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Article abstract

A recent study of the wayfinding techniques employed by Inupiat residing in the communities of Barrow, Wainwright, and Anaktuvuk Pass, suggests that the incidence of disorientation episodes has increased in recent decades, despite easier access to maps and compasses and other aids to navigation and wayfinding. A general model, which focuses on the environmental and cognitive sources of disorientation, is introduced to help understand this apparent deterioration in Inupiat travel skills. Some social consequences of disorientation are also discussed, including: (a) the community reaction to individuals who get lost; and (b) resolution of spatial conflicts during group travel. Finally, questions are raised concerning the nature of "traditional knowledge," and its role in the Inupiat wayfinding system.

Social dimensions of geographic disorientation in Arctic Alaska

Joseph Sonnenfeld*

Résumé: Les dimensions sociales de la désorientation dans l'Alaska arctique

Une récente étude sur les techniques d'orientation utilisées par les Inupiat résidant dans les communautés de Barrow, Wainwright et Anaktuvuk Pass, suggère que les épisodes de désorientation se sont accrus depuis les récentes décennies et ce, malgré l'accès aux cartes, compas, et autres aides pour la navigation et l'orientation. Un modèle général centré sur l'environnement et les sources cognitives de désorientation est présenté afin de comprendre cette apparente détérioration des compétences des Inupiat en matière de voyage. Certaines des conséquences sociales de la désorientation sont aussi discutées, incluant: a) la réaction de la communauté vis-à-vis des individus qui se perdent et b) la résolution de conflits ayant rapport à l'espace durant les voyages en groupe. Finalement, des questions sont soulevées concernant la nature des «savoirs traditionnels» et de leur rôle dans le système d'orientation des Inupiat.

Abstract: Social dimensions of geographic disorientation in Arctic Alaska

A recent study of the wayfinding techniques employed by Inupiat residing in the communities of Barrow, Wainwright, and Anaktuvuk Pass, suggests that the incidence of disorientation episodes has increased in recent decades, despite easier access to maps and compasses and other aids to navigation and wayfinding. A general model, which focuses on the environmental and cognitive sources of disorientation, is introduced to help understand this apparent deterioration in Inupiat travel skills. Some social consequences of disorientation are also discussed, including: (a) the community reaction to individuals who get lost; and (b) resolution of spatial conflicts during group travel. Finally, questions are raised concerning the nature of "traditional knowledge," and its role in the Inupiat wayfinding system.

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Nobody gets lost in the Arctic on purpose. Rules for Inupiat travellers are clear: check the weather; note wind direction; identify snow drift patterns; be aware of the position of sun and moon and stars, which you can use to orient by if you know how they change over time. Also, be sure of the condition of your vehicle. And in the absence of a well-defined trail and other indicators of location and direction, clear your mind of all things that would keep you from paying full attention to the travel landscape. As a number of the more experienced of the Inupiat I interviewed told me: "It's easy to find your way; there is no reason to get lost if you do what you're supposed to do."

If the rules are so clear, why, then, does disorientation occur? The reasons vary: visibility is poor, memory has its limits, there are distractions, one makes mistakes in identifying landmarks, your timing is off. Or you inappropriately project features from memory onto a landscape that doesn't quite match. Or the expected sequence of landscape features is missing, and you become anxious. Or a storm or blizzard blows in and obscures it all.

Some aspects of disorientation are universal: going in circles when there are no clear surface or sky features to help maintain the direction of travel; not being aware when wind direction or the orientation of snowdrifts changes; and conflicts in what the traveller attends to while in the field, which results in a form of mental interference that he is supposed to avoid.

Some aspects of disorientation are specific to the Arctic: those having to do with regionally distinctive weather patterns, and snow cover effects and sky features specific to polar latitudes, not to mention, also, extended periods of darkness. And there are other aspects of disorientation specific to the Inupiat, who no longer are transmitting their traditional knowledge across generations as consistently and effectively as they had earlier in the last century. This has all been exacerbated by changes in the significance of traditional subsistence activities, a new travel technology — snow machines replacing dog-teams — and by different mentors and role models. All have contributed to the loss of traditional environmental sensitivities and spatial skills. In other words, while the urge to travel still exists, the travel that does occur too often lacks the infrastructure of tradition to support it. The result is that fewer people are travelling on their own, and more are getting lost, involuntarily.

Research methods

This paper is based on research from a project entitled: "Travel behaviours in an extreme environment: changing technologies, skills, and risks among the Inupiat of northern Alaska." It included interviews with 50 Inupiat in the villages of Barrow, Wainwright, and Anaktuvuk Pass, during January to May 1991. Twenty-one of those interviewed were from Barrow, 15 from Wainwright, and 14 from Anaktuvuk Pass. Interviews in Wainwright and Anaktuvuk Pass occurred during January and February, and, also, during March and April. The reason for so dividing the interview schedule

was to accommodate for possible seasonal influences on responses to questions and related discussions regarding wayfinding techniques and the wayfinding environment.

Seven of the interviews at Barrow were conducted in Inupiaq, with the assistance of Dorothy Edwardsen and Mabel Panigeo, interpreters who were assigned to this study by Jana Harcharek, Liaison Officer for the Inupiat History, Language, and Culture Division of the North Slope Borough Planning Department. These tapes were later translated by Anna Nageak, currently of Anaktuvuk Pass, with some occasional assistance from her husband, James Nageak. Lucille Mayer was interpreter for my interview with Henry Peetook, an elder living in Wainwright; she was also responsible for translating the tape and for providing a draft of the transcript. I handled the recording of the remaining interviews on my own, and arranged for transcripts of the tapes to be prepared by student workers at Texas A&M University (College Station, Texas). I verified the accuracy of these latter transcripts by personally comparing them with the recordings of the interviews, as supplemented, also, by my notes of the interviews, and with the maps used during the interviews.

Most of the questions raised by the interviews were resolved by discussing these with respondents and interpreters, either during or shortly after taping. However, given the volume and diversity of this material, there were many questions that did not become apparent until after I had a chance to digest and analyze the transcript records. Not only were there informal follow-up discussions with many of those who had been interviewed, but also with others who for various reasons were not included in the original study sample; these discussions occurred both before and after my return to Texas, as well as since my retirement from Texas A&M University.

A disorientation model

A distinction is often made between wayfinding and waykeeping as travel techniques. Wayfinding involves being able to find one's way to some destination in the absence of clear and stable guides to direction and location. By contrast, through waykeeping the traveller follows a road or marked trail, a coastline, or a river bed or stream channel to destination. Yet, there is enough ambiguity in the spatial environment within which the Inupiat travel, for waykeeping to require the same kinds of environmental sensitivities and skills that are central to success in wayfinding. Consider, for example, the extended periods of winter darkness, and the impact of blizzard and whiteout and fog, all of which can confuse the appearance of critical landmarks.

Some years ago, I developed a descriptive model (Sonnenfeld 1994) to aid in the diagnosis of specific cases of spatial disorientation (see Figure 1). While there are a number of ways in which the model seems to fit examples of Inupiat disorientation that were collected during interviews at Barrow, Wainwright, and Anaktuvuk Pass, there were difficulties in matching it to the Inupiat experience. In particular, in its original formulation it lacks any sense of a role for "traditional knowledge" of either the travel

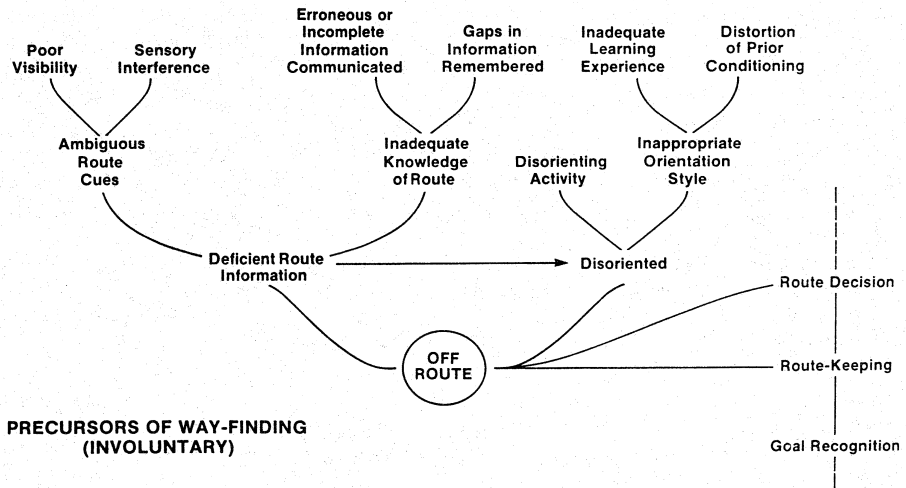


Figure 1. Descriptive model of spatial disorientation (from Sonnenfeld 1994)

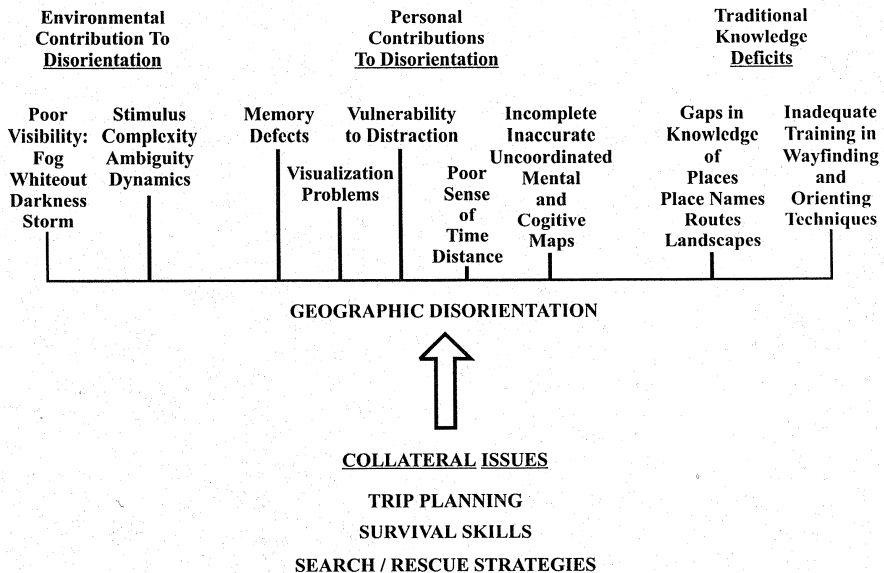


Figure 2. Revised model of spatial disorientation

environment or of wayfinding techniques. In addition, the model rather obviously ignores some rather crucial social dimensions of the disorientation experience, as these were shown to apply to Inupiat in the communities within which I worked.

A quick review of the model should demonstrate its relevance both for the Inupiat and the Arctic as travel environment. Note, for example, the importance of "ambiguous route cues," which, in the Arctic, can be more common than not, at all seasons. Also, the effect of "interference" by activities that compete for the traveller's attention, which is what hunting and tracking game require. Note, also, the importance of an "inadequate knowledge of route," and of using an "inappropriate orientation style," both a result of the "inadequate learning" of traditional wayfinding techniques, in turn a consequence of family and community life style changes that have occurred over the past century.

In most cases, a more thorough grounding in traditional knowledge would have minimized uncertainties of route and of place, so critical were both considered to be for subsistence travel, generally. Equally critical would have been the ability to work one's way out of the disoriented state, which implied, also, a different sense of the importance of time, and a different level of preparation for extended travel, which might last for weeks rather than for a few days or a weekend, that are more common now. Curiously, apart from the reference to "poor visibility," there is no mention in this model of the contribution of the travel environment to disorientation. I have attempted to remedy some of these deficiencies in the revised disorientation model prepared for this paper (see Figure 2).

Social factors

There was at least the hint of a social dimension in wayfinding implicit in my original model of disorientation, for example, in the reference to the "erroneous or incomplete information communicated" concerning route, and, by extension, of more basic wayfinding techniques. But there are also social relationships that get stressed by dysfunctional wayfinding behaviours, of the sort that I had not considered in previous studies of the disorientation process. These have to do with social obligations and social controls that influence, for example, the willingness of community members to bear the costs of recovery of those who become disoriented, and also the interaction of individuals who travel together. All of these may apply differently according to the kind and closeness of the social relationships that exist among both kin and non-kin who live, work and travel together.

In this paper, I will discuss two examples of social involvement relevant to the Inupiat disorientation experience. One was suggested by my reading of Richard Nelson's book, *Hunters of the Northern Ice* (1969), which was based on field work in the 1960s, primarily in Wainwright, Alaska. In a concluding chapter he entitled "The death of hunting," Nelson described what I considered — at the time — to constitute a peculiar reaction by the community to those who had become lost. Instead of expressing concern over the victim, they tried to shame him, as if this was an especially

appropriate means for getting him to comply with community standards of performance. The victim, in other words, was twice victimized: first, by whatever the conditions were — personal or environmental — that had led him to become disoriented; and secondly, by the community which felt that ultimately he was at fault, and that he should be made aware of the seriousness of his lapses in judgement.

The other example of social relationships intruding into the disorientation experience deals with the way in which the Inupiat handle wayfinding disputes during travel. When a wayfinding question arises among a group of travellers, how do they resolve it with minimum conflict or ill will?

Shaming

As suggested, one of the techniques used by the Wainwright community during the 1960s of Nelson's study, included the shaming of those who had the misfortune to get lost. Nelson seemed to imply that this was the traditional way in which the Inupiat trained their young to desired levels of competence. According to Nelson, the young hunter was expected to accompany older men on their hunting trips, and to learn by observing them. "If he succeeds in duplicating their actions properly," Nelson reported, "he is rewarded by silent acceptance. If he should make an error, he is chastised and teased." According to Nelson, this ridicule continues for some time; and, later, the "other men are also told of the young hunter's failings so that they can join in" on the ridicule (Nelson 1969: 386).

Nelson considered this to be an effective teaching device, and its relevance for the subject of my paper is clear in his comment that the "fear of such ridicule forces the Eskimo to learn his navigation skills well and to exercise caution whenever he travels." Yet, as a naive academic I was surprised that such a teaching technique would be used by a people who were reputed to avoid antagonizing others, regardless of circumstance, if only because at some later time they might have to depend on these same others for their own needs. Certainly, it seemed to me wiser not to be judgmental about the errors made by those still in process of learning the essentials of independent living.

Though Nelson emphasizes shaming as a traditional practice, and refers to it as an incentive for learning navigation skills, there is little indication that disorientation was considered a problem by the Inupiat community prior to 1950. Inupiat in process of growing up as Inupiat came to know directions, and they knew places; and they could depend to a degree on their dogs at those times that their own sensitivities failed. My older respondents indicated that they generally avoided setting up explicit time schedules for their return from hunting trips, to avoid the kinds of anxieties that later came to sensitize a community concerned with the welfare of youngsters who were not always as well-trained as their parents and grandparents had been. With formal schooling, many of the former lacked the same opportunities to develop their wayfinding skills. As has already been suggested, the introduction of the snowmobile as the primary transportation vehicle also had an impact. And while it is not apparent that the environment itself has become more disorienting than it was in the past, it can

appear to be so to those who travel at high speed by snowmobile over a larger area, for both subsistence and recreational purposes.

Similar problems appear to have afflicted some young Inuit at Igloolik (Nunavut). John MacDonald (1998), in his ground-breaking book on Inuit ethnoastronomy, included some materials on navigation and wayfinding (Chapter 6), and referred to two instances in which young people had to be reprimanded for their lack of expected spatial skills. In one case, some youngsters who had become lost were "given a lecture on the necessity of knowing place names which could have pinpointed [during a short-wave radio conversation] their exact position and spared the search-and-rescue party much concern and effort." The second case involved two youngsters who also had difficulty in finding their way back to Igloolik; they were similarly reprimanded by an "appalled" Noah Piugaattuk, who "lectured them, saying they were ignorant because they could see the sun and the ground [...]. They were old enough but they were not trying to know these things" (quoted in MacDonald 1998: 163). It is not clear whether such reprimands were part of a shaming tradition, but MacDonald (1998: 161) mentions, in commenting more generally on the value of wayfinding skills, that among the Inuit the "[...] good navigator is quietly revered, a poor one gently ridiculed."

When I asked Inupiat in the three study communities about this shaming practice, they seemed to offer no support for Nelson's account. Most felt — at least as they expressed this to me — that shaming was not an appropriate way to handle the problem of individuals getting lost, as if the trauma of such an event required a different kind of response, one more caring and constructive in nature. How to explain this contradiction, between what I was predisposed to think, as supported also by my respondents, and what Nelson (1969: 387) presented as having been a harsher but also more traditional practice?

The explanation was either (1) that Nelson somehow misread the temper of his times, in regards to the appropriateness of the shaming technique as applied to incompetent way finders; or (2) that none of my respondents wanted to admit to me that they would be so harsh with their own youngsters, as if they were trying to protect me from such realities, or keep me from being judgmental about them in things that I really couldn't understand, not being Inupiaq. Or else, (3) it may also have been that standards had changed, from the early 1960s Wainwright that Nelson was writing about, to the early 1990s of my study. A bit of probing since suggests that Nelson was not wrong, neither in implying that there was a traditional basis for such behaviour, nor in the impact it still had on individual Inupiat who were not able to match the standards of performance expected of them.

Curiously, ridicule, which is a way to publicly vent one's anger or frustration with a person, seems to have been categorized as a variant form of the Inupiat "sense of humour;" but it obviously goes beyond the level of people "poking friendly fun" at the victim, as Spencer (1959: 172-177) described this in his study *The North Alaskan Eskimo*. What better way to react to someone who should have known better than to get lost, thereby causing others the considerable inconvenience of dropping what they were doing so that they could take up the search for him. It would help if the victim

himself could see the humour in his situation, and be able to laugh at himself, for then, as Jean Briggs (1970: 337-343) expressed this for a community of Canadian Inuit, he could "persuade himself that others [were] sharing in [his] amusement, rather than laughing at [his] downfall and humiliation." Nicholas Gubser (1965: 111) hints at a similar behaviour pattern at Anaktuvuk Pass, when he refers to the "great pleasure" that comes from "joking with teenage boys about their developing [...] prowess as hunters; "and the social psychiatrist Robert Coles (1977: 205-208) writes about teasing in equivalent fashion, as part of the range of "humour protocols" Inupiat consider acceptable as a means for encouraging appropriate type behaviours from the young. That it had this effect on older Inupiat, as well, is suggested by James Van Stone in his Point Hope study (1961), when he commented about a group of hunters who had been caught out on the sea ice, and who required rescue parties to help them return to safety. Van Stone (1961: 31) reported that these hunters "profess(ed) intense shame for their negligence which required the extra work and efforts of many villagers."

In other words, shaming was not only effective as an educational tool for the young, but it was also intended to remind older adults of their obligation to maintain a reasonable level of competence in traditional skills. However, I would add that there are instances in which the threat of being so shamed put individuals at greater risk as a consequence. For example, in a case involving an older teen-ager who became disoriented while en route from Barrow to his home in Atqasuk¹, help was ignored, refused, and avoided even when it should have been welcomed, because of the embarrassment the young man felt at having become lost, even in the absence of others to observe this. That he knew it, was enough. For others to learn of it would have been even worse. He survived the episode, but he might not have.

As suggested by Ferdinand Tönnies, in his classic study of *Community and Society*, this kind of self-disapproval could be harsher even than that imposed by the community. This fear of public disapproval, Tönnies (1963 [1887]: 160) said, "like every form of fear, is a pain felt beforehand," meaning even before others have had a chance to judge the transgressor.

If there is now less interest in shaming young people for their inadequacies as travellers, this may be, at least in part, the result of changes that afflict the community-at-large. Now, there is the excuse of a snowmobile breaking down, or running out of fuel, which seem more tolerable kinds of error. With less travel, generally, mistakes get made; and with the rapid travel possible by fast-moving snowmobiles, which requires attention to both the machine and the travel surface, individuals can get more easily distracted, particularly during hunting or tracking game. Many young people also seem to remember less about places, and know fewer of these than their parents and grandparents did. They get started as independent travellers later in life, since formal schooling interferes with much of the traditional schooling in the field that would have matured an earlier generation of back-country travellers. In other words, there are different expectations of those who remain in their home communities after schooling.

¹ This account was derived from the tape of the field interview with the subject, arranged and recorded by Michael Pearce, who was a member of the staff of The Exploratorium (San Francisco), in April, 1992. Used with the permission of Mr. Pearce.

Given such change in the social atmosphere of community life, shaming becomes a less appropriate or even unproductive way to treat individuals who fail to meet traditional standards of performance.

For those who lack the necessary traditional skills, there are other ways for the individual to protect himself from the risk of public disapproval, and these include: not taking the risk, by avoiding that which he senses he is incompetent to handle on his own; and making sure that he travels only with others. In addition, he can try to avoid needing to travel, by engaging in activities that are minimally demanding of travel. Nelson (1969: 387) noted this earlier: once alternative, non-traditional behaviours became available as options for young people at Wainwright after they finished their schooling, they could then "leave the village, find a job in the village, or [even] live as an unproductive consumer," which is what welfare allowed, without the stigma we normally associate with welfare dependence. Nelson also indicated why shaming had ceased to be as effective a means of behaviour control as it had been traditionally, specifically, because of the alternatives available to young people: "Today," Nelson (1969: 387) explained, "the youth who returns to the village after completing his formal education is, in the first place, not interested [in returning to a hunting tradition], and must, in addition, face the continual frustration of a learner, if he does attempt to hunt. In the past there was no alternative but to undergo the painful process [...]."²

The same situation applies currently, some thirty years later, except there are more productive job opportunities which also allow young adults to remain at home, to earn an income, which if not as praiseworthy among traditionalists, is still capable of providing for comfortable living. Norman Chance noted this even earlier, in his insightful study of the Kaktovik community. He described the case of a middle-aged man who decided to change his way of life. Instead of a traditional life style, he chose one which offered regular and steady employment. He knew this would have to be at the cost of involvement of his family in all of the more normal community activities: hunting, summer moves to the family fish camp, travel to other villages, and participation in the "traditional forms of sharing and cooperative exchange" (Chance 1966: 94). In time, as he became more competent in his new work, Chance (*ibid.*) reported that this man found ways to reenter the community that he had abandoned, with a success that was "symbolized by his being voted a place on the village council, an action that might not have happened earlier since he had been an average hunter, at best."

In other words, in the traditional sphere, the community would reward performance in traditional terms, with the approbation deserved by one who performed

² When I asked David Erlandson, Professor of Education at Texas A&M University (College Station), about the use of shaming as an educational technique, he said that he could not recall an article on this subject in the 40 years of reviewing a wide range of professional journals in his field. He suggested that the change I had described to him resulted from the transformation of holistic traditional societies — in which the role of the individual was not conceivable apart from his family and community — to an "atomistic" society (Erlandson, pers. com. 2001). In this latter, if an individual decides he doesn't want to "go along," he can find alternative things to do, and/or an alternative group to affiliate with. There is no longer a requirement for a uniformity of belief and behaviour that the holistic or traditional group depends on for its integrity. Atomism implies a "mechanistic" model of society, which permits alternate solutions to specific problems, roles, etc.

well, in the approved manner; or, alternately, the individual would be ridiculed for efforts that missed their mark in a performance that would have been considered inadequate or incompetent. But the community did not respond, equivalently, in any derogatory fashion, to those who simply avoided involvement in traditional activities, who made the choice to change in ways they considered productive and effective for the lives they wanted to lead in other than the traditional fashion; and here, there were other measures of performance, including income level, and the quality of village life that it permitted. Competence was competence regardless of the skill or activity, and it would be judged positively, especially if accompanied by the more traditional forms of giving and sharing that implied strength of commitment, still, to one's home community.

Group travel as a source of conflict

The social issue in the second of my examples is different. Here, the focus is not on the community reaction to individuals who exceed its tolerance for incompetence; rather it has to do with the nature of the relationship between those who travel together. When a difference of opinion develops over how to resolve a wayfinding problem, who submits to whom? Is the more skilled and knowledgeable member of a group expected to "take charge," to assume responsibility for the safety and well-being of the other(s)? Or is this not the case? And why should this even be a problem?

Billy Patkotak, at Wainwright, suggested that, traditionally, a group on the move would choose a leader — or a guide — who was known to be an effective way finder. He was someone recognized as having a good sense of direction, and ideally he knew the country through which they would be travelling. Leadership qualities were important, including the ability to keep a "cool head," but, as Billy explained, it was even more important that such a person be "very observant, more observant than the others" (Billy Patkotak, Interview Transcript, March 9, 1991, lines 1245-60). By implication, not all were equally suited to lead a group, at least not for travel in more difficult or minimally known areas, and possibly not for travel in any area.

This was an aspect of Inupiat travel — relationships among members of a travel group — that I did not probe in any systematic fashion during my study, which focused more on traditional and contemporary techniques of wayfinding and the travel environment. It quickly became apparent during the interviews that contemporary Inupiat were variably experienced in back-country travel. I assumed, therefore, that ego would be minimally involved, and that while Inupiat who travelled together would be reasonably knowledgeable about where they were going, routes to be followed, places or features to avoid, etc., that individuals who were themselves uncertain about any of these would be wise enough to submit to the judgement of those amongst them more knowledgeable than they. Yet, I ran into two examples, one from Barrow and the other from Anaktuvuk Pass, which ran counter to this logic.

In the example from Barrow, it was apparent that if one traveller differed from another about where each thought they ought to be going, then at some point, when

neither seemed willing to submit, each was prepared to say: "Goodbye and good luck." Whichever one proved correct would enjoy the benefits of his good judgement; while the other would have to pay the penalty of being both wrong and stubborn. Subsequently, when I was in Anaktuvuk Pass, I asked whether this kind of problem ever afflicted travellers there, and I found out that it did, meaning that there might be contention over how to resolve the uncertainty, but this was not without sensitivity to the feelings of the one who had become disoriented. More importantly, there was evidence of a sense of responsibility for the less well-oriented person's safety that seemed as unnatural as the lack of such a concern — even if only on an occasional basis — had been at Barrow.

To start with the Barrow case: my respondent attributed the problem he'd had with his travel companion to a conflict of wills that developed under the stress of being disoriented. As he explained this: Sometimes when you're travelling, "even if you know the terrain, suddenly you become aware that you're not where you're supposed to be, at the time that you're supposed to be there. But you give it a few more minutes, and you're still not there; and then you lose all sense of direction. I've seen people like that," he said. "Even if you show them, they still won't find north, they won't find south, they won't find east or west. Once they get like that," he said, "it's very bad. Then your will has to be much stronger than theirs, because they take that strong will with them when they [get lost]. I've seen it," he said. "They try to take you along. When that happens, you need to tell them: You go your own way, I'm heading [the other way]. You tell them just that" (Anonymous, Interview Transcript, March 19, 1991, lines 1364-80).

Still, this was not an easy kind of decision to make. He explained his position: "When they are too strong-headed their way, then I can't [deal with it]." He continued: "It's very difficult to take outright responsibility for a person that's headstrong and loses his (sense of) direction [...]. You just have to split up. And [even] then I always feel responsible when I take someone out. That's his life. I've done everything to gain his confidence about where I'm going, where I'm at; and [I will tell him] where he will end up if he takes the direction he wants to go, instead. I'll tell him where he is going, and what he's going to see, and anything else. If he proves me right, then he's probably liable to come back" (*ibid.*, lines 1385-95). But what was left unsaid was that he also might not!

Significantly, my Barrow respondent also indicated that he would make an exception for his brothers, and members of his whaling crew, were they to be travelling with him; but it was not clear whether this meant that he would follow them if they rejected his advice and insisted in going a different way, or, instead, be more persistent in trying to convince them of the error of their way.

A different process applied in the example from Anaktuvuk Pass. My respondent there (Joshua Rulland) said that in a situation where he and a companion differed about where they ought to be going, he would try to discuss this with him; but if the other proved non-responsive, then he wouldn't keep pressuring him, even when he was certain they were going the wrong way. As he stated it, "You just got to let him find out for himself; it's for his own strength. Next time, then, he'll know. You don't have to

get anybody mad while you're travelling out there. You try to explain one time, and that's all. And then you just go along with him" (Joshua Rulland, Interview Transcript, April 23, 1991, lines 559-606).

Joshua suggested, however, that he might continue to state his case in round-about fashion, for example, that they've been travelling for an overlong period of time, and should have since gotten to where they were originally heading. But he never tells him that he's going to take off on his own. "No, you never tell him nothing like that. You just keep on going with him" (*ibid.*) Joshua might actually just let the other person go his way, while he, himself, would take off in the direction he knew to be the correct one; but then he — Joshua — would still wait for him "down there somewhere; you know he'll come around looking for you. You just don't leave him out there; especially up there, we don't leave anybody out. Even if he went off course, by accident or something, we'd turn around and go back and lead him in the right direction" (*ibid.*).

When I asked why his companion wouldn't consider the possibility that he was wrong, Joshua's answer was, simply: "Well, some people always think they know better than you. I just go along with it. Sometimes you don't really mind whether they got angry at you, or anything like that; but you just don't leave him out there to freeze or anything. That's what we do, is to watch out for each other pretty close" (*ibid.*).

Discussion

Watching out for each other was the traditional rule, but so was paying attention and submitting graciously to the judgement of those who were more knowledgeable about an area or a route or trail, or about wayfinding, generally. How does one explain the kinds of events described, including the contrast in the treatment of individuals who have the misfortune to become spatially confused? Is it simply that social changes have been greater at Barrow than at Anaktuvuk Pass, in ways that are weakening traditional obligations to be responsible for those with whom one travels? And is there, in fact, such a tradition for selflessness that requires travel companions to assume responsibility for each other?

The example from Anaktuvuk Pass would seem to suggest that such a tradition does exist, but I have not yet probed the dimensions of such obligation, nor the extent to which others in his community would agree with Joshua's position. And similarly with the apparent lack of an equivalent sense of obligation at Barrow, though again with the caveat that neither have I yet attempted to establish its dimensions, nor whether others in this larger, more contemporary community would have agreed with abrogating unilaterally what tradition may have prescribed to be proper trail behaviour. I would only suggest that it would not surprise me if the behavioural distinction implied by my examples applies more generally to others in both communities. This would be consistent with the changing character of social relationships in both communities, in which the obligations of kinship now have a lower safety-net value, given the confusion that multiple marriages and divorces and in-laws and adoptions can introduce into the obligation equation.

The literature is not overly helpful on this matter. Clearly, the relationship between travellers does not appear to have been as formal as it was traditionally among "joking" and trading partners (see Spencer 1959: 167-77). Rather, a group of travellers may or may not be related by kinship, depending on the community and the reasons for travel. The makeup of a particular travel group, for example, can be influenced by who is available for the period of time during which the travel is planned. And depending on the purpose of the trip, there may be an effort to recruit individuals with certain skills or talents, or other resources able to contribute to it materially.

According to Jean Briggs' study of an Inuit community in the Canadian Northwest Territories, "if a man wanted a companion for a fishing or trapping trip, he usually invited a close relative" (Briggs 1970: 178). Gubser (1965) described groups at Anaktuvuk Pass that were less constrained by kinship. For example, he suggested, for that community, that two friends of "similar age and sex may become so close that they regard each other as partners" (Gubser 1965: 162). And he also described (*ibid.*: 152) larger groups characterized not only by friendship among its members, but also by "economic exigency, and contiguity," who "explicitly undertake some common activity," which I assume also includes those who decide to travel together. I see no reason not to assume that similar groups, equally open-ended in membership, exist also at Wainwright and Barrow.

My point is that the makeup of such *ad hoc* groups of travellers may not be consistent in the closeness of relationship that exists among its members; and similarly with the sense of obligation to care for each other during difficult times. The only consistency I would expect is with size of community: closeness and the obligation to be caring should be greater, the smaller and the more coherent the home community from which a group derives.

This still leaves the question of why an individual finds himself at odds with other members of his travel group, and resists their counsel. Is it, as my Barrow respondent suggested, the result of becoming disoriented, which produces a conflict of wills, and that an individual may not even be aware that he has lost his sense of direction? Or is it, more simply, as Joshua Rulland (from Anaktuvuk Pass) has suggested, that "some people always think that they know better than you"; which means they will not acknowledge the possibility that they are wrong?

Can this state of mind be the result of a disconnection between the reality of the travel environment, and the imagery that individuals attempt to reconstruct from memory traces of previous travel experiences, which then is projected onto the travel landscape? This reverses and confuses the more normal process of landscape identification, by which one attempts to match the reality with one's memory of previous place and orientation experiences. It is interesting that informants from both communities have commented on the need to encourage certain individuals to stop and set up camp when conditions become such as to make continued travel difficult: to wait for a disorienting storm to pass, or whatever else may be causing them to lose confidence that they know where they are at, or the direction they are headed, as during

darkness, or fog, or whiteout. To continue on to camp or other destination under such conditions can border on the irrational.

There are no doubt other explanations why an individual may resist taking another's advice. For example, he has more confidence in his own spatial intuitions, meaning that he feels he has judged a situation correctly, and that there is no reason to reconsider the appropriateness of his decision. Or he doubts the insights of another, when he lacks trust in that person. But one would question whether either reason is grounds for abandonment of the other, if this other is placed at greater risk as a consequence.

One final related example, in this case from Wainwright, involves husbands and wives who travel together. Situations were described to me in which couples become temporarily disoriented and have difficulty resolving differences between them: in particular, wives have to contend with husbands not easily persuaded that it is they — the husbands — who might be the more confused. In a number of cases at Wainwright, wives — who on a more or less regular basis might accompany their husbands on extended trips — indicated that they would assume (or be assigned) the responsibility for keeping oriented, so that while tracking wolves or wolverines, for example, or when chasing wounded game over what could be a disorienting cross-country course, at least one of them would know where they were heading. Yet, when it was time to get back on track, the wife would often have to argue with her husband about their location and the heading to take to their destination, so certain was she about where they had been, and so unwilling was he to acknowledge that he might have gotten confused, or turned around, during the extended off-trail chase. But there is never any question that they would separate, each go their own way, because of such differences between them.

This "spousal model" exemplifies a group of travellers bound by mutual caring and a sense of dependence on each other, who feel comfortable (or not) arguing with each other, but who still care enough to try to resolve their differences, and to remain together, even when the one knows the other(s) to be wrong. It is only the absence of an equivalent closeness, or a lack of a personal obligation to the other's welfare, that causes a separation of the type described by my Barrow informant. Abandonment is inconceivable, otherwise. The decision to go one's own way, to manifest the strength of one's will, is easier to understand, even when it is irrational, than is the abandonment of the one so afflicted, in which a concern for one's own well-being comes to exceed the need to maintain a concern for the other.

Summary

There is an important social component in the Inupiat wayfinding tradition; it is most apparent when disorientation occurs. The larger community gets involved not only in recovery efforts, which carry a high priority, but also in the way that it encourages competence and discourages incompetence in wayfinding. Currently, the community reaction to those who get lost seems to have become less critical or severe, if Nelson's description of the Wainwright community's response to errant travellers

during the 1960s has validity also for earlier generations and other Inupiat communities.

Group travel is more directly influenced by the quality of the social relationships that exist among group members. In particular, the disparity in the wayfinding skills of those who travel together was more easily accommodated for by traditional practice, but change is again apparent; and group members — some, if not all — may be at greater risk as a consequence, in particular when means for resolving disputes cease to be rational. In fact, many of the more competent Inupiat now prefer to travel alone because, among other reasons for solo travel, it relieves them of the need to be responsible for those who desire still to travel, but who are less prepared to contribute positively to what such travel demands of them, including the ability to stay oriented on their own, once they reach their destination.

Conclusions

1. Inupiat get lost, like other people do, when they lose the discipline that keeps them oriented, and when they lose the knowledge of place that long-distance travel in the Arctic and their traditional culture demand of them.

2. Inupiat get shamed, and use shame, as others do — or did³ — as a means for gaining compliance when community welfare is at issue, in particular when individuals lack sufficient motivation to learn and practice what they have been taught as a traditional value. But it is not clear that shaming remains effective, when there are options which allow the less competent to avoid activities that would cause them shame, which they could not avoid traditionally.

3. Inupiat continue to care for each other, including those who prove less capable in what wayfinding demands of them; but, within a context of changing social relationships, they seem to care more for their own kinfolk and hunting partners than for miscellaneous others, especially when these others resist their counsel and lack good travel sense.

A final comment: There was much emphasis during ICASS IV⁴ on the importance of traditional knowledge, which was a reason for the title of our session: "Navigation and Travel in the Arctic: The Power of Tradition." While this suggests a commitment to the preservation of such knowledge, we indicated — in our proposal for this session — that it might be difficult to sustain such knowledge "in the absence of that which gives it meaning; and when it ceases to be useful, it can be lost." This implies that traditional knowledge is in some sense finite or inflexible, which, if it were true, would make it less effective than it has in fact proven to be over a generation and more of economic and technological change. In effect, it does not operate as a closed system, but rather may be a mix of indigenous and borrowed elements.

³ See Kroeber (1948: 612); Boehm (1999).

⁴ An earlier version of this paper was presented at the Fourth International Congress of Arctic Social Sciences (ICASS IV), May 2001, held in Quebec City.

Does it make any difference whether the contemporary Inupiat wayfinding system is characterized as more or less traditional, when the Inupiat wayfinding community does not consider this to be an issue? During my study, I found that it was not the application of non-traditional means to the task of wayfinding that was of concern, but rather the unnecessary loss of traditional knowledge that still remained useful; for example, the spatial knowledge associated with particular places and place names, that was part of a distinctive Inupiat navigational system (see Sonnenfeld, forthcoming).

Much of the traditional knowledge of wayfinding available to earlier generations of Inupiat is still valued, but the system of wayfinding to which this contributed has changed. It has been fragmented and modified in ways that, curiously, may have acted to preserve it as a distinctive Inupiat system, even if parts integral to earlier versions of the system have been lost (eliminated or replaced). However, there is a threshold of loss beyond which the system may cease to be effective. An indication of this is the increased experience of geographic disorientation, which was discussed earlier in this paper, the incidence of which traditional knowledge was intended to minimize.

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