

frustration, aggression, and the nonviolent Semai

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The frustration-aggression hypothesis has provided the dominant paradigm for the psychological study of aggression during the more than three decades since it was first formulated by Dollard and his co-workers. Although the hypothesis has been widely criticized in the intervening years and the original formulation has been subject to numerous revisions and qualifications, the central assertion of a causal relationship between an antecedent frustrating event and the consequent occurrence of an aggressive response remains largely intact. In one or another of several modern formulations the hypothesis continues to inspire a good deal of research and theorizing concerning the nature and sources of human aggression, much of which has significant social and political implications, for example, scapegoat theories of prejudice (Allport 1954) and deprivation theories of social violence (Davies 1962).

Although the frustration-aggression hypothesis continues to be widely employed, a number of researchers have recently argued that it has outlived its usefulness and, citing its inadequacies, have proposed alternative approaches to the study of aggression (for example, Buss 1961; Bandura 1973). In view of this continuing debate and in the hope of contributing to the ongoing search for a more nearly adequate model of aggression, the present paper undertakes to reexamine the frustration-aggression hypothesis in the light of a corpus of ethnographic data. The objective here is neither to explain completely the data at hand, since I will be examining only selected aspects of a complex behavioral system, nor to propose a comprehensive theory of aggression. The goals of this exercise are rather more limited: to gain an increased understanding of the ethnographic material and to explore the implications of any insights thus gained for a new conceptualization of the relationship between frustration and aggression. Toward this end, a model is proposed that draws upon research concerning the psychology and physiology of aggression and emotion in an attempt to organize and synthesize a number of diverse theoretical approaches within a systems-oriented framework.

The empirical data describe a complex of cultural beliefs and associated behaviors that relate to the perception of, and response to, both frustration and aggression

The frustration-aggression hypothesis is examined in the light of a corpus of ethnographic data and is shown to be inadequate to account for the observed behaviors. An alternative model is tentatively proposed that incorporates the frustration-aggression hypothesis, other extant approaches to the study of aggression, and early and current theories in the field of emotion within a systems-oriented framework. This model is then tested against additional ethnographic data.

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among the Semai Senoi, an aboriginal people of the central Malay Peninsula known in the anthropological literature for their aversion to interpersonal violence (Dentan 1968; Alland 1972). These data were the product of fourteen months of ethnographic fieldwork conducted by myself and my wife in West Malaysia in 1973-74.

the frustration-aggression hypothesis

As originally proposed, the hypothesis held that "the occurrence of aggression always presupposes the existence of frustration and, contrariwise, that the existence of frustration always leads to some form of aggression" (Dollard et al. 1939:1). Frustration was thus seen as both a necessary and a sufficient condition for the occurrence of aggression. The proposal was immediately controversial and objections to the hypothesis, especially to the assertion that frustration always culminates in aggression, soon led Miller to "rephrase" the second part of the proposition to read "frustration produces instigations to a number of different types of response, one of which is an instigation to some form of aggression" (Miller 1941:338). He thus explicitly acknowledged the possibility that frustration may lead to behaviors other than aggression.

A number of modern versions of the hypothesis continue to inspire research and discussion (for example, Berkowitz 1962, 1969; Feshbach 1970; Whiting and Child 1953, among others). Perhaps the most influential of these have been the formulations advanced by Berkowitz (1962, 1969), the earlier of which has become a standard reference work in the study of aggression. For the purposes of this paper I shall take Berkowitz's work as representative of current expositions of the frustration-aggression hypothesis, since it provides a relatively clear, concise, and comprehensive statement of this approach to the problem of the genesis of human aggression. Moreover, although he has introduced significant modifications, Berkowitz remains true to the spirit of the 1939 work, holding that "a frustrating event increases the probability that the thwarted organism will act aggressively soon afterwards, and that the relationship exists in many different animal species, including man" (Berkowitz 1962:2). Contrary to Dollard et al., however, he recognizes that "the existence of frustration *does not* always lead to some form of aggression, and the occurrence of aggressive behavior *does not necessarily* presuppose the existence of frustration" (1962:2 emphasis in original). For Berkowitz, then, frustration is neither a necessary nor a sufficient condition for aggression.

A frustration, for Berkowitz as it was for Dollard et al., is "an interference with an instigated goal response at its proper time in the behavior sequence" (Dollard et al. 1939:7; Berkowitz 1962:26, 1969:6). He holds, however, that "goal responses must be in operation, whether implicitly or overtly, and prevented from reaching consummation if there is to be a resulting instigation to aggression" (1969:6). Simple deprivation, then, does not constitute a frustration. A frustration is the *interference* with the gratification of a goal-directed activity, not a state of the organism. Thus, working through the noon hour and missing lunch would not be a frustration unless one intended to eat lunch but was prevented from doing so by some obstacle, either internal or external.

Berkowitz acknowledges that difficulties exist in defining frustration and argues that many of the apparent failures to confirm the hypothesis may be due to the vagueness of this concept. It was recognized early (Menninger 1942:295) that certain antecedent conditions that reliably elicited aggressive responses could only with difficulty be regarded as frustrations, as this term was then defined. Of particular importance in this regard were painful stimuli. An attempt to conceive of pain as a frustration led

Berkowitz to posit "internal responses oriented toward the preservation or attainment of security and comfort," that is, ongoing response sequences that would be interrupted by a painful intrusion (1962:30). Later, however, he altered this conception of aggression-provoking stimuli such that both frustrating and pain-producing stimuli are now seen as subsets of a larger class of "aversive events" that are capable of eliciting aggressive responses (1969:14-15). This is an important distinction to which I shall return later.

As noted above, Berkowitz also largely accepts Dollard's conception of aggression, noting, as did Dollard et al., that the behavior need not be overt but "may occur in thoughts and fantasies, symbolic or direct attacks on animate or inanimate objects, or for that matter, may not seem to be aimed at any target at all" (1962:28). He also explicitly acknowledges the existence of aggression not induced by frustration: "instrumental aggression" (which he terms "learned aggression"). This is behavior oriented toward the attainment of some goal other than doing injury but that employs aggressive behavior as a means to the end (1962:30). Aggression of this type he sees as not necessarily dependent upon a prior frustrating event.

Having briefly sketched Berkowitz's conception of the frustration-aggression relationship, I turn now to an examination of several specific points in the hypothesis. The following discussion focuses on what I see to be the crucial theoretical variables in the frustration-aggression hypothesis: emotion, cognition, and learning. Specifically, the concerns of this discussion are (1) whether or not the emotion of anger is, as Berkowitz suggests, a necessary consequence of frustration and (2) the role of cognition and learning in the process of emotional arousal.

The behavioristic orientation of the original formulation by Dollard and his co-workers saw the relationship of frustration and aggression in a simple stimulus-response framework that had no place for a consideration of emotional variables (compare Mowrer 1960:404). Berkowitz, however, explicitly includes the emotional state of anger as an intervening variable between the frustrating stimulus and the aggressive response. He argues that frustration produces an "instigation to aggression," which is identical with the emotional response of anger and which motivates the aggressive response (1962:28). Of particular interest here are two aspects of Berkowitz's conception of anger: its status as a drive and its ontogenetic status (innate or learned).

In the 1962 work he sees anger as a "motivational construct," a drive "heightening the likelihood of aggressive behavior" (1962:32). This drive, in the presence of suitable releasing cues (stimuli in the environment associated with aggression or with the frustrator), will produce a hostile response (1962:32-33). He alters this view somewhat in the 1969 work, where he holds that "the emotional state may in itself contain distinctive stimuli which can instigate the aggressive reaction, particularly if the emotion is strong enough" (1969:18). Thus, although the occurrence of appropriate aggressive cues in the environment or in thought still increases the probability that an overt aggressive response will occur, the emotional state "energizes" the response and may itself be sufficient to elicit aggressive behavior.

Regarding the ontogenetic status of anger, Berkowitz holds that it may be the primary inborn reaction to thwarting and that aggression may be the innately determined response to anger (1962:47). The connection between frustration and aggression seems to be, for Berkowitz, at base an innate, unlearned response sequence, and he argues that "we must question those psychologists who *insist* that people have to learn to act aggressively in response to a frustration" (1969:5 emphasis in original). While he explicitly recognizes that other factors, most notably learning, may intervene between

the frustration and the eventual response, perhaps producing a nonaggressive response, anger remains the innate, primary, and seemingly inevitable response to frustration.

Although anger and aggression may be the primary responses to frustration, the response sequence may be altered by the effects of learning. Thus, Berkowitz argues, one's interpretation of a given stimulus may be a learned response. He "may or may not perceive another's criticism, for example, as an attack upon himself and he may or may not judge this as a serious criticism or attack" (1962:34). He holds that, given the ambiguity in many social situations, varied reactions are not unusual (1962:42). Learned cognitions, then, help to determine whether or not a given situation is perceived as frustrating.

Learned interpretations may also determine what emotions *in addition to* anger are aroused. Thus, Berkowitz notes that "aggression anxiety" may be evoked in situations where "the individual may perceive some features of the frustrating situation as dangerous and thus believe that he has to hide his hostility if he is to avoid punishment" (1962:34). Alternatively, the frustrated individual "may think that any hostility on his part would be a violation of his moral standards and consequently the aggressive reactions to any anger he feels are inhibited, but this time by guilt feelings" (1962:34). In both of these cases, Berkowitz sees the learned cognitions intervening between the primary emotional response of anger and the behavioral response (aggression or other substitute response). The causal relationship between frustration and anger remains inviolate: given the existence of a perceived frustration, anger appears, for Berkowitz, to be the certain result.

The arousal of anger, however, even in the presence of relevant aggressive cues, may still not result in aggressive behavior if there are other learned response tendencies that are stronger than the instigation to aggression (1962:34). If an aggressive response is elicited, its form is still affected by learning. Thus:

when angered, a seventeenth-century French nobleman might automatically reach for his sword, a nineteenth-century cowboy for his gun, and a twentieth-century Englishman for a pen so that he could write a letter to the London Times (Berkowitz 1962:34-35).

Thus, while the underlying reaction may be innate, its behavioral expression is molded by experience.

From the preceding discussion, Berkowitz seems to see anger as the primary, innate, and inevitable emotional response to frustration. An apparent contradiction appears, however, when his view of the relationship between frustration and the emotional response of fear is examined. Here, according to Berkowitz, the individual's perception of a frustrating stimulus may be important in another way: in the differential perception and interpretation of situations arousing fear and anger. Recognizing that frustration may be an important component of situations arousing fear as well as of those arousing anger, he seeks to specify the conditions that determine whether the dominant emotional reaction will be anger or fear. He argues that fear will predominate in those situations (1) that signify noxious consequences, with the individual anticipating either physical or psychological damage to himself, and (2) in which the frustrated individual sees himself as having low "power" relative to the frustrating agent. The less he is able to control or punish the frustrating agent, the more fear predominates over anger (1962:42-43).

This discussion bears directly upon the two central issues in the frustration-aggression hypothesis: the role of cognition and learning in emotional arousal, and whether or not anger is, as Berkowitz seems to suggest earlier, a necessary

consequence of frustration. From the foregoing discussion of the antecedents of fear and anger, it would appear that in some circumstances Berkowitz does not see anger as a necessary consequence of frustration. Since, in the case of the arousal of fear, cognitive and perceptual factors are seen to intervene between the frustrating stimulus and the emotional response, these factors determine which emotion, whether fear or anger, will be experienced. Nevertheless, in a concluding statement he reiterates the position that every frustration increases the instigation to aggression (anger), and that anger may be the primary inborn reaction to thwarting (1962:47). I shall return for a further consideration of these issues after an examination of the ethnographic data.

the Semai case

The Semai live in small, politically autonomous settlements scattered along the steep mountain valleys that descend from the main range forming the spine of the Malay Peninsula. The economy is based on swidden cultivation of hill rice and manioc, supplemented by hunting, fishing, trapping, and the gathering of a variety of vegetable products from the dense tropical rainforest that blankets the interior of the peninsula (compare Dentan 1968; Fix and Lie-Injo 1975). Although the trading of forest products to the lowland Malays and Chinese brings manufactured goods, especially knives, axeheads, cloth, and some foodstuffs to these upland groups, many remain largely independent and economically self-sufficient.

In this section, I will examine several Semai concepts and the complexes of beliefs and behaviors surrounding them to see what implications they may have for an understanding of Semai nonviolence and for the frustration-aggression hypothesis. These concepts encompass food, sex, and cooperation, perhaps the most important potential sources of frustration arising from interpersonal interaction in this relatively simple and undifferentiated society.

hoin The first and most general of these concepts concerns the Semai view of the satisfaction of wants in general. It translates "to be sated." Thus one can eat, dance, bathe, engage in sex, and so on, until one is completely sated, and this is a desired state. The converse, not to be sated in an activity, has the potential for placing one in physical danger. An unsatisfied person, one with an unfulfilled appetite, is vulnerable to attack by a variety of natural and supernatural beings that can cause injury, illness, and even death. He is liable to attack by ghosts and other malevolent supernatural beings, by animals such as tigers, snakes, scorpions, and centipedes, or he may have an accident and cut himself with his machete, fall from a tree, step on a sharp bamboo, and so on. Ordinarily, however, the consequences of not being *hoin* are relatively minor illnesses and injuries.

The concept of *hoin* is often used in post hoc explanations of the occurrence of illness or misfortune. In such cases, however, the frustrated want was usually only dimly recognized, if it was recognized at all at the time of the presumed frustration. More commonly it is identified in retrospect only after some misfortune has occurred. For example, a fever and general malaise contracted by my wife was explained as the consequence of one of her souls having departed because she had not danced enough at a recent ceremony to become *hoin*. This was a desire that she had been unaware of at the time but one that from a Semai perspective may have reasonably been expected to exist.

In a subsistence economy such as this, states of less than complete satisfaction, especially with regard to food, are not at all uncommon. These are not usually cause for

alarm unless the frustrated want is strongly felt (see *pehunan* below). Nonetheless, one is always urged to carry activities through to complete satisfaction whenever possible to avoid the potential danger of not being *hoin*. The concept may perhaps best be seen as expressing a generalized apprehension with which the Semai view the frustration of an individual's wishes.

These general post hoc explanations derive their subjective credibility from a set of more specific concepts: *pehunan*, *srmglook*, and *sasoo*. These concern the dangers inherent in the frustration of specific and strongly felt wants. The consequences of such frustrations are not at all uncommon and have been witnessed by all. They include serious illness, severe injury, and sudden death.

***pehunan*:** This concept refers to a state of being unfulfilled, unsatisfied, or frustrated in regard to some specific and strongly felt want. One most commonly hears the word in connection with hunger or with a longing for a particular food, but it may also refer to frustration deriving from any unfulfilled want such as sex, tobacco, and so on. A person in this state is spoken of as having "incurred *pehunan*," just as one would incur an illness or injury. Being in such a state places the frustrated party in danger of attack by supernaturals or animals, accidental injury, illness and, ultimately, death (compare Dentan 1968). With *pehunan*, the danger is more immediate, explicit, and serious than in the general case of simply not being *hoin*.

An individual may be placed in a state of *pehunan* by circumstances beyond his or anyone's control, for example, by losing his tobacco pouch while hunting or working alone in the forest. In most cases, however, when *pehunan* occurs it is the result of actions of others. The conditions for the occurrence of *pehunan* are virtually identical with Dollard's and Berkowitz's definition of frustration: interference with an instigated goal-response sequence. The Semai belief, moreover, makes the same distinction between frustration and simple deprivation as do these theorists. Thus, simple deprivation is not sufficient to cause *pehunan*. It requires, rather, that the intent to gratify the want be present and that the goal object be potentially available. Perhaps a few concrete examples will serve as illustrations.

Since the Semai diet is rather monotonous, consisting mainly of rice or manioc and small amounts of wild game or fish, seasonal foods are highly valued. One of the most desired of these is the durian fruit, often described by Westerners as "foul smelling" but highly prized by Malaysians, including the Chinese, Malays, and Indians as well as the Semai. Thus, the durian season is awaited with eager anticipation. The months when there are no durian do not, however, cause the Semai to be in a state of *pehunan*. The fruit is simply not available and, in Berkowitz's terms, there is no "instigated goal-response." However, when the season begins and the ripe fruit first falls from the trees, the danger of *pehunan* is intense. Thus, if a visitor who had not yet eaten durian during the current season were to arrive in a village and see the seeds and thorny shells of the fruit scattered about, his hunger for durian would be aroused and he would be in extreme danger of *pehunan*. It would be necessary for someone to procure a durian for him, which could mean a long walk into the forest in search of a ripe fruit. Nevertheless, this would be required, since only satisfying the visitor's hunger for durian will remove the danger of *pehunan*. In order to avoid any possibility of *pehunan* among residents of a village, the first durian of the season are ordinarily not sold to traders, even though the demand is great and the price is high. Although the trees are privately owned, the first fruits are distributed among the villagers and eaten.

Other seasonal or scarce foods similarly carry with them the dangers of *pehunan*. Meat in general is highly valued, and wild pork is the most desired of all. It is seldom

available, since there were no firearms in the settlement where I lived, and the Semai blowpipe and poisoned dart are not effective against such large and dangerous game. On occasion, however, a wild pig may be killed by a spear-trap or noose-trap. On these occasions, everyone in the settlement, and any visitor as well, receives a share of the meat. To do otherwise would place those deprived in a state of *pehunan*.

Similarly, the fruit of certain trees attracts large numbers of small birds, which are trapped by placing thin, pliable withes coated with sticky wild rubber in the tree branches. When a bird brushes against one of these, it adheres to his feathers and he becomes entangled and falls to the ground. These birds are also a highly desired food but they can only be trapped when the fruit is ripe. Since everyone looks forward to these occasions with great anticipation, when the catch is made, the danger of *pehunan* is great. One of my neighbors, in fact, referred to these birds as "*ca'naa' pehunan*" (*pehunan* food). As in the case of wild pork, the catch is scrupulously divided among the villagers to assure that no one is deprived and thus subject to *pehunan* (in all these cases, the hunter or trapper receives no more than anyone else). As was the case with durian, the danger of *pehunan* arises only when the foods are available, not during the "off seasons."

As noted earlier, the danger of *pehunan*, while resulting primarily from the frustration of a food want, is not limited to it. For example, at the close of the durian season the women of the settlement were buying sarongs and jewelry with the proceeds of the sale of the fruit. My wife mentioned to the headman's wife that she wanted a pair of the gold wire earrings that were popular with the village women. Some time later, after she had purchased the earrings, the headman remarked to me that it was good that I had allowed her to buy them since to have refused her wish would have placed her in *pehunan*.

This incident highlights another aspect of the problem of *pehunan*: the voicing of one's wants. The degree of danger in an instance of *pehunan* increases directly with the intensity of the frustrated want. In some cases, the intensity of the desire can be inferred from the circumstances. Thus, in the cases just described, the intense hunger for pork or durian, when they finally become available, can be assumed from their universal desirability and from the long preceding period of deprivation. Most cases, however, are less clear-cut. The preceding discussion of *ho'in* indicated that dimly felt wants are less dangerous than those that are strongly felt. As a consequence, Semai are reluctant to express directly a desire for anything, since the act of verbalizing the want makes it explicit and increases the speaker's vulnerability to *pehunan* if the desire is not fulfilled. Informants agree that, while an unvoiced want can cause *pehunan*, voicing it greatly magnifies the danger if the request is not granted. People are, therefore, reluctant to ask directly for anything if there is a possibility that it may not be forthcoming. Requests are usually phrased in the form "is there any. . . (salt, sugar, tobacco)?" This allows the other to reply "there is none" without placing the petitioner in such explicit danger (since the "goal object" is presumably not available). However, since even an unvoiced desire can, if unfulfilled, result in *pehunan*, Semai are extremely sensitive to such oblique requests and any reference to an item, especially food, is likely to be interpreted as a request for it.

The Semai are, of course, fully attuned to such nuances, but they can be troublesome for outsiders. Thus, at an early stage in my fieldwork, I encountered a villager one morning at the beginning of the durian season on his way down the mountain to sell three of the fruit to a trader. By way of casual conversation, I remarked "I see your durian are falling (ripe)." In response, he insisted that we open the fruit and eat it on the spot and no amount of protest on my part could shake his insistence. My having taken

explicit notice of the fruit was tantamount to a request for it, and it was necessary for him to fulfill my want if I were to avoid the possibility of *pehunan*.¹

Requests, whether direct or oblique, are usually honored if possible. Refusal to grant a reasonable request could result in charges of stinginess, whereas generosity is one of the most valued of Semai virtues. Additionally, if a request were refused and the frustrated party suffered a serious illness or injury, the person who caused him to incur *pehunan* might be held liable and could be subject to a fine. Finally, to cause someone to incur *pehunan* is to place him in serious danger, and most people, whether Semai or not, do not wish illness, injury, or death to befall their friends, neighbors, and relatives. As a consequence, most requests are honored.

This does not mean, however, that anyone can demand anything and it will be given. There are also factors that inhibit requests. Perhaps the most important of these is the previously noted fact that simply by verbalizing the want the petitioner increases his own vulnerability to *pehunan*. Moreover, if the request is refused and injury befalls him, the consensus is likely to be that he is partially to blame because he placed himself in such a position by making the request in the first place. Thus, a girl who refuses a boy her sexual favors may be seen as partly to blame if misfortune befalls him, but the boy is likely to be seen as at least equally responsible for allowing his wants to place him in such a vulnerable position. The consequence of this belief in *pehunan* is that reasonable requests are usually granted and requests that the donor might be reluctant to honor are seldom made. The result is to decrease the number of occasions in which one person frustrates the wishes of another.

The significance of all this for my discussion of the frustration-aggression hypothesis is that, in those instances where frustration does occur, the resultant emotion in the frustrated party is not anger but is rather fear of the danger to which he has become vulnerable. Moreover, the degree of such danger and hence the intensity of his fear varies directly with the intensity of the frustrated want. This parallels the relationship between frustration and anger described by Berkowitz, who notes that "the strength of the drive whose satisfaction is blocked is one of the parameters affecting the intensity of the emotional reaction to the thwarting" (1962:58). The Semai behavioral response, moreover, is not aggression but is rather directed toward dealing with the danger by securing a spell or charm that the victim hopes will protect him from the consequences of *pehunan*.

***srnglook*:** This concept concerns the dangers inherent in the failure to keep appointments, that is promised arrangements to meet someone or to accompany someone on an outing. Such appointments are usually arranged for some specific purpose, for example, hunting, trapping, fishing, fieldwork, ritual participation, and so on, and a broken promise disrupts or forces postponement of the planned activity. Failure to keep a promised appointment thus usually frustrates the wishes or plans of another. As was the case with *pehunan*, this places the frustrated party in danger. For example, a man is asked and agrees to help a relative in a neighboring village build a new house. He promises to arrive on a certain day, but on the appointed day he does not appear. All those people whom he would have met have incurred *srnglook* and are in extreme danger.

The source of the danger is different in the case of *srnglook* from what it was in the case of *pehunan*. With *pehunan*, there is no particular agent that directs or causes the injury. Informants say it "*just happens*." With *srnglook*, however, there is an extremely powerful and malevolent "demon" who listens for these unfulfilled promises. He may come himself in place of the one who broke his word and attack those left waiting, or he

may send some other agent to attack. In the former case, the attack is sudden and direct: he kills his victim's soul by breaking its neck. Illness follows immediately and death usually occurs within hours. In the latter case, the attacker may be an animal or another supernatural being that causes illness, accident, or death.

Sudden accidental death or death following a short, violent illness is often retroactively attributed to *srnglook*. Thus, when a woman was killed during a storm by a falling tree, one explanation offered was the possibility that someone (unknown) may have said that he was going to visit the village and then failed to do so.²

On another occasion, a group of men had agreed to meet to go bird trapping. On the appointed day, one man from another settlement failed to arrive. The rest of the group went home, afraid to go on without him because they feared the *srnglook* demon would come in his place and attack them. There are a sufficient number of sudden deaths from accidents and illness to make the threat of *srnglook* a reality not to be taken lightly.

As with *pehunan*, there are ways of lessening the danger. There is a spell to counteract the danger of *srnglook*; however in most cases its efficacy is not sufficiently certain to relieve the fear and allow the aborted enterprise to continue. Similarly, a person who finds himself unable to fulfill his promise may walk a short way along the trail he would have taken, shout a charm, and spit or toss a stick after his departing fellows. This deceives the *srnglook* demon into believing that he is actually going along and thus preserves his friends from attack. Of course, this only alleviates *their* fear if they know he has done it.

As with *pehunan*, the dangers of *srnglook* are sufficient to cause the Semai to consider carefully the consequences of their actions. One does not make agreements lightly, and an agreement made is an agreement to be kept, if at all possible. To do otherwise is to place one's kin and co-villagers in danger. Moreover, more blame attaches to one who causes another to incur *srnglook* than is the case with *pehunan*. In one case reported to me, a heavy fine was levied against a man who failed to keep an appointment, when the daughter of the man he was to meet died suddenly. These possible consequences of not honoring one's agreements cause the Semai to be highly responsible both in not making rash promises and in keeping those promises that are made. As with *pehunan*, this undoubtedly also results in a decrease in the overall potential for frustrations arising from interpersonal interactions.

With *srnglook* as with *pehunan*, in those instances where someone is frustrated by the actions of another, the resultant dominant emotional response is not anger, but fear.

sasoo The final Semai concept that I will examine concerns frustrations arising from sexual interactions. It is related to both *pehunan* and *srnglook* and contains elements of both. The term *sasoo* refers both to a condition of psychiatric disorder and to the supernatural being that is believed to cause the condition. Symptoms most often associated with the disorder are excessive fearfulness, confused thought, depression, and periods of dissociation. As with Western nosological categories, the disorder is not defined exclusively in terms of symptoms, but also with reference to preceding events seen as etiological factors. As with *pehunan* and *srnglook*, one is said to "incur *sasoo*" as a consequence of certain actions by others, in this case, actions leading to sexual frustration.

There are at least two ways in which one can incur *sasoo*. The first is by a specific type of *srnglook*: failure to keep a sexual rendezvous. A young man in my village suffered periodic psychotic episodes; his condition was believed to have resulted from the failure of a girl to keep a promised rendezvous. She had sent word to him that she would come to his house during the night but, although he waited for her, she never

arrived. In a situation such as this, a malevolent "spirit" assumes the girl's appearance (or the boy's appearance if the one left waiting is a girl) comes to him in a dream, has intercourse with him, and enters into his body. While she is within him, he manifests the symptoms of sasoo.

The second way in which one can incur sasoo is by having one's desire for a particular sex partner thwarted. One's initial advances may be rebuffed, thereby placing one in a state of *pehunan*, or one may be rejected by a spouse or lover, thus leaving the victim unsatisfied (not *hoin*). In either case, attack by a sasoo woman (or man) is likely, with the results described above. Thus, according to a Semai shaman, "one should not want a [particular] woman too much or think about her all the time, there is danger of sasoo."

Although there are techniques for exorcizing malevolent spirits, a sasoo spirit is very difficult to remove. It may remain within the victim permanently or return periodically for the rest of his life and therefore cause him to be chronically or episodically sasoo.

In instances of sasoo, as with *pehunan* in general, the responsibility is largely the victim's. He should keep his emotions under control and not desire too strongly. Again, when a frustration such as this occurs, the emotional response of the victim is predominantly fear rather than anger.

In all of these instances, of course, the behaviors associated with these concepts have far-reaching social implications. In addition to reducing the likelihood of frustration, they also contribute to the maintenance of amicable social relations, for example, promoting the equitable distribution of goods. For the present purposes, however, I am primarily concerned with their psychological implications.

discussion

Having completed my brief excursion into Semai cultural reality, let me now attempt to summarize the main points of Berkowitz's formulation of the frustration-aggression hypothesis so that it may more easily be examined in light of the ethnographic data:

- I. A frustrating event increases the probability that the thwarted organism will act aggressively soon afterwards and this relationship exists in many animal species, including man (Berkowitz 1969:2)
- II. The basic reaction may be innate and of the form:
Frustration → Aggressive Drive → Aggressive Response
State (Anger)
 - A. every frustration increases the instigation to aggression (anger)
 - B. anger may be the inborn reaction to thwarting, and
 - C. aggression may be the innately determined response to anger (Berkowitz 1962:47)
- III. Learning experiences may intervene and possibly alter the course of the reaction by:
 - A. affecting the individual's interpretation of his immediate situation and thus determining:
 1. whether he perceives frustrations and if so
 2. which of his drives are thwarted.
 - B. determining whether any other response tendencies are aroused that are stronger than the elicited aggressive responses, and
 - C. governing the exact nature and intensity of the aggressive and non aggressive responses (Berkowitz 1962:49).

With Statement I, there can be little disagreement. Thirty years of experimental research seem to have demonstrated beyond doubt the existence of such a relationship. Moreover, the cross-specific generality of the relationship, observed in animals as diverse as rats, pigeons, monkeys, and humans seems to argue for an innate mechanism linking the frustrating stimulus and the aggressive response as suggested in Statement II. Having granted this, however, I feel that this vast body of research has been notably unsuccessful in clarifying the precise nature of such a relationship.

Statement II is clearly the heart of the hypothesis, yet the ethnographic data appear incompatible with such an explanation. We have seen a variety of cases where a frustration arising in interpersonal interaction produces not anger, as predicted by Statements II (A) and II (B), but rather fear. Moreover, the behavioral response is not aggression as predicted by II (C) but is rather a variety of coping responses (charms, spells, exorcisms) directed toward dealing with the perceived threat and the fear it evokes.³

How are we to account for such a situation? One might argue, with regard to Statement III, that the emotion of anger is present but is not expressed in behavior due to the presence of other, stronger learned response tendencies. Such an explanation is, however, unsatisfactory on several grounds. First, the contention that the Semai behave as they do simply because they have learned these responses to these situations provides no basis for the prediction of behavior in other situations (a point to which I shall return later). Second, such an explanation renders the core postulate of the frustration-aggression hypothesis (the existence of a causal relationship between frustration and aggression) entirely superfluous (a position taken by Buss 1961; Bandura and Walters 1963; Bandura 1973; and others). Surely any behavioral outcome, including aggression, could be explained as the enactment of learned responses. At most it would seem necessary to posit an innate underlying response sequence only to explain why the individual is motivated to do *something* in these situations. This brings us squarely back to the question of the nature of the underlying response sequence and of its motivational properties.

According to Berkowitz, a crucial link in this sequence is the emotional response of anger to a frustrating situation. This emotional state has specific motivational properties: it is an "instigation to aggression." Let us, then, examine more closely the concept of anger and, briefly, the concept of emotion in general.

Clearly, an attempt even to summarize the immense body of theory and research on the subject of emotion is beyond the scope of this paper. I shall, instead, confine myself to a brief discussion of two aspects of emotion upon which most researchers seem to agree: that emotion has at least two aspects, a physiological state of the organism and a subjectively perceived feeling-state. Numerous hypotheses have been proposed to explain the relationship between these two aspects of emotion. A brief summary of two early approaches to the problem will provide a bit of background.

the James-Lange theory In the late nineteenth century, William James and Carl Lange independently proposed a hypothesis concerning the relation between the subjective feeling of emotion and the physiological state of the organism (James 1890; Lange and James 1922). In essence, they proposed that the subjective experience of emotion is merely the individual's perception of his own internal state and motor responses triggered by a stimulus. Thus, feeling afraid is merely feeling one's dry throat, pounding heart, labored breathing, tensed muscles, and nothing more. From this view, there should be a distinct physiological state corresponding to each subjectively perceived emotion. However, even with the sophisticated techniques available to present-day physiologists, attempts to identify such diverse bodily states have met with little success.

Cannon: the fight-flight reaction The inability to identify discrete physiological states corresponding to different emotions was among the criticisms leveled at the James-Lange theory by Walter Cannon (1927). In proposing his own theory of emotion, Cannon saw neural and endocrine structures operating in emergency situations to

mobilize the organism for action. This was the "fight-flight response," which included increased pulse rate, elevation of blood pressure, increased respiration rate, release of stored sugar for use by the muscles, and so on. These reactions, apparently associated with the release of adrenalin into the bloodstream, prepared the organism to run or fight. Cannon argued that this *same* physiological state was associated with subjectively *different* emotions, specifically with fear and anger. If this were the case, perception of one's internal state could not be synonymous with subjective emotion.

Various attempts have been made to resolve the differences between these two approaches, and a good deal of research has been directed toward discovering the physiological correlates of the various emotions. At present, the situation appears to be much more complex than Cannon supposed, but nothing approaching the physiological specificity of the James-Lange theory appears likely.

What, then, is the relationship between an individual's physiological state and his subjectively perceived affect? How do people recognize and define their emotional states? At least a partial answer is suggested by a series of experiments conducted by Schachter and Singer (1962). Briefly, the experiments were conducted as follows: with suitable control groups employed, groups of subjects were injected with epinephrine (adrenalin), a drug that produces autonomic arousal, and either informed, misinformed, or not informed about the physiological effects to be expected. The subjects were then placed in a room with the experimenters' confederate, who behaved either angrily or euphorically. In general, those subjects who were misinformed or not informed concerning the effects of the drug described their emotional response as anger if they were exposed to the angry confederate and as euphoria if they were exposed to the euphoric confederate. Subjects who were correctly informed about the expected effects of the drug reported little subjective emotion in either situation. In a later experiment, researchers employed subjects who were injected with either epinephrine, a placebo, or chlorpromazine (a drug that depresses autonomic arousal). They found that emotional expression (in this case, amusement) varied directly with the degree of physiological arousal, with the chlorpromazine group expressing the lowest level of emotion (Schachter and Wheeler 1962). These experiments suggest that the experience of a subjectively perceived emotion is dependent upon the existence of a state of physiological arousal, but *which* emotion an individual experiences is defined on the basis of cognitive factors including his perception and interpretation of his arousal state and of the situation in which he finds himself.

These experiments, in which subjects similarly aroused physiologically were induced to experience emotions as subjectively disparate as anger and euphoria, seem to indicate either that people cannot discriminate internal states well or that similar arousal states underlie a variety of subjectively different emotions (or perhaps both). In any case, it appears that given a state of general arousal cognitive factors are decisive in determining which specific emotion will be subjectively experienced. This, in turn, suggests the possibility that a single model may be adequate to deal with the general problem of emotional arousal or, at the very least, to account for the genesis of a variety of different emotions. For the purposes of this paper, however, the model will be restricted to only those emotions most relevant to the frustration-aggression hypothesis and to the ethnographic material: fear and anger. The model tentatively proposed below sees the experience of these emotions, and their behavioral manifestations, as products of the complex interaction of systems on different levels of organization: physiological, psychological, and sociocultural. The model thus subsumes, but is not limited to, the phenomena dealt with by the frustration-aggression hypothesis.

a systems model of emotion⁴

Drawing upon the work of Cannon (1927, 1929), Selye (1956), and others, I propose that a large class of "aversive events," events that are frustrating, pain-producing, threatening, that is, events that require an immediate response by the organism for maximum "survivability," induce in the organism a generalized state of physiological and psychological arousal. This arousal state prepares the organism for a variety of possible responses. This reaction is common to a great variety of animal species, including man, but in most it remains a comparatively undifferentiated behavioral system.

This response system is probably phylogenetically very old. Indeed, it is unlikely that survival would be possible without some mechanism that would, in the presence of a noxious stimulus, instigate a behavioral response directed toward avoiding or overcoming the stimulus. Some such mechanism clearly exists in the most primitive organisms and phylogenetically predates the evolution of higher nervous systems with their more complex psychological processes and cognitive functions. That some such mechanism is also ontogenetically prior to the development of complex cognitive processes in humans is suggested by the existence of so-called "innate fears" in human infants: the undifferentiated agitation induced by loud noises or loss of support (compare Watson 1920; Bridges 1932). The basic reaction can thus apparently operate without the operation of higher cognitive processes, even in humans.

In lower animals, much of the response may remain at this level, largely unaffected by cortical mediation. In man, however, cognitive processes are quickly brought into the process to evaluate the situation. The complexity of these processes and their various effects on the final behavioral response may account for the frequent incomparability of the results of experiments utilizing animal and human subjects. The relative simplicity of the process in animals led theorists to accept the oversimplified stimulus-response model of emotional arousal exemplified by the frustration-aggression hypothesis.

In humans, this complex state of arousal is ordinarily perceived as emotional arousal, perhaps, in the absence of adequate situational cues, as generalized anxiety. (The similarities between fear and anxiety have long been recognized, with many researchers viewing anxiety as fear without an objective focus.) The specific emotion the individual experiences is determined on the basis of a cognitive appraisal and interpretation of the situation in which he finds himself. This "situation" includes both the objective stimulus and the arousal state itself. The individual evaluates and interprets these in the light of his personal history of culturally patterned and idiosyncratic experience, including his knowledge of the situation and culturally learned beliefs and values.

Culture, then, while not the only source, is a major source for the attribution of *meaning* to situations inducing arousal. This attribution of meaning is central to the process of evaluation and interpretation that determines which specific emotion is experienced. Thus, cultural beliefs define certain situations as threatening and the appropriate emotion as fear. Other situations may be defined as thwarting and the appropriate emotion defined as anger. Similarly, the state of arousal is itself a part of the situation as it is apprehended by the individual and, as is argued below for the case of the Semai, may also be variously interpreted. It may, in the process of enculturation, come to acquire a particular meaning that influences the individual's perception and interpretation of the total situation. Emotion, then, is a function not only of the "objective" situation, but rather of the whole person including his past history and stable response patterns, in interaction with an environment that is itself culturally constituted.

The definition of a particular subjective emotional state out of the state of generalized arousal may well initiate secondary physiological reactions that prepare the organism for more specific behavioral responses. This may account for the reported differences in the physiological states characteristic of fear and anger (Ax 1953; Funkenstein 1955). These may be secondary differences elaborated on the basic arousal state.

The subjective emotion, once defined, does, as Berkowitz and others have argued, motivate behavioral responses. It does not, however, determine a specific response. The cultural milieu defines the appropriate behavioral response to a particular emotion. The individual learns, in the course of his enculturation, which behaviors are appropriate to particular situations and emotions and it is these behaviors that are motivated by the emotional state (compare Bandura 1973). Thus in one cultural setting the appropriate response to fear may be flight, in another, attack.

the Semai revisited

Before reexamining the ethnographic data in the light of the model just proposed, I must make explicit an assumption concerning the process of emotional arousal as it occurs among the Semai. Presentation of the bulk of the evidence underlying this assumption is beyond the scope of this paper but it will be presented in a subsequent paper. This assumption is that, in the process of enculturation, Semai learn to perceive the state of general arousal itself as threatening. That is, conditioning in infancy and childhood leads them to fear their own emotional arousal. A compatible opinion is expressed by Dentan, who notes that Semai children "apparently learn to fear their own aggressive impulses" (1968:60). The following discussion is devoted to examining the implications of this assumption as it relates to the ethnographic data and to the model just proposed.

My contention is that in the three ethnographic examples examined (*pehunan*, *sringlook*, and *sasoo*), a frustration evokes a state of arousal, which is itself perceived as threatening. This perception, in turn, lends subjective credibility to the specific cultural beliefs that define the particular situations as dangerous, that is, the frustrating situation *feels* threatening because the individual has already learned to fear the state of arousal (compare Spiro 1967:71-76).

This perception and interpretation of the arousal state, together with the cultural beliefs that define the objective situations as threatening, are employed in the cognitive evaluation of the total situation as one of danger. The subjective emotion thus experienced is predominantly fear and the resulting behaviors are directed toward alleviating the danger and the fear. Such behaviors, as we have seen, usually involve the securing of spells or other types of supernatural intervention to ward off the expected attack.

What advantage does such an explanation confer over one that accounts for the behavior entirely in terms of learned responses to particular situations? One might argue that the preexisting beliefs that define *pehunan*, *sringlook*, and *sasoo* as threatening are sufficient to evoke the subjective emotion of fear and to motivate the previously learned behaviors. Such an explanation does not, however, provide any basis for predicting behaviors in other situations, whereas the model just proposed does permit such prediction.

If, as suggested by Schachter's research, individuals have difficulty discriminating among internal states, or if the same or a similar pattern of physiological arousal underlies a variety of specific emotions, and if for the Semai the arousal state is itself viewed as threatening and evokes the subjective emotion of fear, which most

researchers see as a noxious effect then we would expect that the arousal of *any* emotion would be inhibited, in a negative-feedback relationship, by the simultaneous arousal of subjectively perceived fear. With one notable exception that will be examined later, this is precisely the case. To an outsider, one of the most striking features of life in a Semai settlement is the even tenor of everyday existence. Emotional outbursts virtually never occur: husbands and wives seldom quarrel, neighbors do not argue, children seldom fight (and even their play is restrained), mourning is subdued, even laughter is restrained. In short, emotional behavior of all sorts is manifested at a very low level.

It might be argued that emotion exists but is repressed and not expressed openly due to the operation of cultural norms. If this were the case, however, then an increase in emotional behavior would reasonably be expected to occur under the influence of alcohol (compare Horton 1943). Aboriginally, the Semai neither produced nor used alcohol or any other intoxicant. However, in recent years certain lowland groups under the encroachment of surrounding Malays and Chinese have experienced serious social and cultural distortion and have begun to use alcohol. In one of these settlements, where I lived for three months, consumption of inexpensive palm "toddy," an alcoholic Malay beverage, had progressed to the point where perhaps half of the adult men were intoxicated nearly every evening. Nonetheless, little or no increase in the overt expression of emotion was evident. For example, in this very large village with a population of over two hundred, not a single fight or serious argument occurred during the period of my residence there.

The model further predicts that anger, when it occurs, will be accompanied by the simultaneous arousal of fear. This prediction is difficult to evaluate directly since anger is so rarely expressed; however, the ethnographic record does provide some indirect evidence in support of it. This inference is drawn from the fact that Semai tend vastly to exaggerate (and to fear) the possible consequences of their anger. For instance, when asked why one does not spank a misbehaving child, the typical Semai response is "he might die" (compare Dentan 1968:58). Several informants alleged that striking a child is likely to cause an abscess in the chest which may burst and cause death. A similar response is given to the question "would a man hit his wife if he were angry?": "no, she could die."

In another instance, when charges of dishonesty were made (anonymously) against the headman of a neighboring settlement, government officials asked the residents of surrounding settlements if the charges were true. Although nearly everyone in the area had been victimized by this man over the years, no one would give evidence against him. When I asked why, I was told that "if we send him to jail, his relatives will come here and kill us all." Given my knowledge of the Semai, such a response is entirely beyond the realm of possibility, yet such was their perception of the consequences of their anger at this man.

One final example should suffice to illustrate this point. Although the Semai recognize that their primary hunting weapon, the blowpipe and poisoned dart, is not effective against large game animals, they believe that a single dart shot into a human means swift and certain death. Given the limited range of the weapon and the fact that one must be looking along the barrel to shoot it, it would be virtually impossible to shoot someone accidentally. Such an occurrence would almost certainly have to be deliberate, the consequence of anger. Here again, the perception of the result of such anger appears to be exaggerated and inconsistent with reality.

If the preceding analysis is correct, that is, if subjective fear increases with general arousal and inhibits the arousal of other subjective emotions, then in the presence of a

continuing arousal-inducing stimulus, the state of general arousal and the corresponding subjective fear should continue to increase in intensity until panic occurs.

Support for such a prediction comes from the Semai response to the frequent violent thunderstorms that sweep down the mountain valleys. These storms, accompanied by high winds, torrential rains, lightning, and deafening thunder, are somewhat dangerous and rather frightening, even to a non-Semai. Still, the Semai reaction seems vastly disproportionate to the objective threat. As the storm approaches, people begin chanting spells that direct the thunder spirit to pass by the village. Resin incense is burned as an offering to the thunder. As the storm builds in intensity, activity becomes more frantic until, if the storm persists, people begin to panic and run blindly into the forest (which is even more dangerous due to the hazard of falling trees). During a particularly violent storm that I experienced, my neighbors were dashing wildly about shouting "we are all going to die; we have to run." When my wife asked "where are you going to run?," a woman answered "just run." Several people did, in fact, panic and run away. This progressive escalation of subjective emotion from fear to outright panic appears to support the prediction of the model.

conclusion

At the outset, two interrelated objectives were stated: to gain an increased understanding of the ethnographic material and to explore the implications of any insights thus gained for a new conceptualization of the relationship between frustration and aggression. Beginning with the venerable frustration-aggression hypothesis and drawing on ethnographic data and on early and recent theories and research on the nature of emotion, I have suggested that the question of the nature of the relationships among frustration, anger, and aggression may be subsumed under a broader theoretical matrix dealing with the general problem of emotional behavior. From this perspective, the frustration-aggression hypothesis is neither wrong nor irrelevant, as argued by many critics. Rather, it is vastly oversimplified, attempting, as it does, to deal with the problem of the sources of human aggression in what is essentially a linear stimulus-response framework limited primarily to psychological phenomena.

This paper proposes an alternative framework within which an attempt has been made to achieve a partial synthesis of several extant approaches. This model views emotional behavior as the product of the complex interaction of hierarchically organized systems and emphasizes circular rather than linear causality. Utilizing this conceptual framework, I have drawn upon analytical research directed toward various processes at particular organizational levels: physiological, psychological, and sociocultural. Thus I have attempted to incorporate the perspectives of Cannon and Selye (primarily physiological), Schachter et al. (physiological-psychological-social), Dollard and Berkowitz (psychological), Bandura and Walters (psychological-sociocultural), and others to produce a synthetic and hopefully more realistic model of the process of emotion in general and of the frustration-aggression relationship in particular.

This model was then employed in an attempt to understand better the genesis of, and the relationships between, the subjectively perceived emotions of fear and anger and their behavioral concomitants in a specific ethnographic context. In so doing, I have attempted to identify some of the significant variables, including physiological states, psychological processes (especially cognition and learning), patterns of social interaction, and culturally defined beliefs and values. Application of the model enabled

the prediction of behaviors in contexts other than those from which the model was initially drawn, and these predictions were largely supported by additional ethnographic data.

notes

¹ This incident also further illustrates the distinction between *pehunan* and *hoin*. A small amount of the fruit would have been sufficient to eliminate the danger of *pehunan* but might still have left us unsatisfied (not *hoin*). To avoid this possibility, he insisted that we eat all of the fruit.

² The other explanation offered was that she may have offended the spirit of the thunder, a likely explanation since she was killed by a thunderstorm. The major evidence in favor of the *srnglook* hypothesis was the sudden and violent nature of the death, a hallmark of the *srnglook* demon.

³ One is reminded of Malinowski's argument concerning the anxiety-reducing properties of magical behavior.

⁴ This formulation, based upon the ethnographic data and upon an acquaintance with the work of the researchers previously cited, was largely completed prior to my undertaking a survey of the psychological literature on emotion. Since this paper is not primarily concerned with a review of emotion theory per se, I have not attempted any systematic comparison with other approaches. This model does, however, appear to be compatible with several cognitively oriented approaches to the problem of anxiety, particularly Mandler (1972) and Epstein (1967,1972).

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