communities and territories. The historical tendency has been to view negrito relationships with the broader world in dualistic term (Batek-Malay, Agta-Paranan, etc.), thus missing out on the richness and implications of their interactions with a wider circle of partners and neighbors. While not denying that hierarchy and inequality characterize much of negrito relations with dominant neighbors, I suggest that these have to be contextualized within a larger strand of relationships that includes both hierarchy and egality. Whether there is a direct economic benefit or not, it would be in negritos' interest to extend their social networks. Such relationships are part of the general portfolio of risk reduction and adaptive strategies.

I am not necessarily identifying any particular kind of risk that negrito societies must overcome (such as is inherent in resource fluctuations or climatic instability). However, the objective picture is clear: negrito groups are demographically tiny, socially marginal, politically powerless, and everywhere surrounded by majority groups. There is a great risk of losing identity, autonomy, and the resource base that makes their mobile way of life possible. To avoid being encapsulated to death, it seems likely that one way is to "make friends"-to reach out to friendly intermediary groups, who can buffer them from shocks and help them in times of need. Access to widely scattered environmental resources and passage from one location to another is enhanced not by competing with and displacing neighbors (who are in any case of equal strength and numbers) but by maintaining a flexible regime of friendly exchange partners. There is no reason why the opportunism that characterizes their historical relationships with dominant groups is not similarly deployed in their interactions with these partners. Negrito persistence as distinct societies, their *resilience*, has much to do with how they navigate between the attractions of the broader world and the need to maintain a clear social distance.

To return to the broad themes of this special issue, negrito participation in broader networks of exchange is neither a new topic nor discounted by previous scholars. However, substantive data on the contexts of exchange, and how these affect genetic, cultural, and linguistic adaptations, are still lacking. In light of the exchange relationships analyzed in this article, how negrito groups persist as phenotypically distinctive societies—albeit with high degrees of intragroup variation—is an interesting question. As I have observed of Batek in the past 20 years, they have an ongoing strategy of adapting to influences from other groups. Superficially flexible, they make choices about which aspects of external culture to assimilate and *how*, while they reject those that pose the greatest cultural risk. It is likely that a similar calculation is going on with respect to marriage and child-rearing practices. I leave the discussion to those more qualified than myself to address it. One clue that I have highlighted here is their mobility, which takes them far and wide, avoiding being absorbed into the surrounding populations while

selecting partners and mates from those groups that are more culturally compatible. Echoing Benjamin (this issue), their strategies of social reproduction are certainly worth a great deal of respect.

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Notes

- 1. Are we not playing into the racist assumptions of bureaucratic discourse? In the Malaysian context, negrito groups are seen to be the most "primitive" of all societies and most in need of "development." The terms of this discourse need vigorous challenge.
- 2. For reasons that need not concern us here (see Lye 1997: 57–59), I use the term *hunter-gatherer* interchangeably with *forager*. The people may do many other things beyond hunting and gathering, such as collecting forest products, trading, and working for cash. Because of the pejorative connotations of the word *nomadic* (at least to government ears), my preference is to substitute it with *mobile* as much as possible (Lye 2004: 96–97).
- 3. For Southeast Asia, the (non-negrito) Western Penan of Sarawak have possibly the most impressive of hunter-gatherer ethnohistorical inventories. Peter Brosius and I, 20 years apart, both worked with men who possessed photographic memories. Brosius's three-year study yielded detailed ethnohistory going back some 250 years (Brosius 1992). My genealogies go back 11 generations. Penan interest in preserving their cultural memories is likely related to their use of genealogies in territorial claims.
- 4. In this article I use *Semang* as a substitute for *negrito*, to refer to a cluster of classically mobile hunting-and-gathering societies living mainly in the northern and north-central parts of the Peninsula and the bordering areas of Thailand, who are speakers of Northern Aslian languages (on Aslian language classification, see Benjamin this issue; Dunn, Kruspe, and Burenhult this issue). Although these groups have the stereotypical traits of the phenotype, they do show a great deal of intrapopulation variation (Rambo 1988).

I realize that exceptions must be made for the Lanoh, negritos who share the way of life but speak a Central Aslian language; the Ceq Wong, who "may represent a relic Northern Aslian population" and are "not part of the Semang societal sphere" (Burenhult et al. 2011: 265); and the Semaq Beri, who are not Semang, stereotypically not negrito, speak a Southern Aslian language, but shared the Semang way of life in presettlement times (see below for more discussion). I have not yet accounted for the new group divisions suggested by Benjamin (this issue), and will not do so here. "Semang" is just the most convenient substitute for *negrito*. Arguably, if we take general "mode of life" rather than Benjamin's "societal traditions" as the criteria, Semang would also include the Ceq Wong, Lanoh, and Semaq Beri.

Kirk Endicott (1974: 5-11) identified different subgroups of Batek, which he termed "dialect groups." Almost all the literature refers to the group identified as Batek Deq. On ethnolinguistic grounds, Burenhult et al. (2011) classify Batek together with Jahai, Menriq, and Maniq as the Maniq/Menraq-Batek group. In Pahang, the main Batek group is Batek Deq, intermarried closely with Batek 'Iga.' However, these are dialect groups with no internal boundary-maintenance mechanisms, and they do not appear to hold constant through time. Following their customary terms of self-reference, I refer to them as the Batek of Pahang. The population in my most recent census (early 2013) was in the range of 600–650.

My main work is with the Batek of Pahang, beginning with long-term fieldwork in the mid-1990s, followed by intermittent visits through to 2013. From 2008 to 2010 I also did fieldwork with the Western Penan of the Belaga region in Sarawak, on trips lasting from a few days to over a month each.

- 5. See, for example, the extension of the road networks into remote areas of Batek territory, shown in Figure 1.
- There is not enough mobility data for the Filipino groups (Agta/Aeta) to include them in this discussion.
- Porath (2010) calls the Thai negritos by the generic term Meniq (Maniq). Burenhult et al. (2011: 262–263) identify the dialects and languages as Ten'en, Kensiw, and Tea-de, with Maniq (meaning "human being") as the generic term.
- 8. Following Endicott and Endicott (1986), a "camp group" refers simply to the group of people living together at one camp. Usually there is a nucleus of core members (often a sibling set) that tacitly leads the group as it moves from one camp to another, but the overall membership might change frequently as people leave or join the group.
- 9. The Kelantan Batek fruit season camp in 1975–1976 had a maximal population total of 84. According to Endicott (1995: 251), everyone in the river valley would converge for the fruits and then move as a group from one orchard to another. My data on the Pahang Batek are averaged from day-to-day population changes recorded over the course of the 1995 and 1996 seasons. The fruit season camp group populations averaged 37.49, slightly higher than the overall average of 36.2 for all camp groups that year. However, the first of the fruit season camps attracted a larger population because shamans were conducting singing rituals (singing to the fruit spirits) at the time, thus drawing people from other fruit season camps. For 1996, when no singing rituals were performed, the population average for fruit season camps went down to 33.6. In summary, not only did fruit season movement patterns not conform to the Kelantan picture given by Endicott, but also the population numbers of individual camps were smaller than at other times of the year. Where the Kelantan Batek followed a policy of aggregation (most likely because they had sizable Malay orchards to harvest from and therefore an assured source of fruits), the Pahang Batek did the opposite, dispersing into smaller, band-like family-based groups.
- 10. For example, a Semai community told Gérard Diffloth (personal communication) that they made minute swiddens expressly for this purpose, to bring game populations to them.
- 11. I would make an exception for Penan/Punan groups of Borneo, whose longhouse-based trading partners are just as indigenous as they are. Based on extensive historical evidence, Sellato (1994) suggests that Penan groups have been linked through longhouse peoples to regional trade networks for about a thousand years.
- 12. Bambusa Wrayi is synonymous with Kinabaluchloa wrayi and also known as buloh sumpitan ("blowpipe bamboo") in Malay. Wong (1995: 8–9, 151–152) classifies it among the "rare" montane endemic bamboos. Judging from Wong's botanical inventory, Noone seems to have identified most of the sites where the bamboo is known to grow. When it is not available, the Orang Asli use bamboos with shorter internodes, chiefly buloh temiang (Schizostachyum jaculans Holtum), also known as buloh sumpitan. They will then have to join two internodes together to make the inner tubes of the blowpipes (Endicott 1969: 4–6; Noone 1954: 2). I do not recall ever seeing a blowpipe with a one-piece inner tube.
- Kintak Bong (Kentaq) and Kensieu (Kensiw) are Northern Aslian-speaking negrito groups (Semang). Kintak Nakil, also known as Semang Keroh (Schebesta 1952), were probably a

dialect group of Kentaq and are no longer classified separately. Temiar are Central Aslian– speaking Senoi. On the problematic classification of the Lanoh, Central Aslian–speaking "non-Semang negritos," see Benjamin (this issue) and note 4 above.

- 14. The "Emergency" is the name for the period of communist insurrection from 1948 to 1960.
- 15. With forest landscape fragmentation, the growth of the road networks, and wildlife population and hunting declines, demand for this particular species of bamboo and usage of the old trade routes have likely gone down in many areas. The displacement and resettlement of groups from their old resource territories obviously also disrupted the supply chain. To what degree Orang Asli claim residual rights over the bamboo clumps in their historical territories is not known.
- It is perhaps telling that none of the details so carefully recorded by Noone stand out in Orang Asli cultural memories (e.g., in Dallos 2011), unlike memories of slave raiding (Endicott 1983).
- 17. There might have been conflict at the *individual* level, given the customary rule that the person who cut the bamboo kept the proceeds of the sale (Noone 1954: 7–9).
- 18. The conflicting accounts are not mutually incompatible. The Batek of Pahang historically comprised quite a few subgroups, each with (presumably) different migration histories.
- 19. As far as I know, there has been no research to indicate how all three groups fall within the acceptable variations of the phenotype.
- 20. This is shown in the case of two Semaq Beri women (sisters) who have lived with the Batek a long time. Once when the older sister was about to give birth, her Batek affines suggested she move to her natal kin for family support. She replied that she felt more at home with the Batek. Following her husband's death, she married another Batek man rather than return to her natal village. Following her death, her children, who look more Semaq Beri than Batek, have remained with their Batek relatives. Her younger sister, having grown up with the Batek, remained with them and married a Batek man.
- 21. According to Burenhult and Wegener (2009), the Lanoh recognized two dialect or language groups among them, Lanoh and Semnam.

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