

SECTION 2

THE FORMATION OF COOPERATIVE GROUPS

5. JOINING A GROUP OF YOUR ANCESTORS

We slow our time machine as we pass 200,000 years ago. From that time to about 80,000 years ago, our ancestors became sufficiently like us to be called *Homo sapiens*. There's no point in stopping, as we know little about their behavior, except that they lived alone or in small family groups.

As we cruise along, we notice a gradual change that becomes more common about 35,000 years ago. We see people living in cooperative groups of from fifteen to one hundred members, about the size of a modern troop of chimpanzees or baboons.

We know a quite a bit more about this period of human history from the remains these people left. In addition to their skeletons, we have samples of their tools and weapons. We know the animals they hunted and the animals that hunted them. We even know the plants they ate from the pollen we've found. Their natural environment seems to be quite similar to ours.

These people were very much like us. Their bodies were essentially identical with ours. What's more, their brains were as large as ours, so they could think just as well as we can. Give them a bath, a haircut, and modern clothes, and you could take them anywhere.

So, what change permitted them to progress from a solitary existence to membership in a cooperative group?

This question is the reason for the rather long introduction in the first section of this book, which traces the early evolution of the human brain. The principal change was not in external conditions such as climate. It was not in the predators or prey in their environment. Their bodies did not change significantly. Neither did the size of their brains. The only change was in the gradual increase in the volume of information in their brains. Although this process was continuous over thousands of years, an examination of their brains at three points in time might show what was going on.

The early human brain evolved to serve only the person of whom it is a part. It responds emotionally to stimuli in ways that increase that person's chances of survival. It has no mechanism for cooperation with other people. Stronger people take whatever they want from weaker people. People who are constantly competing with each other for their own survival cannot live together.

The early human brain continued to grow in size. This increase in the number of neurons in the brain increased the strength of the intellectual signal formed when a stimulus was detected. At some point, the intellectual signal in some people strong enough to have some control over the emotional signal. These people could control their natural response to some stimuli, at least to some extent and under some conditions. Eventual

enough people had sufficient control over their natural emotional responses that they could form a cooperative group. This can be considered the beginning of civilization.

The next phase is still going on. Although the brain has not increased in size significantly in the past one hundred thousand years, it now contains much more information learned in that period. As a result, there has been a slow, irregular but sure increase in the intellectual signal, which makes it possible for people to live together in larger, more complex groups.

Sitting in a warm room, well fed and secure, it's almost impossible to know what life was like for our ancestors. Reading about them won't help much in understanding what they did and why they did it. For that, you must go back and live with them for a while. So sit back, loosen your clothing, relax, and let yourself be transported back to a grassy plain near a stream about 35,000 years ago.

You are immediately struck with a frightening realization. You are all alone in a hostile world. To survive, you must find food. You can't buy it at the local supermarket; you must gather it or kill it yourself. What's more, since you have no way to store food, you must do the same thing almost every day. And if you do succeed in obtaining food, every other predator, whether a big cat, jackals, insects, or other people, will try to take it away from you. And most of the time they will succeed.

Even more nerve-wracking, you must be constantly alert to avoid becoming food for more powerful animals, with nothing more to defend yourself than a club, a rock, and a pointed stick. You also must defend yourself from other people who might kill you to get the remains of some animal you scavenged. Your survival is only a matter of time until you walk under a tree where a leopard is hidden, are trapped by a pack of hyenas, or starve to death.

It isn't easy to think straight when you are ravenously hungry. So one day you cautiously approach a small group of people. You're exhausted and famished, but ready to flee at the first sign of hostility. Will they give you a bit of food? Or, almost beyond hope, will they let you live with them?

Think, no, *feel*, what this decision means to you. Acceptance by the group will greatly increase your chances of survival. Rejection is a sentence to an early and unpleasant death. You can't control your trembling. If you can feel yourself in this situation, you have identified one of the most powerful forces affecting your modern behavior. You now understand why social acceptance became a human need almost as strong as that for the physical items required for survival. You must do everything possible to gain and keep the social acceptance of a group because the alternative is death.

You have arrived at a good time. The group is weak and needs all the help it can get against the predators, including other people, in the area. They accept you.

How do you feel now? As your chances for survival have greatly improved, you feel intensely good. If the decision had gone the other way, you would have felt intensely bad.

In addition to your fear of being pushed out of the group, another worry begins to nag at you. Your survival depends on the survival of the group. What are its chances?

All groups of all sizes and all types, from street gangs to professional societies, are formed to achieve some objective that its members cannot do as well on their own. The more desperately they need that objective, the stronger the force that holds them together. The members of your new group have the most powerful of all objectives, that of survival, so the force holding them together is very strong.

There are also strong forces that weaken or destroy a group. Groups usually break up because of personal quarrels among their members. A person's natural response to stimuli didn't change when he became a member of a group. He still had difficulty controlling his natural responses to stimuli. When he sees a benefit, such as a weapon or a better sleeping place, he tries to take it away from a weaker member. The members react violently to every threat by another member, no matter how small or unintentional it might be. At some level, this dissension among its members causes a group to break up. Still happens in modern groups.

So two powerful forces act on every group. The common objectives of the members hold it together. The conflicts among its members tear it apart.

In your thinking about the nature of groups, you realize that the group values those members who make contributions that are needed for its survival at that time. The greater the contribution, the more the member is valued. Your early group needs warriors to defend it from predators and enemies. It needs hunters and gatherers to provide it with food. You can also see that the value of a member will change as the needs of the group change. A group might value warriors highly at one time and merely tolerate them in peacetime. The high value it gives to hunters at one time might be assigned to farmers when conditions change.

The other qualities required for membership are more easily seen in their negative form. They are the three "I's;" incapacity, incompetence, and incompatibility.

Your group needs enough strong, healthy members to do all the things required for its survival. Yet not all members are able to make a full contribution. This might be acceptable in children who will make a larger contribution when they are older. But what does the group do with a valued warrior who is unable to contribute much since he was wounded in a fight? And what about the female who was once valued for gathering, but is now too weak even for preparing meals? These early groups supported these "retirees" when conditions permitted. However, in tough times it could not retain members who use up more resources than they contribute. At some point, the other members expel them from the group.

You recall that even in relatively recent times, the Spartans exposed deformed babies to die. At a time when most women could not provide for themselves, a Hindu widow was burned to death on her husband's funeral pyre. To this day some military patrols operating in enemy territory will abandon those members who are wounded or too weak to keep up.

Incompetent members also weaken the group, reducing the chances of survival of all its members. The group doesn't need members who spook the prey on a hunt, or who make arrowheads that fall off, or who gather plants that make them sick. Not long ago military sentries who fell asleep on duty were shot.

Another serious problem is incompatibility. The personal quarrels among members have already been mentioned. Then there are those who never agree with the leaders. Some undermine the leadership by criticism or grumbling. By pulling in other directions, they reduce the strength of the group.

Although the requirements for membership in an early group were not spelled out, everyone understood what they were. A member must:

- Contribute at least as much as the resources he uses up
- Not harm the group through incompetence
- Not weaken the group through dissension

For weeks you anxiously watch the reaction of the other members toward you, trying to determine if they intend to let you stay or push you out. Before this minute, you never realized how important a simple nod of the head or a grunt of disapproval could be. You can relax now. They will let you stay.

6. HELPING THE GROUP SURVIVE

In your group of our ancestors, you are one of twelve adult males, fifteen adult women, and ten children of various ages. There was another child until a few days ago when she was carried off and eaten by a leopard.

Although membership in an early group increased a member's chances of survival, it didn't ensure it. The group itself often had a hard time surviving. Your group is one of those in trouble. There hasn't been enough rain. The women work from dawn to dark, but there isn't enough food to be gathered. The hunters return with little or no prey. Your people try to hunt and to gather food farther away, but are stopped by other groups who are defending what little they have. There simply isn't enough food for everyone. What's to be done?

The headman of your group is huddled with the wise old man. From their earnest appearance and signs of agitation, they must be discussing the problem. Yet everyone already knows what the decision will be. Some must die so that others might live. The group will abandon some of its members. The only questions are how many will be driven from the group and who they will be.

You also learn that the victims are not chosen by some impartial lottery. The headman and the wise old man will select the person they consider least valuable at this time, then the next least valuable, and so on. So there is some informal hierarchy of value among members based on their contribution to the group's survival. The leaders will abandon the members at the bottom of this hierarchy. You recognize that this also occurs in modern corporations where the top executives decide whom to discharge when business is bad.

While nervously awaiting the decision, each person is eyeing everyone else, mentally comparing his or her value to the group with theirs. Everyone describes the contributions he or she makes to anyone who will listen. Some cautiously mention the shortcomings of other members. One grumbles about the older members of the group. This is something of a surprise because, even in these times of scarcity, you saw him give them a bit of his food. But now he's tired, hungry and scared. He says they are using food the younger, healthy members need. He thinks all three of them should be abandoned. It doesn't matter that one is his aunt who raised him.

Everyone grumbles about those they think are incompetent. They don't do their share of the work, or if they do, they don't do it right. Especially the guy who fell asleep on guard duty and let the hyena steal some of the bones they had scavenged. Who needs him, anyway?

Then there's that big, strong guy who's always taking things from others. He just can't control himself. He's as ferocious as a lion when they have to fight their enemies, but he's more trouble than he's worth in these trying times.

The constant buzzing of an insect can be worse than the pain of a wound. When Zak isn't complaining about the lack of food, he buzzes that the headman doesn't know what he's doing. The group should have stayed where it was or it should have moved in the other direction. Well, the group doesn't need him, either. And do we really need all these children?

As you await the fateful decision, your teeth are chattering though the night is mild. Even as part of a group, you feel alone and helpless. There's no one you can turn to for help. When you threw up from eating rotting food, there was no doctor to call for help. When the big guy pushed you out of your sleeping place, you couldn't call a cop. And if you want to eat meat, you can't get it from a local butcher; you have to catch and kill the animal yourself.

You keep wondering what will happen to you if you are pushed out of the group. You wouldn't be able find enough plants to eat, even if you knew which were edible. You couldn't trap enough small animals to survive. If you don't die of starvation, a leopard or a pack of wild dogs will kill you. The only thing that stands between you and an unpleasant death is your membership in this group.

The alternatives are now crystal clear. Your survival within the group is difficult, but your survival outside the group is impossible. You desperately want, in fact, need, to be a member of a group. So you have now made another important discovery about modern behavior. You have learned why almost everyone still has such a strong need for social acceptance. Even though survival is now seldom at stake, most people still feel the ancient need for social acceptance.

The deadly deed is done. How do you feel when you learn that you are not among those to be pushed out of the group?

7. LIVING IN A HIERARCHY

You already knew that every group of hunting animals has an informal hierarchy but never thought much about how it formed and how its members behave toward each other. Back home you thought of it as some friends going off together in hunting season to have a good time and to share the game they killed. Your short stay in a small ancestral group has been very instructive. You now realize that your human group behaves like other groups of hunting animals. Each member responds naturally to the stimuli affecting his survival.

These natural responses are pretty ugly. The creature with the best combination of strength and smarts does anything it pleases. This “alpha-male” consumes the best food, takes the best sleeping places, and has the most desirable sex partners. Then there’s a beta-male who takes what he wants from everyone except the alpha-male, and so on through the Greek alphabet. Even chickens have a pecking order. Males top most animal hierarchies except those for hyenas, where the pack leader is a female.

You can see that brutality has survival value for those near the top of the hierarchy. They do whatever contributes to their survival, regardless of its effect on other members of the group. They keep their privileged position by force, killing or injuring any member that challenges them. Every member knows its present position in the hierarchy. Lower-ranking members show submission to their superiors or suffer painful attacks. Those near the bottom of the hierarchy are usually hungry and in constant fear of being abused. The headman showed you he was boss the first day you arrived by knocking you down.

The “government” of the group is based entirely on personal force. There’s no place to appeal for mercy or to punish an infraction of the law because there isn’t any law, or police, or social pressure. It’s every man, monkey, or wolf for himself.

The hierarchy changes occasionally as young members become stronger and smarter while older members become weaker. Eventually, a younger member defeats the aging alpha-male, either killing him or injuring him so seriously that he leaves the group or falls to the bottom of the hierarchy, where he is abused by all those he abused.

There is constant jockeying for position at all levels in the hierarchy. The higher a member gets in the hierarchy, the more secure he becomes. When the group can’t support all its members, those near the top of the hierarchy push out those near the bottom. So each member’s life or death depends on where he stands in the hierarchy at that time.

In these small groups, a single notch up or down in the hierarchy might be the difference between life and death. Moving up in a hierarchy increases a member’s chances of survival. Being pushed down is being pushed closer to death. As a result, any change in a member’s status in the hierarchy, up or down, triggers intense feelings. No wonder the fighting is fierce and the feelings intense.

After you recover from the shock of watching the least valuable members (incidentally, a woman and two children) pushed out of your group, you begin to wonder where you stand in its hierarchy. You must be close to the bottom of those remaining. Even slow learners in the group can see that their chances of surviving will be better if they can move up in the hierarchy. To stay alive, you'll have to work even harder and smarter to become more valuable to the group than they are.

Moving up a notch in modern hierarchies, such as government agencies, professional societies, or industrial companies, has only a modest effect in your benefits and none on your survival. Yet almost everyone still tries to improve his position in a hierarchy, just as our ancestors did. Those on their way down often fight fiercely to prevent their status from being reduced further. Because the loss of a job is the modern equivalent of being expelled from an early group, some people have murdered those who fired them. In fact, any diminishment in status triggers this ancient fear of being driven from the group to die. Old Spanish knights and modern teenagers have killed those who diminished their status by not showing them "respect."

So you have now identified another major factor influencing social behavior. You want to move up in the hierarchy because it increases your chances of survival and you don't want to move down because that is associated with death. As a result, anything that might affect your position, up or down, in a hierarchy generates violence and intense feelings. Although a change of a few notches in the modern hierarchy has no effect on your survival and relatively little on your benefits, this struggle is still the source of a lot of unnecessary unhappiness.

8. BEHAVING FOR SURVIVAL

Now that you're a member of a small group of early people, you can see what is going on more clearly than you could in a complex modern society. As you examine their behavior more closely, you recognize many of the ways you behave now. Moreover, you find that each response to a stimulus was adopted to increase that person's chances of survival, directly or indirectly.

You soon learn that your group of early humans, as with many other types of animals, has a strong sense of its territory. It defends its own territory fiercely and seldom goes into a territory occupied by others. When you watched nature shows at home, you were amused to see animals staking out the boundaries of their territory by leaving scent marks. Then you were amazed that an animal would risk its life or serious injury by attacking any member of its own species that entered its territory. Now you realize that this behavior is essential to its survival. Without a territory as a source of food, the animal's chances of survival are reduced. It might as well risk a quick death in fighting for a territory instead of dying of starvation through not having one.

This helps you recognize that you still have this sense of territory. You are uncomfortable when someone invades your "personal space." For example, even though they do no harm, you get angry when neighborhood kids take a shortcut across your lawn. You can now see that you feel threatened because outsiders are invading your territory. Visitors to your home and office behave differently than they do in their own space. Their behavior shows that they recognize that this is your space and that you can order them out of it. As a result, you are now careful not to invade the private space of others, as by standing too close to them.

The members of your group also have a strong sense of personal property. No one owns a tree, but the person who makes arrows from its branches becomes their private owner. Some members keep weapons, scraps of food, arrowheads, bits of flint, and charms to ward off evil spirits. Despite their variety, these items are not chosen randomly. Their owners think that each one of them improves his chances of survival in some way. The members fight constantly over their personal possessions. At first you were amazed that anyone would risk serious injury for these scraps. Now you can see that the members feel that the loss of any one of them reduces his chances of survival. That's something worth fighting fiercely for.

You soon get to know the other members of your group very well. Everyone knows each other's personal strengths and weaknesses and the contributions each makes to the welfare of the group. You also learn their shortcomings and who the trouble-makers are.

Our ancestors did not suddenly change their basic nature when they first began to form groups. Everyone still tried to get the things he needed to survive, especially food, shelter, and weapons. The stronger members still took what they wanted from the weaker

members. Everyone still automatically fled from threats, even if this meant abandoning comrades in trouble. Cooperation with others is not part of basic human nature.

You watch a young male run squawking through the clearing, pursued by an older adult. If he's caught, he'll get a severe beating. The members of the group are forever quarreling, but no one interferes in these personal quarrels. The stronger members are always abusing the weaker members, who live in constant fear of their stronger companions. One wrong move and you'll be hurt, maybe killed. To protect themselves, some of the weaker members form alliances, usually with others in their immediate family, but these alliances are constantly shifting. Since everyone knows his place in the pecking order based on his fighting ability, there are few serious fights. Nevertheless, they do occur as the younger men get strong enough to challenge their former superiors.

The weaker members don't have much choice. As they have little chance of surviving alone, they can't leave the group. If they try to join another group, they will almost surely be killed. So they have to stay in their group and make the best of it.

Much of the group's activity is devoted to getting and preparing food. This is no paradise where food is readily available for the taking. Here there's a struggle for every bit of it. Not only is it scarce, but you must fight many other creatures, from insects to predators, for it. The men travel for days to hunt small animals or to find the scraps of a carcasses left by a more powerful predator. They fight for these scraps against vultures and jackals and must flee when a hyena or leopard appears. The women walk for miles to compete with birds and monkeys for fruits and nuts. Even when they dig up roots below the ground they compete with insects and worms. And if your group does occasionally find a bonanza of fresh fruit, they must eat as much of it as they can where it is, as they have no way to carry it away, let alone preserve it.

Nevertheless, when you look beyond the constant squabbling about who does what and who gets what; you realize that something important is going on here. The members are working together on an activity that contributes to their individual survival. They get more food this way than they could by working alone. Cooperative human behavior is increasing.

Even in your small group there is some specialization. Duties gravitate to those who can handle them best. As a result, men and women have separate roles and responsibilities. Men are expected to do the hunting and fighting. Women do the gathering, prepare food, and raise the children.

A member's job affects how his behavior. The headman has to act as though he knows what he's doing. The women have to be submissive to the men and not complain about their hard work. The men have to be tough. Their fights with other groups are not the impersonal shooting of missiles or the dropping of bombs on an unseen enemy. It's hand-to-hand combat. They have to suppress their natural tendency to run away from enemies that are a threat to their survival. It takes courage to stand and fight when your life is at stake. Can they depend on the courage of the man who cried when his young

daughter was killed by the leopard? Each member's job also affects the way they talk to each other. Unless you are prepared to fight him, you'd better speak respectfully to the headman, even if he replies abusively to you. You speak to most of the other men as equals, but as a warrior, you talk down to women and children. You can see that this manner of speaking and behaving according to a person's status in the group has come down to us essentially unchanged.

Considering how highly the members value their few possessions, you are astonished when you see them give some away to others. The man who makes a stone scraper gives it to one of the women. The old man who makes arrows gives some to younger hunters. Well, you've found an example of these people helping others! But, when the hunters return, you see them give a choice morsel to the old man. The arrows were an exchange, not a gift.

The hunters also give some of the less desirable parts of the prey to everyone else in the group. But you soon learn that the gift of food isn't really "free." Any excess food will soon spoil if it isn't eaten. So the giver makes an investment of the food he can't use anyway by giving it to those who need it. Both the giver and the receiver remember these transactions for a long time. The giver expects to receive something of equal value in return eventually. If the receiver isn't able to repay the gift, the giver's status in the hierarchy increases while the receiver loses some of his.

You recognize this exchange as another example of how the necessities of early behavior still affect us today. The gift of food in these early groups is the origin of our social "party." The modern host or hostess is still showing that he has so much food that he can give away some of it. Nevertheless, he expects to be "invited back." If his parties are so elaborate that his guests cannot reciprocate in kind, he gains the prestige that they lose. The great importance of exchanges within the group will be examined in more detail later on.

One day the blue sky becomes a dark gray. There is a sharp crack, like a dead limb being broken, then a dazzling flash of light, followed by a tremendous rumble in the sky. Huge quantities of water pour down on you. Drenched, you take shelter beneath an overhanging rock and wait calmly for the storm to pass. A man and woman join you. But instead of being relaxed, they huddle up and shake with fear. What's happening? How can they protect themselves from whatever powerful thing is causing the noise and the flashes of light?

Other mysterious things are always happening to members of your group. How did the baby get into the woman? What's growing in Toog's ankle after he slipped off the rock yesterday? His body is hot and he's thrashing around. The headman tells you solemnly that Toog is fighting off an ancestor who is trying to take over his body.

Even more mysterious than birth and illness is death. Koo had a body that moved, ate, and talked. Then there was only a body with no movement. So somewhere there must be another Koo that moves, eats, and talks without a body. In fact, the world is

filled with these spirits. There are spirits not only of people but also of animals, of the river, and even of the tree whose branch you cut. You never know when you will offend these spirits. That's what's happening to Toog. If he can't drive that spirit out of his body, it will drive away his own spirit.

How can you be safe in a world with so many dangers? One mistake and your spirit will leave your body. How can you be sure you're not doing something to offend some spirit? You'd better listen to the words of the old ones and behave as they tell you to. They must be right or they wouldn't still be here. Stick to the ways that have been safe in the past. Don't do anything new. And don't let others do anything new because that might hurt the entire group. It didn't take some people long to learn to use this fear of the unknown to control the behavior of the other members of the group.

The next chapter will show how an individual's natural responses to stimuli become modified by his membership in a group.

9. WHAT WILL PEOPLE SAY?

Let's give the Fast Forward button a quick jab to move you forward in time by a few thousand years and then deposit you in a different group of early people. Your new group has about a hundred members. At first glance, things seem to be about the same here as in your earlier group. The environment is essentially unchanged. The appearance of the people is about the same. They have a few more possessions, especially more and better tools. Yet, as you look around, you sense that something else is different but can't put your finger on what it is.

The very first day in your new group, you see a big guy go over and take a spear from a smaller man. Nothing special about this. You saw it often enough in the old group to know what will happen next. Losing a spear reduces the smaller man's chances of survival, so his natural response is to fly into a rage and attack the big guy, who will then beat him up. The little man will be injured or killed, which will weaken the group. It's a typical example of the friction among members that prevented earlier groups from becoming larger, stronger, and more secure.

But this time something unexpected happens. The little man controls his natural emotional impulse to attack the big guy. Let's pause briefly to salute this dramatic change in human behavior. The intellectual signal in some people had become strong enough to control at least some of their natural emotional responses to stimuli.

Nevertheless, the little man wants his spear back. In your earlier group, the other members seldom got involved in personal quarrels. But this is a day for unusual events. Two older men amble over to the big guy. The big guy turns to run away, but stops and faces the men. They admire his spear. One mentions that it looks remarkably like the small man's spear. The big guy gets the idea. While they watch, he returns the spear, adding a bit of food as an inducement for the other fellow to forget the whole thing.

Both the small man and the big guy controlled their emotions, but for different reasons. The small man controlled his natural response to fight so that he wouldn't be injured, that is, for his own benefit. The big guy also acted to avoid injury, but his behavior was forced on him by others not for his benefit but for the benefit of the group. It's an early example of social pressure.

You soon encounter many more examples of social pressure. This behavior is so different from that of your earlier group that you examine each incident carefully. You conclude that social pressure is trying to do two things. It pushes the members into doing all they can to strengthen the group. It also tries to reduce the friction among members that weaken the group. So primary objective of social pressure is to increase the chances of survival of the group.

Strengthening the group through increased effort is relatively easy to do because most members can see that this benefits them as well. If they make more and better weapons, they become more secure. If they cooperate in hunting, they will have more

food to share. So the members respond naturally to this pressure in order to obtain personal benefits. If anyone doesn't understand why he or she should do as much as possible for the group, the other members pressure him or her to do so. To this day we regard anyone who doesn't do his or her share of a group's work with anger and contempt.

Reducing the friction among members is much harder to do because it requires the members to control their automatic emotional responses to stimuli. It's natural for stronger members to take what they want, even if it's a possession of a weaker member. It's natural for a member to flee from a predator instead of helping an injured comrade. So the members had to be forced in some way to control their natural responses to stimuli. Social pressure does this by associating the undesirable behavior with an even stronger negative. The unwanted behavior might give the member some personal benefit, but it would soon be followed by an even greater hurt. The early groups used a powerful negative stimulus for this purpose. Members who did not control their emotional responses were expelled from the group to die. Even those who did not understand why they had to control their natural behavior soon realized that it was better than the alternative.

You are rather surprised to learn that no one in your group is responsible for enforcing social pressure. In fact, there is no formal set of do's and don'ts. Social pressure here is nothing more than individual members forcing each other to avoid behavior that hurts the group. This pressure usually does the job, but when it fails, the other members of the group punish the misbehavior in some way.

When the damage is not caused by violence, the other members try to settle the quarrel with the least bad effect on the group itself. They don't want to punish a member physically because hurting him also hurts the group. Since the objective of social pressure is to prevent future quarrels rather than to punish members for past actions, the penalty usually consists of making the guilty party compensate the victim in some way.

Violence by one member against another is more serious because it hurts the group as well as the victim. As forcing some members to control their natural, violent responses is tough to do, the punishments also had to be severe, typically "an eye for an eye." At some point, a member's behavior might become so destructive that the group would be better off without him. The threat of expulsion to an unpleasant death was usually enough to control most violence. Today we put such people into institutions or cages, but the principle hasn't changed.

To achieve its objective of keeping the group together, social pressure must do a delicate balancing act. As the stronger members enforce it, it always favors them to some extent. Those near the top of the hierarchy who hurt those near the bottom are punished less severely than the other way around. However, if the stronger members abuse the weaker so much that they leave the group, the group is also hurt. So social pressure forces the stronger members to control their behavior enough to keep the group together. In effect, the stronger members give up some of their power so that they can keep the

rest. The weaker members accept an inferior position because it's better to be abused to a certain extent within the group than to die without it. The course of social evolution over the millennia, from before the Magna Carta to the present, has been irregular progress in the struggle of the weaker members of society to reduce the right of the strong to abuse them.

Social pressure exists in every group, from nations to the neighborhood gang. However, both its intensity and the behavior it controls vary with the circumstances. Since its basic objective is the survival of the group, it's most intense when this survival is threatened, as when a group is at war or suffering economic hardship. As recently as the great depression, no one made a move, from considering a divorce to choosing a wardrobe, before asking himself, "What will people say?" When the group is secure both from enemies and from hunger, less social pressure is required to assure its survival, so control over the behavior of its members is relaxed. As long as a behavior doesn't hurt the group too much, what was once considered inappropriate behavior becomes accepted, or at least tolerated.

Much later in time, most groups formalized some of their standards of behavior through written rules, regulations, and laws. Those who break them are punished in various ways from fines to prison to exile. Nevertheless, the enforcement of most violations of social pressure continues to be informal. Parents punish their children to force them to behave in ways acceptable to others. Peers shun those who don't behave properly. Employers discharge "trouble-makers." Someone who behaves badly at a dinner party is not invited again.

Social pressure is not inscribed in stone. The behavior it controls changes as the group's need for survival changes. The current standards for behavior are then passed on from parent to child over the millennia.

Reflecting on your observations of social pressure, you shake your head in wonder. Here's an activity that no one invented. No committee made up a list of rules and regulations. There are no police, no judges, and no wardens to enforce it. Yet it controls more behavior more effectively than any police force.

But, since social pressure is so useful and so effective, why didn't it start sooner? The surprising answer is, "It couldn't."

There are two requirements for effective social pressure. The people being pressured must have enough intellect to control their emotional responses to most stimuli. And the people who exert social pressure must have the power to make others try to control themselves even when they don't want to. So social pressure had to wait until our ancestors developed not only sufficiently large brains but also enough information to generate an intellectual signal that could control some of their natural responses to stimuli.

Even today social pressure does not work perfectly. Some people cannot control their responses under any conditions. Others have only enough intellect to control their flight on seeing a fire, but not an armed enemy. Even those people with strong emotional control sometimes lose it on seeing a desirable bed partner or in handling other people's money. Controlling your natural emotional response to stimuli is like putting a lid on a pot of boiling water. If the flame gets hot enough, the lid is blown off.

The next chapter will examine the unexpected effect of the size of a group on human behavior.

10. EVADING THE MEMBERSHIP REQUIREMENTS

In your earlier group, everyone knew what he had to do to retain his membership. He also knew what would happen to him if he didn't. Each member knew what everyone else did, could do, and would do in every situation. They knew whom they could count on to fight the enemy, hunt the antelope, and make the best arrowheads. And they constantly talked about these things. They told each other how bravely Mu had fought the wild pig and how many clams Raa had gathered.

This was not idle gossip. It was behavior essential to their survival. They needed day-to-day reports on the condition of each member to know how much strength the group had. If four men go out to hunt antelope, will there be enough strength at home if a leopard attacks? They are excited about the young man who went out with the hunters for the first time; there will soon be another spear against the enemy. Someone growls that it's just in time. Did you notice that Gar had trouble chasing the antelope? He won't be able to hunt much longer. The women complain that they have to work harder because Kree hasn't been doing her share of the threshing. The headman should talk to her about this.

Everybody needed to know everything about everyone else in the group because it affected his own survival. In a small group it isn't possible for anyone to claim contributions he didn't make or to conceal his shortcomings.

This information established the social status of every member of the group. As it was based on personal observations, each member had the degree of social acceptance that he or she deserved.

As the size of the groups increased, a gradual change occurred that profoundly affects modern behavior. You have now been a member of one of these larger groups for some time. You know a few of the members about as well as you did those in your smaller group. However, although you recognize most of the other members, the only information you have about them is what you've been told. Most of this is second or third hand. You heard that Moh escaped from a leopard but you didn't see for yourself what he did. You also heard that Chu clubbed an enemy but he was right beside you the whole fight and you didn't see that. So not only is your information about some members incomplete but some is incorrect as well.

This difference in the accuracy of the information about other members of a group might seem minor, yet it gives some people a way to get around the group's requirements for membership. It also gives them a way to increase their status in the hierarchy without earning it.

Making useful contributions takes ability and hard work. Besides, it can be risky. A guy can get hurt fighting another group or attacking a herd of water buffalo. So instead of actually making contributions, some shrewd operators decided that they would only give the impression of doing so. In a big battle, with so much confusion, no one knows

what everyone else is doing. Why risk your life fighting, when you can claim later that you did it? Maybe bruise your arm with a rock in case anyone asks why you withdrew. This opportunity to distort the facts is the beginning of a large part of behavior that continues to this day. People claim contributions they didn't make or exaggerate the value of the contributions they do make in order to improve their position in the hierarchy.

Eventually your new, larger group finds a suitable new territory near a lake. The people who are already there don't want your company but your group is able to drive them a short distance away. When the dust settles, your group occupies a strip of lakefront together with the land that extends back into the trees. Things are better but not good. There still isn't enough food for everyone. All everyone talks about is food.

A few days later, you are sent on a scouting mission into the forest with three companions. Your task is to learn about the animals that live there as well as the location of any plant foods. The four of you are walking abreast but some distance apart to cover more ground. The foliage is so thick that you can't see each other. You stop short when you hear an unusual bird whistle. One of the men has spotted something. He's warning the others not to disclose their presence. It must be prey or predator or there would be no need for caution. Holding your breath, every sense alert, you see the leaves of a bush move. Then you see something behind those leaves. Part of the body emerges. What good fortune! It's a young pig!

In your excitement, you raise your spear and rush forward. Your leg brushes against a shrub, making a sound hardly more than the wind stirring the foliage. Nevertheless, the pig hears it and scampers away.

You are frustrated and angry with yourself. Meat is scarce. Then a worse thought occurs to you. It's bad enough to lose the pig, but what will your companions think of your incompetence? It's sure to reduce your status in the group, which means your chances of survival will be reduced. In fact, you might well be the next person abandoned.

As you stew about the problem, a solution occurs to you. Your error will reduce your social acceptance only if others know about it. Maybe your companions didn't hear the sound you made. Why tell them what you did? No one knows what makes pigs run away. And if, by chance, one of your companions did hear the noise you made, you can claim it was made by the wind or by one of the other men. It's just what a modern guy would do, even though his error no longer affects his survival.

As the days go by, you notice a number of other ways in which the members of this larger group behave differently from those in the smaller group.

Pi comes running into camp. When he catches his breath, he tells of meeting a member of another group in the forest. After a brief skirmish, the man fled. In your old group, this would have generated a lot of excitement. What was that man doing near their

territory? Was the group in danger of attack? And there would have been much praise for Pi's courage in driving the man away. Some members of this group also begin to praise Pi. Then someone says that the intruders are all cowards. Another claims he drove two of them away simply by waving his club at them. This guy doesn't seem strong enough to scare off one person, let alone two. Nevertheless, in contrast, Pi's contributions don't seem nearly as heroic now. You can see the pride drain out of Pi as he sits down, deflated.

A few days later, as you are busy making a new bow, Zek comes over to you. After admiring your work, he tells you that he personally saw Ma hiding during the fight with the roundheads. Why is he saying this? And why is he saying it to you privately instead of telling the entire group? You know it isn't true because Ma was right next to you during the worst of the fight. What is he trying to do?

Later in the day when many of the members are talking together, you hear this same Zek challenge Yu to a foot race to the edge of the forest and back. You can see the pained look on Yu's face. He would like to race, but he's still limping from the wound he received from the buffalo's horns in the last hunt. Zek must know this. Why is he doing that?

Zek will have to be more careful how he goes about doing these things. Ma and Yu won't like having their status lowered and will find some way to get back at him for trying to make them look bad. Besides, the group doesn't like troublemakers. A wiser Zek would have been subtler about trying to diminish these men. He'd bad-mouth Pi to only a few people at a time. This way he could deny the story if it's traced back to him. And he'd keep his comments vague so that he could claim later that he meant something else.

These incidents illustrate some of the profound changes that occur when a group reaches the size where the members no longer know each other intimately. The absence of first-hand information provides an opening for some people to evade the requirements for membership in the group. They can claim contributions they did not make. They can more easily conceal their personal shortcomings and their errors in performance. They can blame others for their failings. All these techniques are widely used in every group, but the most common are the many ways in which members attempt to discredit each other.

Most people don't have the ability to make outstanding contributions. Others are afraid to try to do so for fear of failing, which would decrease their status instead of increasing it. Why risk injury or death when you can advance in a hierarchy simply by pushing another member down? It's a case of "the worse I make you look, the better I seem to be." The technique must work very well as it's still practiced essentially unchanged even today.

The next chapter will show why you constantly make comparisons, not only with other members of the group, but also with yourself. Why do you do that?

11. LIFE-OR-DEATH COMPARISONS

You shudder every time you think back on the day your former group abandoned three of its members. Although the headman and the wise old man selected the victims, their decision was based on the value of each member to the group. Still, the process stuns you. How can a person's value be measured?

You might give each member some points for his contributions and subtract points for his shortcomings and errors, but do you measure past performance or future potential? Instead of some formal rating system, each member's value was determined by comparing him in many different ways with every other member of the group. Some older people have less time left to make contributions. Some members bring in more game than others. Some are better fighters. Some cause more trouble than others. You're staggered at the importance of these simple comparisons. They determine whether each member lives or dies.

The members of your group are compared only in those things that affect its survival, directly or indirectly. As hunting is essential to its survival, the members compare each other's speed, his stamina, his courage, and his accuracy in throwing a spear. They compare the quantity of food each woman gathers. Over the ages, however, the original reason for these personal comparisons has been forgotten. Instead of measuring only the individual's contributions to the survival of his group, we now compare almost everything about each other, from a person's weight at birth to the number of mourners at his funeral.

You watch Zek throw a spear, walk over to pick it up, and throw it back, over and over again. He would like someone to compete with him, but they all ignore him. Everyone knows he is the best spear-thrower in the group.

As you watch him, you realize that some comparisons are voluntary. Everyone wants to enter into comparisons that he expects to "win" since this will improve his position in the hierarchy. The more important the contest, the greater winning improves his status. An unfavorable comparison loses some status, so no one in his right mind ever voluntarily enters a comparison he knows he will lose, unless he gains something else of greater value in the attempt.

Nevertheless, you can't avoid all unfavorable comparisons. Sometimes refusal to compete is even worse for your status than losing the comparison, as in being challenged to a fight or a duel. Even when you are simply being yourself and minding your own business, others are comparing you, fairly or unfairly. So there's no escaping involuntary comparisons. You are dragged into them and forced to compete as well as you can.

You frequently compare yourself with others to see how you measure up. However, you don't compare yourself with all members of the group. You never compare yourself with the headman. And there's one member of the group you consider so inferior to you in so many ways that you don't compare yourself with him, either.

Come to think of it, you're usually comparing yourself with only two or three guys who have about your level of skills.

Once you become aware of this choice of comparisons, the reason for it becomes clear. You don't compare yourself with others simply because you have nothing better to do. These comparisons are deadly serious. They determine your position in the hierarchy and so your chances of survival. The only people who affect your status are those competing with you for advancement. You don't gain status by winning a comparison with someone far below you and you don't lose it by an unfavorable comparison with someone far above you. When you were back in the modern world, you compared yourself only with others at about your level, such as your siblings and classmates. At work, you compared yourself with those of about equal skill and not with the company president or the janitor.

The most important comparisons are those you make with yourself. You frequently compare where you are now with where you were at some significant point in the past. Every now and then you go off by yourself to examine all your possessions. You now have two spears, a bow, seven good arrows as well as some arrowheads, three shafts that need straightening, and two bird feathers. You also have some clear stones you picked up near the river; you can see colors when you look through them. You now have a spear and two arrowheads more than you had when you counted them before! Your new weapons increase your chances of survival, which makes you feel very good.

Then you reflect on your stay with this group. You recall that their first reaction to you was rather hostile. Even recently they seemed to be deciding whether to let you stay or kick you out. But now they are much more friendly. You are especially pleased that the headman asked you to help him make a new spear. This comparison of your present social acceptance with what it was earlier shows that your chances of survival have improved, which also makes you feel very good.

Of course these comparisons could have gone the other way. You'd feel bad if you had fewer possessions now than you had before. You'd also feel bad if your companions were less friendly to you, as these negative comparisons would mean that your chances of survival were reduced. You recall that you made similar comparisons in your modern life. Most modern people have more possessions and more social acceptance than they need for survival. Nevertheless, these comparisons still generate the same intense feelings as they did when they were a measure of our ancestors' chances of survival.

In your modern existence, you often wondered why you tried so hard to win even a friendly game and why you were devastated when you lost. You can see now that it is a residue of the time when no contest was "friendly." Every comparison affected life or death. And you now understand why the feelings associated with winning and losing are so intense. You feel good when you win any comparison, whether it's making the team, getting a promotion, or receiving an award, because these successes once increased a person's chances of survival. You feel bad when you strike out, fail a college exam, or

lose your job because any failure decreased your chances of survival. So even today most people fight fiercely and sometimes desperately to win comparisons as though their survival and well-being still depended on them as they once did.

Most people try desperately to discredit the comparisons they lose. They find ingenious ways to show that the comparison was unfair in some way. If that doesn't work, they try to blame others for their failure. However, the members of your group haven't become that clever yet, so these techniques will be set aside for a later chapter.

12. TRADING FOR SURVIVAL

The early groups provided their members with some protection from enemies and predators and gave them the opportunity to work together to get more food. But beyond that, each member was responsible for his own welfare. For its own benefit, the group tried to prevent its members from doing things that hurt themselves because this also hurt the group. But if someone decided to walk under a leopard's favorite tree, that was his business. And since a member's possessions improved his chances of survival, they also benefited the group indirectly, so the individual was free to amass as many as his abilities permitted. The members of your group respect and envy those who have more possessions than they do.

In a small group, everyone knows what everyone else owns. If you had the new cutting stone that Sho made, you could make better arrows with less work. Even though he uses his sharp stone, Sho's arrows are not nearly as good as yours. They don't go as far and don't go as straight. You talk to him about his new stone. He talks about your arrows. Eventually you trade him five arrow shafts for the stone.

People trade their possessions for only one reason - to increase their chances of survival. The objects traded have no specific value in themselves, but only in their potential to increase the chances of survival of their owners. Each participant in a trade evaluates the objects to be exchanged in terms of how much they contribute to his survival. He makes the trade only if the object he gets increases his chances of survival more than the one he gives up for it.

The items exchanged might be physical objects, such as food and weapons. Or they might be services, such as helping someone construct a shelter. The items might also be intangible, such as exchanging grunts of recognition or swapping compliments. Any item can be exchanged for any other item.

An exchange can be favorable or unfavorable. A favorable exchange is one in which the person receives items that contribute more to his chances of survival than those he gives up. An unfavorable exchange has the reverse effect. As these exchanges influence survival, they generate intense feelings. You feel very good when you make a favorable exchange and feel very bad when your exchange is unfavorable.

There are several factors that affect the value of the items being exchanged. Early in human development, the only value of an object was its potential contribution to its owner's physical survival, as with food and weapons. The formation of cooperative groups introduced items that had indirect value. As social acceptance contributed to survival, an object that increased a member's social approval began to have value. Some items contribute both to physical survival and to social acceptance and so have both types of value.

The same object might make a different contribution to the survival of different people. A shield has more value to a warrior than to a farmer. Animal skin clothing has more value in cold climates than in a warm one.

The same object might also have different value for the same person under different condition. An item of food will have great value when you are starving but much less value soon after you have eaten. Moreover, the food will have more value if it is all you have to eat today and less value if you have more food than you can eat over several days.

Many items have value in increasing or decreasing social approval, which can vary from zero to very high. A lion's tooth makes no contribution to physical survival but might have great value in gaining social approval. A member with poisonous snakes might lose social approval.

The value of some items is influenced by their source. You value a compliment from the headman more than the same compliment from one of the hunters. A modern art collector places a high value on a painting by a famous artist but the same painting loses most of its value when it is learned that someone else painted it.

One of the members wants your stone with the colored lights. How will a bit of a prism contribute to his survival? Well, he thinks it contains a powerful spirit that will keep away the bad spirits that might harm him. At least that's the way he thinks it worked for you. So the value a person places on an object might not be its true value. After all, most modern people place a high value on a small, colorless stone that reflects light. Very few of them use a diamond to cut glass or scratch steel, so its true usefulness for physical survival is about the same as the prism you traded away. You might as well accept the big stick he's offering you for your stone.

Overall, the value of an item comes down to how much the person wants it. This is usually different for different people, which make it possible for both participants to benefit from an exchange.

Everyone tries to make favorable trades. However, a trader sometimes places an incorrect value on an object, as in trading a useful stick for your colored stone. No one intentionally makes an unfavorable trade. Nevertheless, this sometimes occurs through an error in judgment. It also occurs through deception, but this is a more modern development that will be deferred to a later chapter.

A member's overall success or failure in his exchanges also has an indirect effect on his chances of survival. As his successful exchanges benefit the group as well as himself, they increase his social approval. Unsuccessful exchanges have the opposite effect. The other members begin to suspect the competence of anyone who makes several unfavorable exchanges. As the incompetence of a member hurts the group, his social approval is reduced. So he not only loses something tangible in his exchanges but some social acceptance as well.

Now you know what it feels like to be concerned with survival almost every waking moment. You know how fiercely you would fight for the survival of your group, for without it you would surely die. You know the dread of being abandoned by your group and the panic at every mistake that might cause your expulsion. What more, you know that you would have done everything you could, by what today would be considered fair means or foul, to move up a single notch in its hierarchy.

You can also see how some of your present behavior originated. You understand why and how the actions required for survival were burned into human behavior and why this behavior was passed on from generation to generation by example and social pressure until it seemed as natural as eating and breathing. Indeed, some ancient behavior is still accepted as normal even when it is no longer appropriate.

Welcome back!