CHAPTER 26
COMPETITION AND COOPERATION

When we pursue our needs, we regularly come into contact with other individuals. These individuals may constitute obstacles in our pursuit of happiness because their pursuits may interfere with ours. The causes for this phenomenon appear to be intrinsic to the manner in which humans produce happiness. Because our happiness is a function of the pursuit and fulfillment of our needs, it is represented by a completely selfish motivation. We may make concessions to others in the interest of advancing our purposes. The happiness of others may matter to us. However, our concern with others is subject to the general condition that their advancement has to serve the fulfillment of our needs. This attitude is part of a larger general motivation to impose our intent onto our environment so we can satisfy our needs. In our strategies of securing and improving means for the fulfillment of our needs, we are confronted with the fact that we are not alone in such efforts. We find that independent actors around us pursue their own needs and that their agenda may not only be different but similar to or the same as ours. Both varieties in the relation of pursuits may cause competition.

We may call this competition external to distinguish it from the internal competition among our needs. It may be intense in areas edging up against general impossibility. Individuals may attempt to be the first to achieve particular knowledge or means because they expect to benefit overproportionally from their leadership. But competitive attitudes are bound to increase in the fight against individual impossibility. Here, we do not operate in the rarified area of what no human has been able to achieve yet and where few humans will be able to compete. Instead, individuals may try to obtain what someone else already has, knows, or can do. On this level, many more individuals are motivated and able to compete. In their struggle to close deficiencies, contestants are likely to compete for the same implements. This competition appears to mostly arise because many if not most human needs are similar, must be pursued in a shared environment, and require resources with a limited availability. We may have to engage in competition or suffer the pain of deprivation. We will have to take resources from others or prevent them from accessing resources we claim. Such offensive competition, if successful, necessarily results in damage and possibly the destruction of others. Others will therefore try to defend against it with countermeasures that can also be considered competitive. Additionally, our frustration over our lack of fulfillment and our justified or unjustified attribution of blame for this to others may af-

fect our behavior in ways that may resemble competitive acts. In addition to or without competing for the possession of resources, we may seek to prevent others from possessing a resource that we cannot have or we may seek to reduce their ownership, use, or enjoyment to our or inferior levels. We may therefore engage in destructive activities.

These two aspects of behavior with regard to resources may often coincide because they share a common root in the attribution of resources. We may deem it a violation of our fundamental rights that others who possess a resource we do not have or of which they possess more will not share it with us. We may expand this claim beyond the equality of resources to a fundamental right to have our needs fulfilled at similar levels. Such claims may be limited to existential needs but may also pertain to more idiosyncratic deficiencies. We may consider ourselves particularly justified in our demands if others possess a surplus in excess of what we regard to be reasonable provisions. However, our insistence on sharing may continue regardless of whether others can fulfill their needs. More than that, we may deem ourselves justified to sacrifice the wellbeing and even the survival of others disproportionally. We may surrender to impulses that do not care about the needs of others over other impulses pertaining to our collective as well as our individual survival and thriving that immediately command or imply such care and may even press on us to subordinate concerns for ourselves. The variety of contending needs and their pursuits, the diversity in the relative fulfillment status of our needs, and the differentiations of our relationships with other individuals may disperse how treat other humans over the entirety of the possible spectrum. Beyond being drawn into a conflict by the challenges of pursuing needs in an environment of scarcity, individuals may conflict in their pursuits because they use means that infringe on the choices of others. This conflict may not necessarily arise from the scarcity of resources. It could even increase with their availability. Rather than being a narrow question of control over resources, the competitive imposition consists in a more general restriction on others of how they can use resources. Still, it constitutes an attempt to assert domination over resources and may engender similar consequences as a conflict over scarce resources.

Intersecting claims for domination over resources tend to incite unwavering positioning in conflict because all parties with such claims may assert rights based on their needs. If individuals who claim domination encounter resistance, they may consider it necessary to protect their interests by the threat or application of force. They may further threaten or employ force in protection against or in retribution for the presumed violation of their rights or to recoup purported damage they

suffered. The claim of right to pursue and fulfill needs by intersecting parties may make pursuits by one another appear like initial infringements for all of them and may harden their opposition. However, such conflicts seem resolvable if all sides acknowledge the legitimacy of one another's needs and of rights to fulfill these needs and if they agree to allocate resources accordingly. Such a mutual recognition seems most likely if common needs are involved and if all parties respect fundamental rights to the claimed extent. Idiosyncratic needs may be more problematic to manage because the parties might not acknowledge idiosyncrasies as legitimate causes for attributing resources. Moreover, a potential for conflict seems to remain if needs are differently weighted in participants' lists of priorities or if individuals encounter exigencies that diminish or eliminate their consideration for other individuals.

Arguably, all matters of competition should be resolvable if we could provide sufficient resources for everybody and separate the application of these resources sufficiently to avoid infringements on others. That appears to be most easily imaginable with respect to mental resources because we can generate them inherently or through our efforts. We might sufficiently grow mental resources by maximizing the implementation of the potential we are given for them by our genetic attributes and by improving these attributes. We may also increasingly institute mental resources in manufactured mechanisms to assist us externally. Notwithstanding, some mental resources, particularly emotional resources, may be difficult to emulate and may require human sourcing for a long time. We might ameliorate the receipt of emotional resources by motivating others to provide them. Individuals may be spontaneously inclined to confer emotional resources onto us, as they would be motivated to grant us any other type of resource, based on impressions that we do or might benefit their pursuits. Where such an impression is not initially present, we might convince them to support us by demonstrating our potential to support their pursuits, our intent to benefit them, or the exercise of our potential and intent. Our utility may be demonstrated by showing them that we can provide means to them or others in their stead. Our actions might not only impress others with direct benefits they might obtain but also with the advancement of their interests in collective survival and thriving through us. Being worthy of their protection and support in that capacity might not be achieved by our mere existence. It might depend on activities by us that in turn serve the collective survival and thriving of our species or at least on our abstention from activities that potentially or actually damage these objectives. The protection and support by other individuals may then be motivated by the desired or actual receipt of

direct reciprocal benefits or because it advances needs apart from an expectation of direct reciprocity. In either case, the recognition by individuals that others are or can become of value in their pursuits may prompt these individuals to include such others into their care as useful or essential means for fulfilling their needs. Eventually, beneficiaries will have to follow up indications of their utility by benefiting their benefactors to maintain and renew support and prevent defensive action by benefactors against manipulation and exploitation. The resulting direct or indirect mutuality of assistance among humans seems to be a proficient mechanism for increasing the availability of all types of resources. It does not necessarily require the involvement of emotional resources. Nevertheless, the provision and generation of emotional resources seem to lie at the instinctive foundation that originated this mechanism and they seem to particularly profit from its mutuality.

As benefactors, the receipt of nonemotional resources in an exchange for nonemotional resources contributes directly to our success experience. But we may receive additional benefit from the emotional resources created in the beneficiary by the advancement of the beneficiary's needs through the provision of nonemotional resources. While these emotions may motivate the beneficiary to engage in further pursuits, they also include aspects of emotion such as love, respect, and gratitude expressed toward the benefactor that can serve as resources in current and future pursuits. They give the benefactor assurances of reciprocity in current and future exchanges. The generation of emotional resources can be increased if we provide nonemotional benefits without a directly conditioned exchange of nonemotional benefits in return. Beneficiaries may be more thoroughly impressed and feel obligated to reciprocate by nonemotional goods or services of at least the same value. Either way, perceiving a positive emotional reaction from a recipient generates emotional resources in the benefactor. However, such an awareness of goodwill appears to be only part of the benefactor's emotional benefit from a beneficiary's positive emotions. A demonstration of a beneficiary's emotional response can engender an additional emotional reaction in the benefactor. This allocation of emotional resources to the benefactor is subject to a translation process by which a benefactor interprets and emotionally reacts to indications of a beneficiary's emotional response. Although the submitting of nonemotional resources by a beneficiary can be a carrier for this response, the mere observation of beneficiaries' emotional reactions may suffice. An emotional response may also be evoked by a recipient's expression and translation of emotions that the benefactor might have shown initially. The return of emotional expressions by the beneficiary may mo-

tivate successive rounds of emotional expressions. The supportive expression of emotions seems to increase emotional resources in others without the loss, and likely with the amelioration, of such resources in the benefactor. Emotional resources might be rather easily increased by the provision of emotional or nonemotional resources. The transfer of emotional resources to other individuals may further be instrumental in obtaining nonemotional resources in return. Exchanges involving emotional resources may give rise to potentially endless exchanges involving all types of resources. They can fashion a powerful guidance system for the extension of comprehensive mutual support in which resources are liberally shared through internal motivation of mutuality alone and without external regulation and enforcement. The anticipation and actualization of receiving emotional and nonemotional resources from others as a result of practicing comprehensive mutuality with them might also incentivize individuals to increase their production of resources and to make these available to assure the goodwill of counterparts. Because emotional resources ultimately provide the motivation for all our pursuits, they decree whether and how we acquire, generate, and apply all other resources in our technical capacity. Their amelioration and perpetuation strengthen the production and use of all other resources. The generation of emotional resources in us and in other humans may then give rise to a mechanism that materially promotes the production of emotional and nonemotional resources.

Although many of our pursuits rely on the generation of emotional resources through others, essential aspects have to be generated by us autonomously from experiences of deprivation, frustration, progress, and fulfillment of our needs. Such emotional resources might be triggered or assisted in their development by specific external sources or by our general environment. They might be built in part by the advancement and fulfillment of our needs that confer benefits onto others and in return to us. Yet this aspect of emotional resources cannot ultimately be created by or through others. It can only arise and reach full functionality through our activities. By developing our emotional traits and their pursuit to their best harmonized effect, we can maximize internally produced emotional resources. For an overall maximization of our emotional resources, we have to harmonize this individual production of emotional resources with their transferred production through other individuals. This reconciliation is a part of the reconciliation requirement for the pursuit of all our needs. It may require concessions to the interests of others. Still, supporting them by our pursuits does not appear to necessarily detract from our ideals because it can benefit our needs directly and indirectly through reciprocity.

Compared to emotional resources, rational and related perceptive resources can be enhanced relatively unproblematically. Once insights are obtained, they are easily shared. That is so because they are representations of and can find representation in obviously physical circumstances. They can be readily transferred by communication because language is a representation of rational and originally perceptive concepts. The universality and easy communicability of nonemotional concepts further render them eminently suitable for collaborative development. We may employ external resources to recognize, interpret, and summarize such matters for us, to determine how to apply them, and to assist us in their application. A common basis of perceptive and rational capacity among humans, that we can acquire large sections of the pertaining resources, and that machines can assist us give us hope that we can make sufficient rational and related perceptive processing available for everybody. Notwithstanding, to comprehend what is being represented, individuals must apply their rational and related perceptive capacity to some level. Moreover, the auxiliary purposes of rational and perceptive resources for emotional resources with regard to each need and in the council of traits make it important for each individual to develop sufficient rational and related perceptive resources to properly fulfill that function. Because our use of resources is based on emotional impulses, the proper development and application of rational and related perceptive resources depend on the development of emotional resources that favor their generation and application in the interest of our needs. But the development of our emotional resources has to also rely on rational and related perceptive resources. Through collaboration among traits and individuals, all mental resources may be developed and shared to where conflict over them is minimized.

While the scarcity of mental resources may be relatively easily overcome and thus conflict about them might be avoided, the remaining resources of time and obviously physical resources pose more difficult problems to resolve. The resource of time is finite for each individual. Its expenditure cannot be stopped or delayed. It cannot be directly transferred and does not appear to be easily extended. Even if it can be extended, it remains finite and very limited. Hence, time is not a resource that we can easily acquire. Mostly, we are restricted to putting it to good use. The inescapable limitation of time creates pressure in us to save our time for successful and pleasurable pursuits. We may achieve a measure of success by time-efficiency in our individual pursuits. We may also try to save time by imposing on other humans or machines aspects of pursuits that we do not enjoy so that our time is freed up for more pleasurable experiences. We may further try to have

other individuals or machines engage in activities that could shorten our available time if we engaged in them. More directly, we may draw on the physical facilities of other humans or machines to extend our life. These movements at the cost of other individuals may place us in competition with them. That we may endeavor to extend our lifetime by avoiding life-threatening situations and by preserving or modifying our body does not place us necessarily in such a conflict. However, to the extent life-extending means are limited or to the extent they infringe on the pursuits by others, we may be drawn into a conflict.

Regardless of whether we rely on preserving or extending time by burdening others or we take measures to extend it independently, the allocations and extensions of time present themselves through the positioning of physical occurrences under the direction of our mental resources. We may therefore designate time in terms of other types of resources. The investment of such resources may achieve technological breakthroughs that can considerably extend our life potential. Yet, short of that, we may not be able to create much time. Saving time at the cost of others does not increase it as a resource overall. It only improves the conditions of some individuals because it deteriorates the conditions of others. The efficiency savings we can achieve by prudent planning and implementation of our pursuits or the transfer of work to machines cannot increase this resource but only our ability to apply it. Short of scientific intervention that extends our life and ultimately reverses the inevitability of death, the most dramatic escalation of this resource consists in the maximization of individuals' lifetime to their natural potential. An extension of time of any sort will not only rely on other types of resources in the extension of life but also for the provision of means to maintain life during the resulting extension. The improvement of our resource of time then appears to inexorably depend on the improvement of our remaining resources as facilitators.

Considering the complications in extending life, we might have a better chance to ameliorate competitive pressure with regard to other, more overtly physical resources because we may be able to increase their quantity and their quality more readily to where they suffice for all humans. Beyond securing the availability of resources, we may be able to create environments where the interference among individuals in their pursuits is eliminated or minimized. With sufficient technical capacity, we might be able to establish environments for each individual where all obviously physical aspects of our needs can be satisfied without any limitation by other individuals. The development of that technology and its initial application to advance obviously physical resources to a state of saturation for each individual are likely to require

a massive investment of obviously physical and other categories of resources. As long as humans are involved in the production of obviously physical resources, this aim obliges them to cooperate. We may try to raise the development of machines to a level where they can build or maintain a total independence of individuals in obviously physical matters. Yet the creation of such a level of development also relies on human collaboration and thus appears to cause increased cooperative dependence before independence is achieved. We may not mind this dependence if it improves the supply of obviously physical resources. It seems to coincide well with the cooperative mechanisms that seem to greatly support the maximization of all other types of resources.

It appears possible for humanity to develop to a state where all types of resources are sufficiently available and where the competition and frustration resulting from deprivation can be overcome. However, we might wonder how we can maximize our happiness in the interim when resources remain scarce or uncertain. It appears that as long as all desired resources are not attainable by all humans, we will live in an environment of scarcity and struggle. Such an environment seems to necessarily place us in competition with others to gain resources or to defend against competition by others. At least until we reach a state of saturation of resources, it seems to be not only a natural but also a necessary state of human being. Offensive competition occurs in two directions. To safeguard our access to resources that others want, we would have to exclude them from access to the extent of our requirements. This means that we would need to be stronger, smarter, more determined, more competent than others. To reach extended or maximum fulfillment of our needs in the presence of competition, or only to safeguard minimal satisfaction, we would need to win and others would have to lose. We may call this the exclusionary aspect of external competition. If others have already reached what we desire or they possess the resources to acquire or create what we desire, we may unilaterally appropriate their possessions. We may seize the resources we need or can use for a minimal, elevated, or maximum fulfillment. We may take them if we cannot produce or purchase them or because this course of conduct might save us the expenditure of resources in their pursuit. We may designate this the predatory or exploitatory aspect of external competition. These aspects interfere with different degrees of appropriation on the part of competitive victims. While the exclusionary aspect involves that we foreclose access from others to preserve resources for us, the predatory aspect requires that we overcome already entrenched assertions of control by others concerning means we seek. Exclusionary competition addresses prospective and current attempts

to secure resources. The predatory aspect addresses a past appropriation and development of resources. Asserting control over how others access, produce, and use resources carries both exclusionary and exploitatory aspects. It excludes others from accessing uses represented in potentially and actually available resources and asserts domination over resources that otherwise flows from their possession. It thus constitutes a lesser form of exclusionary and exploitatory competition.

We may believe that excluding and exploiting others must be a part of our strategies even if we comprehend that humans are conditioned to include others as beneficiaries of their needs for collective survival and thriving and collateral needs. We may even hold such a course knowing that enhanced pursuit of many other needs makes us dependent on cooperation. We may employ cooperative techniques as long as they serve us. But we may deem them too unreliable or weak to build our existence solely upon them. We may not be able to count on others to relinquish their resources or at least not under the terms we require to meet our needs. Competitive strategies gain urgency and rationalization if we have to succeed in an environment where others might apply these techniques against us. Our application of offensive competitive techniques appears necessary to preempt or to adequately counter their application by others or to persist in spite of losses we sustain from competitive activities by others. While the application of offensive competitive techniques may seem inescapable or at least advantageous for us at times, the overall effects of offensive competition, and even of defensive competition that endeavors to foreclose, arrest, and remediate offensive competition, are negative. Offensive competitive strategies do not create means. They merely try to manipulate the attribution of means before, during, or after their production. The exercise of these methods by others places us at risk to be left without an adequate access to resources, to be subjected to produce for others without a commensurate reward, and to incur damage in attempts to defend against such impositions. To have competition function for us, we must ensure that we are and remain on the winning side. Offensive competition might yield certain advantages for those who can secure their position. Nevertheless, it is not an overall satisfying approach for the production of happiness because its gains are obtained at the cost of losses by other participants. It does not produce an overall net gain in means. Instead, competitive strategies produce an overall deficit in means and happiness. This is not necessarily caused by the acquisition of means by some at the loss of these means by others. That occasion may be overall neutral. Rather, it occurs because competitive activities damage or destroy resources and stunt productive development.

The expectation that means might be taken is bound to render victims reluctant to produce and maintain means. Similarly, insecure access to resources is bound to render victims unwilling to engage in production that would use such resources. Victims may also be preoccupied with defensive maneuvers or deem it more favorable to engage in competitive behavior of their own rather than producing means in a competitive environment. These reactions add to the unproductive nature of competition. However, beyond that, competition is destructive. Competitive efforts carry a high potential of conflict because they violate the pursuits by others. The conflict created by competition is systemic and pervasive. It might not only persist between victims and those who seek to acquire means from them or seek to prevent them from acquiring means. It might further exist among those engaging in predatory or exclusionary activities because they may be one another's competitors in securing the spoils. It might also ensue among competitive victims from activity to secure their access and possessions at the disadvantage of others. The merged destructive consequences of these conflicts and their potential for escalation may produce a momentous deficit of constructive means. Not only may the manufacture of constructive means suffer, but resources may be held captive, expended, or destroyed in the activity of excluding others and in acquiring their possessions as well as in defense against such efforts. Even if more excessive and destructive forms of conflict might be prevented, the environment of conflict and of its escalation potential will influence us. It will prompt us to invest in means to conduct such conflict offensively, defensively, or both. These means are lost to the productive pursuit of our needs. The continuing condition of external competition institutionalizes waste and the curtailment of production. Instruments of external competition were comparatively limited during most of human development. With technological advances, capabilities that might be used in a competitive struggle have dramatically increased. Offensive competitive capabilities and defenses have proceeded to endanger the existence that competitive behavior is designed to establish, maintain, and enhance and that defensive measures are meant to protect.

Considering the predictable and the potential consequences of competition, we may determine that competition may be neither the most effective nor the most efficient way of fulfilling our needs. Our energies and resources may be put to more advantageous use by coming to arrangements regarding the management and attribution of resources. Beyond that, we may secure additional advantages by cooperative production with those with whom we would compete. Productive cooperation substitutes the one-sided interaction of competition

with the coordination of claims and constructive cooperation that is enabled by pacification. Constructive cooperation may allow pursuits, levels of attainment, or efficiencies that we cannot match alone. Some wishes are beyond individual practical capabilities. They can only be accomplished collectively, either by compounding identical actions or through complementary activities. The coordination of our contributions with similar or dissimilar contributions from others allows us to achieve goals that would be impossible to achieve on our own. Other wishes can be more effectively or efficiently achieved through cooperation even if we might be able to fulfill them unaided. The reasons for our problems may be quantitative or qualitative deficiencies that can find cooperative solutions. Quantitative cooperation implies that we bundle our participation with the same or similar participation of others to increase their combined effect in coordinated acts. Qualitative cooperation provides additional effects because it enables us each to contribute our particular strengths as complementary means in the production of means. Quantitative and qualitative cooperation allows us to raise the level of our pursuits. It allows us to transcend our personal limitations and to enhance effectiveness and efficiency by drawing on a sum of identical, similar, and dissimilar contributions.

If individuals share an objective that can solely or can better be reached cooperatively, they may form a united undertaking in which they pool their contributions and share in the combined success. We may call such an undertaking a joint venture. The applicability of this strategy appears to be limited because the objects of our desire are as diverse as our personalities and our individual and environmental circumstances. We are bound to have objectives that do not or only partly lend themselves to joint efforts. Nevertheless, pursuing our objectives our own way does not mean that we would not be able to band together during certain stages of pursuit and diverge at other stages. Even a partial commonality of pursuits may give us effectiveness or efficiency incentives to cooperate on certain passages. We may continue with repetitions of the production process in a joint venture if we have use for more of the same or a similar product or the maintenance of a product. Yet, upon achieving a certain level of means or accomplishment, there may not be a sufficient benefit left for participants to continue in a joint venture. They may therefore defer or abandon the joint venture. They may either acquire control over their share of commonly produced resources or productive facilities so they can use them for purposes that lie beyond the competence of the venture. Participants may contribute these resources into different joint ventures for subsequent processing or apply them independently in individual pursuits.

A decision to advance at certain stages of pursuit or in certain pursuits apart from joint ventures does not necessarily imply that we would resort in our interactions with other individuals to competitive interference with the means they have secured or seek to secure. Even if our interaction with others is directed at obtaining resources from them, such interaction is not necessarily adverse. We may carry on the coordination of contributions without entering into a joint venture if we obtain goods and services in an exchange. The voluntary nature of an exchange and the related facilitation of acquiring mutually beneficial means give this method of pursuit a cooperative character. To motivate cooperation by others in an exchange, we have to be prepared to add to their pursuits in return. This results in an exchange of contributions to each other's separate endeavors. The exchange of goods and services increases the reach and effect of our actions by allowing us access to goods and services produced by a diversity of sources. It may allow us to concentrate on producing goods and services that we can most effectively or efficiently generate. This can increase the utility and the value of our invested resources. Exchanges significantly increase the possible scope of cooperation because they do not require identity of objectives but instead require differentiation. This provides an opportunity to make the benefits of particularities in personal and external circumstances available to a broader group of individuals beyond acts of direct pursuit. Exchange can provide access to individuals who have no other connection to the owner of assets than being able to offer a product in return that the owner wishes to acquire.

To enable an exchange, the interests of the exchanging participants must be different although they must be complementary. Each participant must want what another has and be prepared to exchange a possession for it. That happens solely if each participant wants what is to be acquired from another participant in the exchange more than what is to be given. That difference in valuation by the parties of what is to be given and received may be based on the absolute inability to produce a desired good or service. It may also derive from the relative inability to generate a desired means as effectively or efficiently as the other party to an exchange. It may further be founded on the idea that the resources to be committed to the production of desired means by the desiring party can be more effectively or efficiently spent on other pursuits. The advantage gained from forgoing the production of a desired product and rather undertaking the production of another product with better effectiveness or efficiency may positively reflect on the attribution of value to the desired product by the desiring party. That attribution arises and rises because of the inability or the decision not

to produce a certain product by the desiring party. But that party may also have increased means available for exchange since it can concentrate on the production of other products for exchange. A party may increase its means if it can produce items for exchange with higher effectiveness or efficiency than items it desires. Higher effectiveness in production may translate into products with a higher effectiveness or efficiency, allowing their producers to command a higher price. Increased efficiency may allow them to offer their products at prices that are attractive to purchasers and still achieve sufficient profit margins for consumption or for use in subsequent exchanges. Increased means may reflect as well on the ability and willingness to pay higher prices for items in an exchange. These circumstances create a setting where both sides to an exchange can profit and thus achieve a complementary match between their desires. The raised availability of means for an exchange and amplified effectiveness and efficiency leave room for both parties to an exchange to improve their means by partaking in the increased value of each other's production. An exchange may enable them to acquire goods or services they would not be able to obtain otherwise. It may further enable them to acquire goods and services at a cost below the cost they would incur if they attempted to produce the good or service themselves. Most ideally, it enables them to lower the effect of this cost by producing highly valued means for exchange.

It may then be fairly easy to determine how differentiations in valuations by parties to an exchange might motivate them to engage in an exchange. However, matching the subject matters of exchange is more difficult. The requirement for complementary wishes in a direct exchange may restrict the utility of this type of cooperation. We would have to find coinciding complementary desires for means of a particular quality and quantity. We can increase the availability of goods and services in the quality and quantity we desire if we can break free from direct exchanges. An exchange could participate in a clearing mechanism in which multiple exchanges are related through barter. Yet the most flexible mechanism is an arrangement where we insert fungible value equivalents we may call money as intermediaries for exchanges. Through this mediation in common representations of value, the requirement for complementary means in an exchange can be deferred over and split into multiple exchanges with different participants. Depending on the scale and the variety of participation in a system of exchange, we may be able to obtain some or perhaps most means for our pursuits from others. The only requirement is that we must be able to produce means of sufficient quality and quantity that are of value to other participants and can be traded against products we want.

The advantages of exchanges can be augmented if we combine them with the production proficiency of joint efforts. Since a joint enterprise extends our productive capacity, it also may extend our ability to exchange products. The cooperative strategies of pooling and exchanging contributions may be combined to where participants merge their contributions in producing means for exchange in a joint venture. The exchange may be for resources for which the joint venture has use in its production or in which the participants share a need and partake by distribution. Alternatively, it may be for money that can be used in the joint business or attributed to the participants. The combination of exchanges with joint ventures vastly expands the opportunities for joint enterprises and their participants. It allows such enterprises to untether their purposes from the immediate concerns of participants' wishes and needs. A similar result may be achieved through exchanges that amalgamate multiple goods or services into a joint result without the participation of the contributors in the governance, profits, or losses of the coordinating entity. We may call such entities and joint ventures joint production enterprises. Exchanging a jointly produced product opens the advantages of a joint production process to any product that a sufficient number of other individuals may find desirable to acquire and in which joint production can trump individual production. The joint production process may compete with individual production in many areas. It may increase the effectiveness and efficiency of a production compared to individual production by permitting and encouraging specialization among contributors and the rationalization of production through standardization, repetition, and scale. Some effectiveness or efficiency advantages might be achieved if individuals or joint production enterprises participate in a sequencing of production installments that are connected by exchanges because this preserves possible advantages of separate organization.

Sequential and joint production may in many cases outperform individual production for self supply as well as individual production for exchange. It may produce goods and services not only more effectively or efficiently. It may further bring forth products that individuals by themselves might not be able to produce. The benefits of a sequential and joint production enterprise may not have to be limited to the enhancement of individual effectiveness or efficiency through specialization and rationalization. It may also be structured to proliferate knowledge and aptitude that can assist individuals to overcome individual impossibility. Additionally, its augmented effectiveness and efficiency can be instrumental to expand the boundaries of humankind's knowledge and technical capabilities. Sequential and joint production

and sharing of knowledge and aptitude help us to overcome matters of general impossibility. The scale and the complexity necessary to advance humanity's knowledge and capabilities may require a pooling of resources and the coordination of specialized knowledge and aptitude. This may not merely be the best but also often the only way to expand boundaries of knowledge and to create the infrastructure to use that knowledge. In addition to the combined effort that might functionally be necessary to advance, the cost of efforts and the risk of failure or of unintended consequences may require that we spread them over multiple individuals or an entire society. Such a spreading of cost and risk appears to attract participants to ventures that advance knowledge or practical proficiency as well as to productive ventures. The mutual dependence of sequential and joint production implies that participants share in the benefits and the costs of the entire production process. In a supply chain that is linked through exchanges, the sharing might to some degree be expressed in the exchange pricing. In a joint venture, it may be more categorically reflected by the arrangement of members to tally and deduct the entire cost before members obtain benefits.

We may designate all exchange and joint production as cooperative production. The benefits of cooperative production are not confined to obviously physical, objectively verifiable perceptive, or rational resources. Their heightened effectiveness and efficiency may free at least some of our time and extend our lifetime. Beyond that, all cooperative methods of pursuit regarding nonemotional resources involve patterns that foster the development of emotional bonds because they imply the creation of mutual benefit by participants for one another's pursuits. The emotional reaction to that benefit not only helps to reinforce nonemotional cooperative relationships. It also prompts the creation of emotional resources in recipients of nonemotional resources and, by reflection, in purveyors of nonemotional resources. Cooperation appears to be essential for the generation of both aspects of emotional resources. Cooperative modes of pursuit then seem to carry the decisive advantage that they can support pursuits in the full spectrum of our needs. The offensive character of competitive strategies, on the other hand, makes them ineffective or at least less effective in areas of pursuit where the fulfillment of needs depends on the voluntary cooperation by other humans. Competitive interests may employ manipulations to have victims supply resources to them voluntarily. They may present false promises of cooperation or pretenses of providing emotional or other resources to obtain resources from their victims without or with a reduced mutuality. Competitive interests may be able to make the identification of their practices challenging by commingling

competitive with cooperative practices. Either way, such shams might only be maintained as long as their disingenuity is not revealed. Upon such exposure, competitive interests may have to fall back on coercive practices to keep obtaining resources from others in spite of their violation of mutuality. Yet, in this openly competitive manner, they will only be able to substitute the voluntary concession or transfer of resources that is inherent in cooperation to some imperfect extent in areas that are conducive to coercion. The coercive reach of competitive strategies is largely limited to nonemotional resources and to those of their pursuits that must and can be adequately fulfilled by such means alone. Because overt physical resources are represented in objects that can be sequestered and in events that can be compelled, a competitive strategy with regard to obviously physical concerns appears relatively simple. While it might seem that a competitive strategy might not be as successful in fostering and in acquiring rational and related perceptive resources, threats or application of manifest harm might be successfully used to generate and to extract such results as well. The same methods may be used to obtain time advantages by burdening others. Openly competitive strategies might then appear to create results for the acquiring of nonemotional resources that match or exceed what is achievable through voluntary cooperation. Still, these methods might meet with resistance that might be costly to subdue or that might not be overcome and might threaten the welfare and existence of competitive perpetrators and their beneficiaries. Further, even if coercion is successful, it may be no match for voluntary participation in evoking performance in the generation and in the transfer of resources. These factors may taint or erase the benefits of competitive practices.

A blatantly competitive strategy is even less productive in acquiring emotional resources. Competitors may generate some of these resources individually through the successful pursuit of needs that do not necessitate the generation of emotional resources through others. They may also acquire them from emulated relationships that provide them with the pretense of emotional transfers. However, needs whose pursuit involves the production of emotional resources through other humans all appear to require that we engage in cooperative strategies with such individuals. Their acquisition is not predicated on a capacity and the determination to take and exclude but to give and assist. The quality of emotional resources we seek from others requires that they be voluntarily given. We cannot appropriate them from other individuals against their will. To attain emotional resources in the interaction with others, it appears necessary that we provide emotional and possibly other resources. The decision whether such resources are given is

reserved to the person from whom we seek to acquire them. We have to cooperate with and serve the objectives of persons whose emotional favor we seek. Although emotional resources may initially be granted without an immediate requirement of a cooperative return, they may frequently carry an expectation of a response. To have them persist in a recurring or continuing fashion, we may have to engage in and continue a cooperative relationship with the person who generates them for us or with another person for whom that person cares. Such a cooperative relationship may not necessarily require that we engage in a cooperation concerning nonemotional resources. However, a competitive approach regarding nonemotional resources against the individuals from whom we seek emotional cooperation is problematic because it sends conflicting messages. Competitors may attempt a pretentious or even a truthful provision of emotional resources to victims of their competitive strategies to be given genuine emotional resources in return. But the interference from their competitive behavior in such attempts prevents the initiation or continuation of relevant emotions in victims. It is contradictory to seek emotional resources and to engage in competitive practices in the acquisition of other resources from the same individuals or from individuals for whom these individuals care. Competitors may try to secure their supply of emotional resources by engaging in extensive cooperation regarding nonemotional resources. Still, the transfer of emotional resources may even be negatively influenced by only slightly competitive activities. The continued provision of emotional resources appears to be sensitive to and contingent upon a full mutuality including all resources. Competitors might succeed in maintaining a pretentious pattern of mutuality in which they compensate some of the shortfalls of mutuality on their part with continuous manipulation. Yet, even then, the mechanism of transferred emotional resources may not perform for them because they recognize that the emotions they elicit, albeit genuine on their victims' part, are the result of competitive fraud. Accordingly, competitors may not be able to use these emotions to evoke genuine emotions on their part.

Limitations in their ability to acquire emotional resources may instigate competitors to reserve their attempts to obtain emotional resources from other humans to individuals on whom they do not prey and who do not care that they take their other resources competitively from others. They may therefore restrict the acquisition of emotional resources to relations with other competitors, or co-opted competitive beneficiaries or third parties. But these strategies may aggravate problems in acquiring nonemotional resources. The missing semblance of an intent to build emotional mutuality lays open the nonmutual na-

ture of competitors' relationship with victims, and it breeds resistance regarding their appropriation of nonemotional resources. To maintain the cooperation by their victims with competitive practices, competitors must still manipulate victims into a belief of full mutuality. Alternatively, they would be required to ensure victims' compliance by resorting to coercion. Competitors who receive sufficient emotional resources from within their circle may consider their position to be sufficiently secure to drop pretenses of emotional or any other mutuality. They may deem the efforts necessary to uphold such pretenses more involved than the requirements for sustaining coercion. Yet they have to consider that such a practice tends to effect a destruction of emotional resources in them. They would not only lose the generation of emotional resources by translation of constructive emotions produced in others. Similar to the translation of positive emotions in beneficiaries to benefactors in relationships of mutuality, negative emotions issued by victims seem to translate to competitors as well. Instead of incurring love, respect, and gratitude, competitors are likely to incur resentment, disrespect, and revengefulness that drain emotional energy. These negative emotions additionally place competitors in immediate apprehension of retribution and recoupment and victims' determination to defend against competitive abuse. The resulting reductions in competitors' emotional resources combine with their internal destruction of emotional resources that arises from their competitive practices and failure to protect and support others. Such demeanor detracts from competitors' emotional resources because it betrays their needs for collective survival and thriving and other needs that produce emotional resources from cooperation with others. Together, these mechanisms produce a powerful deficit in emotional resources.

Manipulative schemes might forestall resentment that could be translated and might lessen the immediacy of apprehension regarding victims' defensive action. Still, they share all other negative emotional effects of coercive behavior. This renders competitive strategies inherently unsatisfactory even if they should succeed in nonmaterial terms. Cooperative strategies do not suffer from these problems. Their comprehensive ability to provide satisfaction for reconciled needs creates a source of great strength and stability because they can be governed by an integrated set of mutually beneficial correlations. We may call such a setting a cooperative system. In a competitive environment, preclusion and predation may as well occur systemically. We may call a setting in which competitors have achieved governance over cooperative concerns to engage in continued or repeated competition a competitive system. Contrary to a cooperative system, a competitive system is

not capable of a comprehensive integration of needs. Its essence is the antithesis of cooperation. It is predicated on taking advantage of or on preempting others, on the infraction and appropriation of their current and prospective resources for the benefit of competitors. While the imposition of a competitive system may entrench these practices, it cannot change their fundamentally offensive nature that breeds adverse reactions from deprived individuals upon reaching awareness. A competitive system hence institutionalizes the struggle between those who benefit and those who suffer from such a system. This lack of stability represents an intrinsic systemic disadvantage. Sustaining a competitive system requires significant commitment to overcome victims' resistance and to keep them from trying to change or abolish the system. These control requirements obligate a competitive system to reinvest large portions of means secured by competition into maintaining the system's existence and functioning. This situates a competitive system at an essential disadvantage compared to a cooperative system. Additionally, the effectiveness and efficiency of a competitive system suffer because it cannot count on the constructive abundance of motivations of mutuality that are characteristic to cooperative interaction. It cannot allow uncontrolled cooperation because it must prevent the formation of potential counterforces or independent forces. Hence, it cannot match the development and production potential of a cooperative system. Compelled cooperation suffers from costs and risks of enforcement and lacks the alacrity of voluntary cooperation. A competitive system can only approximate the effectiveness and efficiency of a cooperative system by taking advantage of cooperative structures and processes. It may therefore sanction, encourage, and protect these as long as desired resources can be safely extracted from them. But this infrastructure proves to victims the uselessness and oppressive character of superimposed competitive levels. Reliance by a competitive system on cooperative underpinnings renders its competitive superstructure vulnerable to be shaken off. The contradictions between the naturally free organization of cooperative pursuits and control measures required to keep a competitive system in place threaten instability.

This problem might only be avoided if cooperative processes of production were to progress toward heightened effectiveness and efficiency in a technologically dictated organization that can be described as human automation. The restricted character of such a production method and the specialized, dependent functionalities of participants could align cooperative structures and processes with competitive interests. All that might be necessary is that competitive interests take command of the integrated structures and processes that cooperative

development might voluntarily or with limited influence prepare. This is why competitive interests strongly favor the progression of economic systems to human automation. It disciplines human participants into set functions and makes competitors less dependent on voluntary mutuality. Regulated mechanisms of integrated production might still be classified as cooperative in form. Yet the involuntary and inflexible nature of functions of integrated production processes deprives cooperation of the element of free association of participants who proceed at their discretion. Participants may be at liberty to determine whether they wish to participate and initially have a choice of a number of functions. But the requirements of earning a living as well as the specialization of their training and work may deprive them of the liberty to work in most other functions or in any other capacity. To the extent skills do not become specialized, the fungibility of participants and a threat that they might be replaced by machines may place pressure on them to comply. This makes integrated cooperative production an attractive objective and a relatively easy target to be usurped by competitive interests. Because competitive interests are unable to interactively derive emotional resources from the production process of nonemotional resources, and because these emotional resources are not contributing to the production process, such interests would not benefit from stopping short of maximizing production to instead derive emotional resources. They might only be willing to agree to concessions to the extent this might be necessary to maintain the morale of those involved in production or to keep their adverse emotions contained.

Competitive interests could further increase their control of the production process if they would proceed to mechanical automation. It would make them even less dependent on the ability to keep human participants committed to the production process. But they might also have good reason to abstain from this ultimate efficiency progression and effectiveness advancement because it would release humans from their restricted specialized or their fungible dependence. They might therefore hold back on technologically available automation. However, already as human automation with mechanical assistance advances, its increases in effectiveness and efficiency and its replacement of humans in the production process give rise to the problem of keeping the growing unproductive masses at bay. Similar problems where the number of individuals in a society exceeds the system's economic requirements have challenged societies in past stages during human development. Only, at this time, the productive replacement of humans threatens to be more comprehensive. To keep control in such a state, competitive interests might render the receipt of resources by unpro-

ductive individuals dependent on their compliance. Additional measures may become required because a lack of productive pursuits might foment discontent. Competitive interests may have to find ways to divert unproductive individuals toward activities that keep them harmless. But filling the lives of such individuals with diversions, and suppressing dangerous potential where diversions fail, may become a cost and risk burden that competitors might become loath to carry. Since subjects at that juncture would be of no productive use for competitive interests within the system, competitive interests might endeavor to put them to use in the expansion of the system, to dispose of them without having them turn against competitive rule, or both.

These objectives might be advanced together by engaging surplus individuals to subject other societies or to discover and to settle territories that become newly accessible to humans. While successful expansion may keep surplus labor occupied for some periods, resource transfers from conquered territories may exacerbate domestic unemployment. Even where that is not the case, expansion would have to be continued to keep unemployment from rising upon a period of settlement. Limited room for expansion restrains the successful application of this policy. Moreover, the expansion of a system may cause its fracturing and a competitive reorientation of its fragments toward one another. To the extent expansionary undertakings fail, the loss of surplus population may be a welcome result. Only, if an expansion meets with adversaries, the failure to succeed implies the risk that defensive measures might threaten the productive basis and the existence of expansionary competitors. Competitors may choreograph some conflicts to occupy and to consume surplus population without major setbacks for themselves. Yet, with rising technological capabilities and economic interdependence, such conflicts may impair vital assets of competitive systems and thus not offer useful solutions. The only safe way to direct surplus labor may ultimately be the exploration and settlement of space. That solution is implied in the development of human technology. Still, here again, the distance and success of such settlements pose the risk that they might assert independence and bring competitive strategies to bear against their origin. Further, competitors might discover that their expansion into space is met with repercussions by previously unknown forces in a similar manner as their expansion attempts in their original realm. Even if such risks did not exist or could be controlled, surplus labor may amass long before relevant competitive systems become able to establish sufficient other viable locations. In recognition of the limits, risks, and costs of expansion, a competitive system might turn entirely or partly inward and endeavor to syn-

chronize its population numbers with the available meaningful occupations. This might be promoted by controlling birthrates, lack of assistance, or active elimination of individuals. Imposing such measures, however, may have to be undertaken with great security precautions for the system because it squarely places a competitive system into adversity with a sizeable segment of its population and threatens to provoke active resistance that may lead to its weakening or downfall.

Arguably, unemployment and its related problems could afflict cooperative societies as well. Because they may not resort to the same remedies as competitive systems within their system, they have to find outward occupation for their unproductive populace to keep the system stable. Their lack of alternatives may render them even more aggressive in their expansion. Yet the competitive treatment of individuals beyond the system betrays the cooperative essence of a cooperative system in an irreconcilable contradiction. Although primitive motivations may support such mistreatment, it has no justification in and diametrically controverts the foundations of human rights, collectively oriented human needs, and insights about practical benefits on which cooperation is based. A developed cooperative system would therefore have to find voluntary and equitable solutions to problems of a lack of productive positions due to human and technological automation in the best overall interest of all humans affected. This may likely require the purposeful guiding of societies and technological progress by cooperative insight in manners that do not unnecessarily render humans unproductive and reapply those whose productive displacement cannot be avoided. It might include the planning of birthrates and of resource generation, use, and regeneration. It might also include the engagement of increased qualities and quantities of production enabled by technological progress, including human and mechanical automation. But the extrapolation of the problems connected to technological progress indicates that the logical perfection of cooperative effectiveness and efficiency may ultimately become an existential issue for all of humanity unless humans keep developing sufficiently to remain the controllers and beneficiaries of such developments. The automation of productive processes threatens to make humanity expendable and idle in all aspects that can be assumed by machines. This may cause undesired activities by humans or by machines. A fully satisfactory and safe solution to the problems posed by our technological progress must include the use, maintenance, and improvement of human capacity to fulfill the all our constructive needs. This will likely require substantial technological improvements of the species within its current capacity. It may further necessitate the enhancement of human capacity.

These considerations, however, may be distantly removed from the concerns in systems at lower levels of development. Because they have fewer resources to sustain, divert, or reorient unproductive individuals, they may engage in severe remedial action. The scarcity of resources may serve as a general justification for competitive behavior as a matter of fundamental right based on needs. Competitors may claim that emergencies that threaten their survival or ability to recover from damage justify a competitive stance. But placing others into situations of exigency by remedial action merely shifts the burden, coerces them into competitive modes, and worsens the overall conditions. It wastes resources in conflict and additionally endangers participants because such a conflict is bound to be hard-fought. Cooperative measures provide the best way to avoid such battles and to address their causes. In times of scarcity, applying the productive advantages of cooperation is most required and their weakening, paralysis, or destruction by competitive strategies can be least afforded. Systems that are domestically and outwardly competitive as well as cooperative systems that employ outward competition may justify their competitive positioning as constructively motivated. They may claim to defend themselves or others, to maintain order among their members or among systems, to ameliorate the supply of resources, to administrate attribution of limited resources in the overall interest of humanity, or to serve other beneficial causes. Yet such possibly necessary or helpful measures may be combined with or give way to aggressive competitive policies. It is difficult to build or maintain a system in which governing forces only use their power in the overall interest. They might take advantage of their position without the insight or compliance with the insight that competitive aggression is superfluous and is deleterious to the achievement of happiness and that a setting where humans follow their unreconciled impulses will eventually subject them to be the victims of others.

In spite of grave evidence to this effect, proponents of a right to competitive behavior may argue that our drive to compete is a necessary characteristic that has served humanity well in its development. They may posit that such a characteristic should have died out in the development of humankind if it were detrimental to the satisfaction of our needs. More than that, humanity should have died out as a result of its purported shortcomings. They may also point to indications for the general usefulness of competitive behavior. As individuals and as a species, we encounter conditions where we have to preclude biological and nonbiological phenomena from negatively affecting us directly or our external resources. Additionally, we take all obviously physical resources we need from our biological and nonbiological surroundings.

Where such resources are not readily available, we extract, farm, or search for them. We share some competitive behavior with other species. Only, in other species, competition is principally focused on the nonbiological environment and other species. That we are rather readily willing to extend these techniques to individuals of our own species makes us unique. We share a certain level of intraspecies competitive behavior with individuals in other species. We and they behave competitively to one another by instinct to secure habitat, food, and propagation. We can discern the survival and thriving of the species as the ulterior purpose of such competition. Yet, if a species is to succeed, it is regulated to inhibit harm to the species that outweighs benefits. It often serves exclusionary purposes. Exploitation is limited because animals create no or only few external means for personal use and keep even fewer. Moreover, the effects of exploitation are less controversial because interaction regarding resources is largely genetically stipulated. Exclusion usually happens where the resources in a geographic area cannot support the needs of the present number of individuals. Exploitation of other individuals can occur as a part of exclusionary conduct. Boundless competition toward members of the same species appears to be due to deviant instinctive dispositions in victims or perpetrators, failed exclusion, or different sources of strain that may corrupt instincts. Yet even episodes of seemingly excessive competition might be an overall useful device to rebalance a species' position in nature.

Humans share many of the exclusionary and predatory instincts of other species toward members of their own species. Notwithstanding, they appear to be more inclined to excessive competitive behavior toward members of their species as a continuing matter. That may not necessarily be attributable to exclusively human instincts. We may act similar to how other animals would act if they were exposed to similar conditions. Excessive population density that results from the success of the human species may cause the continual interference of humans with one another and a scarcity of resources that may induce competitive conduct. But a theory of excessive stress as the cause of our excessive behavior fails to explain behavior we can observe even if extraordinary pressures can be excluded. Humans have not been peaceful toward one another even in times and contexts where population density and the scarcity of resources were a moderate or no problem. There seems to be an insatiable hunger for resources, for keeping as many of them as we can for ourselves, for subjecting others to our will, and for having what they have. While limited semblances of such behavior exist in other species, human behavior seems to have lost its bearings of a limited instinctive structure that was to serve the survival and thriv-

ing of the species. Compared to members of other species, we seem to be disposed to compete with one another much more unremittingly. Our mental advancement seems partly to blame for this result. Its enablement of production that is not instinctively ordered as well as the increased means, uses for such means, capacity to possess, and potential to attain transfers it provides enlarge the scope of competition for resources. The instinctive link between a control of resources and relative social standing may incite some social needs to fuel competition within this scope beyond resource requirements of other needs.

Other competitive responses appear to arise from the comparatively extensive genetic and acquired differentiation within the human species. It may cause us instinctive problems to acknowledge other individuals, and particularly groups, as members of our species even if our perceptions and rational insights tell us that they share all attributes that define us as human. Even if variations do not matter or could benefit our pursuits, instincts that have not kept pace with human diversification may tell us that their carriers belong to a different species and command or authorize us to act competitively toward them. The direction of such genetic instincts and possibly acquired instincts that reinforce them may weaken instincts that would have us handle other humans as members of the same species. Yet if we accept differentiated individuals or groups as human, our competitive pressure on them might even increase because instincts may designate them as deviant. This may mark them as unfit to be beneficiaries of our need for collective survival and thriving or even as a potential threat in our pursuit of that need. Moreover, behavioral idiosyncrasies may destroy instinctive complementarity that formerly prevented or guided competition.

While excessive competition may be resolved for many species with a movement of some individuals to less populated habitats, such a strategy may then only in part defuse human competitive challenges. But even in this regard, the extensive coverage of territory by humans, their attachment to locations, unexploited, reserved resources, and resources they have acquired in these locations, and the aversion of others to compensate them for losses may not permit a de-escalation. Unreconciled instincts may therefore often assert themselves with initial excessive intensity or may, by their disharmony with instincts in other humans, lead to an intensification of competitive activities toward extreme measures. Humans are afflicted with a mental volatility if not a standing attitude that provokes them to harm other humans for competitive purposes. Our expectation that others may act this way fills us with determination to respond or preempt in kind to defend ourselves and may license and pressure us to gain an advantage by acting first.

We may be disinclined to acknowledge these ugly common features of our personality as needs although they constitute determined motivations that might prove devastating for us individually and as a species. Our denial of their existence or their character as common errors and our attempts to characterize them as constructive and heroic may prevent us from adequately addressing these damaging traits and increase the jeopardy that we might succumb to them. Even if we may be able to keep some modes of competition within relatively peaceful parameters, our readiness to engage in excessive competition without limit appears to dwell very close to the surface of our regular behavior. We may not be certain whether these traits are genetically caused, acquired, or both. Yet, short of their modification, we must rely on our cooperative traits to counter their impulses and keep the abyss of possible escalation in check. Under ordinary circumstances, we may have relatively well-developed acquired or genetic scruples that counsel us against killing other humans or to use their body as a resource. But we may have significantly fewer scruples to subject others to produce resources for us and to assert our access to resources over theirs. To assuage our cooperative instincts, we may cite an assortment of euphemisms and rationalizations why others should cater to us or not have access to resources. These may include that their suffering is induced by a lack of cooperative motivation or capacity on their part relative to the dedication and higher capacity on our part in a cooperative environment. A cooperative setting may thus serve not only as a welcome setting for competitors to take advantage of its productive superiority but also as an operative medium within which they can disguise their competitive practices behind valuations of relative contributions.

Considering our propensity to interact with other humans competitively, we may not be surprised about the existence of competitive strife. We may have more difficulties illuminating why there appear to be so many incidents in which competitive practices are accommodated and achieve relative stability. Even if we acknowledge that cooperative traits work to balance competitive traits, we should arrive at volatile conditions that may not require much to escalate. Our hierarchic instincts may render a critical contribution to sustain peace. Although humans seem to have developed acquired hierarchic aspects, the presence of a hierarchic order among individuals of other species that are not or less capable of rational organization appears to be an indication that hierarchic inclinations possess a genetic foundation. Genetic programming appears to determine the hierarchic order and corresponding behavior of individuals by relating their relative standing according to their attributes. This allows individuals whose attributes repre-

sent the best chances to secure the survival and thriving of a species to assume command and preference in the attribution of resources. That may happen without any contest as a matter of innate compliance, or it may be left to a contest. The determination of hierarchic ranking by contest regularly depends on a show of quantitative or qualitative superiority. The original criterion for uncontested acknowledgment and the outcome of contests has been relative physical strength. While in the progression of human development mental and possessional factors have been added, these regularly pertain to the prowess to lead as well. Other persistent criteria refer to beauty as an expression of physical health and capacity to secure collective survival and thriving.

The determination of hierarchic ranking may assign lasting acknowledged positions and behavioral patterns to individuals as rulers and subjects, competitors and victims, depending on their relative position. Instinctive programming features determine the relative rights of individuals to access or possess resources and to command the activities of others regarding the production and use of resources. Such a competitive attribution of resources appears to have become gradually less accepted among humans. That may be in part due to widespread experiences of abuse of hierarchic control. Hierarchic dispositions also seem to have been increasingly replaced by considerations of whether they serve individuals' needs. As humans develop, they find that cooperation rather than following orders is the best way to secure their objectives. In coming to that realization, they can draw on a number of needs that inherently require cooperation. As emotional and rational incentives for cooperation are found, humans arrive at the concept of merit in the attribution of resources. We might only cede access to resources we claim or grant resources we possess if we receive adequate worth in return. Similarly, in a joint production enterprise, we might only concede an attribution to others in relation to their contribution. Nevertheless, a reconciliation among individuals consistent with these more advanced criteria may develop through an era of disorientation. This period when humanity has departed from the strictures of hierarchic instinct but not attained a secure footing under the consideration of needs has proven to be unpredictable and violent. Individuals may operate without secure inner guidance and therefore act competitively without constraint. Initially, there may be a battle between those who adhere to original hierarchic instincts and others who left the competitive constraints of such a regulation behind. Yet, increasingly, the development of humanity appears to jointly position remaining original and unbound competitive powers against those who have advanced to an attribution concept according to the merit of contributions.

At past stages in the development of humanity, hierarchic configurations may have been useful and perhaps essential in securing individual and collective survival. Hierarchy offered an arrangement by which friction within a tribe could be minimized, existential functions could be effectively organized, and its environmental success could be maximized. It provided effective means to ensure that a tribe could be led and protected by the most able individuals and that only the fittest specimens procreated. These genetic aspects and acquired traditions still hold considerable power over human behavior. Yet, in an environment with intensified complexity, variability, and nontraditional challenges, hierarchic approaches do not function as well to solve issues of individual and collective existence. The instinctive basis of hierarchic models in organizing human behavior predates the mental and practical development of humanity. Traditional hierarchies seem to possess some redeeming cooperative aspects that appear to benefit nonprivileged individuals and the human species. But these are extraneous adjuncts that do not require a hierarchy to exist and function and cannot serve as justifications for retaining hierarchic structures to which they are customarily connected. Hierarchic organization and behavior have not only become unsuitable or inferior to resolve problems in variable settings that require or can benefit from the cooperation of a wide variety of contributions. They are also counterproductive and dangerous because hierarchic instincts form an origin of unchecked competition and enable it. They ordain the domination by those with higher status and their protection and support by those with lower status long after any justifications for such a positioning other than the ability to project power have passed. These dispositions threaten to lead to contradictions with other traits that raise the specter of conflict.

If we desire to defeat competition and attain the benefits of cooperation, we must remove all shapes of hierarchies and replace them with cooperative mechanisms. This comprises hierarchies that purport to work on our behalf because the dedication of any overproportional power to any individual or group fashions a competitive potential and temptations that may turn against us. Only, distancing ourselves from hierarchies may be difficult for us because we remain genetically programmed to meld into them. Competitors and their victims appear to continue to act at least in part according to this instinct, including the acknowledgment of a relative positioning without or upon a contest. Further, this program as well as supplements to and deviations from it have been inculcated into us by acquired traits and by structures and processes of human society. To triumph over these forces, our insight and its reflection in our traits must rise to formidable heights.

The instructions issued by the variety of our cooperative needs appear to obtain additional support from a cooperative instinct that is of a more general quality. This instinct disposes us to cultivate tribal bonds and motivations. Similar to hierarchic instinct, and maybe even more, it appears to have a deeply ingrained, genetic nature because we can detect it in many other species. We may underestimate the power of tribal instinct if we can identify the benefits of cooperative organization in emotional and rational terms for single needs. We may not realize that, besides such practical assessments and insights, there is also a more general emotional requirement for the formation of cooperative units. Although frequently moving parallel with the emotional considerations of needs that can attain only or can find better fulfillment in correlation with other individuals, this requirement seems to reach beyond. There appears to be an instinctive directive to organize with other individuals of our kind in a lasting manner in societies and to coordinate a multitude if not all our pursuits with the interests of that society, possibly even if that entails damage to our pursuits. This overarching instinctive directive appears to reach back into the developmental history of our species. Similar directives can be observed in species that might not have the mental capacity to judge the utility of tribal behavior or might not have some of our needs that require cooperation. The genetic basis of tribal instinct may have been essential for reconciled demeanor among individuals of our species before a development of rational insight into the superiority of such a manner of existence and before the development of more particular cooperative needs. Even now, it may grant necessary or helpful reinforcement and fill our cooperative disruptions and voids. It causes us to band together with other individuals even if conflicts of interest exist. It can steer us toward cooperation over the objection of competitive impulses.

Applying tribal motivations to cooperative ventures would appear to be generally well suited to enhance their utility for their members. The emotional connection among members and between members and the organization improves cohesion and coordination in efforts to obtain and maintain objectives because it adds a strong aspect of emotional mutuality. Beyond many concerns of individual survival and thriving, it appears to particularly serve needs to secure collective survival and thriving. The motivation to advance the tribe seems to be the original expression of our need to secure the survival and thriving of our species. The resulting emotional bond and its precedence over individual concerns benefited our species for eons when humans lived in small groups in an often hostile and dangerous setting where these groups had to fend for themselves. Coordination of humans as an op-

erative unit maximized the chances of a group and its members. However, in an era of human proliferation and development of human cooperation past the confines of traditional tribes, tribal mentalities and functions they induce can be out of place. They may become obstacles and threats because they can improperly control the judgment of our council of traits regarding the subjects of our individual and collective survival and thriving. In particular, they might counteract helpful and necessary interaction beyond the limits of our tribe. Tribal emotional bonds may induce us to treat nonmembers differently. We are less inclined to identify and empathize with them or to collaborate or compromise with them as a matter of emotional allegiance. Not including them in our tribe releases us from supporting or protecting them. We may regard them with indifference. Our lack of emotional bonds may further permit us to exclude them from access to resources and to use them as resources with less or no scruples. Our expectation that tribal outsiders object to our attitude or resulting behavior, and our awareness that they might hold similar unprovoked attitudes toward us and might act on them, may raise our hostility toward them. Our differentiation and apprehension due to lack of emotional mutuality are likely to intensify against individuals who possess their own tribal organization because this may make their social association self-contained and them similarly prepared and intentioned to act toward the outside.

A competitive stance against our environment is not surprising if the tribal bonding is created by external challenges. We might organize a cooperative structure to defend against competitive strategies with competitive strategies of our own or to secure resources from our environment that we could not achieve by other strategies. Yet tribal dynamics may also produce a competitive stance toward the outside if the cooperative bond was established to manage challenges or opportunities within the tribe. Tribal instinct appears to position us into a competitive mode toward the outside regardless of the activating conditions. Our high reverence for our tribe, our dedication to its survival and thriving, and our fear that other tribes might have converse priorities induce us to wish or believe that our tribe possesses superior attributes compared to other tribes and to promote such attributes. We brush aside similarities and we exaggerate differences of those beyond our tribe. We may also develop impressions that the hostility of other tribes compels us to take adverse measures against them. We may use these impressions to justify the exclusion, exploitation, or possibly extermination of other tribes. Even if we grant room to our need to advance humanity, we may believe that it can be best fulfilled if our tribe prevails. This notion may help us to defeat any remaining scruples.

The genuine or imputed threat of competitive aggression from outside forces and the potential to acquire means by competitive behavior against them may cause intense impressions of danger and opportunity that demand comprehensive coordination within a tribe to respond. The requirement to rely on others in a momentous and possibly existential common undertaking and the coordination in preparation for conflict are liable to strengthen the bonds within a tribe. At the same time, gearing up for a competitive struggle with other tribes reinforces negative attitudes toward them. All this raises the probability of conflict among tribes that have contact. A conflict has an additional reinforcing influence on the emotional commitment to the tribe and escalates the alienation and competitive attitudes toward an opposing tribe. This may further heighten members' commitment to aggressive or defensive competitive behavior and the intensity and scope of their hostile behavior. Consequently, tribal tendencies may lead to the competitive radicalization of societies. Through them, cooperative instincts seem to give rise to a many of our competitive impulses.

These risks emanating from our tribal instincts already existed in the less developed stages of humanity. But they were limited by the comparatively rudimentary state of technology and organization. In a densely populated and interconnected setting, the differentiations of tribal instincts make them particularly menacing forces of limitation, conflict, and destruction. Although the number of tribes may have decreased, their destructive potential has grown. At the very least, their differentiation may hamper the advancement of civilization to the extent it is based on comprehensive cooperation. To overcome the problems posed by tribal instinct, it might appear necessary to merge tribal groups until solely one tribal society of humanity remains. Yet, even if humans formally succeed to unite their tribes and hence escape some tribal strife, tribal mentality might struggle to maintain pace with this expansion. Individuals might continue to adhere to traditional criteria of identification to establish and maintain tribal allegiances. They will have to make a conscious effort to overpower negative tribal impulses after considering them in the context of the entirety of their needs.

Proponents of competition might justify hierarchic or tribal instincts as beneficial mechanisms that coordinate constructive cooperation and issues brought on by human contact. Coordination is necessary because we choose the company of humans as helpful or as indispensable partners in our pursuits but may not necessarily agree on cooperative strategies. Even where there is no need for constructive cooperation, we may not be able to prevent the intersection of other individuals' pursuits with ours. Either way, the aims of individuals seem

to inevitably collide. That may be attributable to discrepancies among individuals in their personality or situation. It may also be due to their focus on securing the same objectives for themselves. We all view the world from the viewpoint of our needs and feel compelled by them to obtain what we need. Other humans may be permanently or temporarily our allies or foes, or they may be both simultaneously. We may have difficulties to live with as well as without other humans. Facing such difficulties, it may seem logical to engage in the inward and outward conduct devised by our tribal instinct and the ordering behavior instilled by our hierarchic instinct. These dispositions appear to make the best of our existential requirements and settings, and they seem to be in the interest of the selection processes by which species evolve. They connect nurturing features with features that promote stronger individuals and sets of individuals. It may therefore seem appropriate to defer to these instincts as institutions that have been generated and honed by the logic of nature, including their competitive aspects. Still, regardless of possible historic justifications for competitive aspects of hierarchic and of tribal modes, humanity has been outgrowing the circumstances that might have made them necessary or helpful. At the same time, the potential and the necessity for considered cooperation have been increasing. That we have not been able to abandon competitive approaches toward one another seems to be a shortcoming.

Our hierarchic and tribal instincts may not appear to us as distinct needs. Their deeply ingrained character may prompt us to regard them as more basic urges that find reflection in a number of different needs. Their widespread presence may make them appear to be mere manners in which we pursue our needs. Yet their hold on our behavior and our discomfort if we do not comply with them establish them as common fundamental needs. Properly addressing them will require an acknowledgment that we possess them and that they carry deleterious aspects. A considerate approach appears advisable that differentiates constructive and destructive features of these traits. Their long history in species that have survived, including our own, indicates that they possess aspects that might be important to preserve, at least for now. The fundamental ability of hierarchic and tribal instincts to organize individuals to coordinated action may prove to be indispensable. We may try to adjust them to serve our needs better by replacing their competitive aspects with cooperative principles. We may change hierarchic instincts to where the hierarchy places all individual members in a society on top and subordinates functions that serve that authority. We would reverse the interrelation between government and the governed while preserving the organizational essence of this trait.

We might further adjust our tribal instinct to become inclusive of all our traits and all of humanity, hence leaving no objects for tribal discrimination. To the extent the genetic basis of this instinct cannot be altered, we might restrict and direct its expressions through our council of traits and the institution of its rulings in acquired traits.

It seems that remaining competitive reactions due to excessive proximity, scarcity of resources, and appearances of difference among humans lend themselves to resolution by practical cooperative measures. The threats of excessive proximity may be solved by coordinated demeanor that restrains mutual infractions, by cooperative population planning, and by developing human technology to access new realms beyond traditional habitats for humans. Similarly, the scarcity of resources might be overcome by engaging the effectiveness and efficiency advantages peculiar to cooperative production. Appearances of difference among humans might be overcome by cooperative interaction among individuals and groups. This will bring necessarily forth the realization that any of these differences are superficial and, compared to the broad expanse of human commonalities, are irrelevant. We might thus be able to look forward to a setting where competitive behavior will have been vanquished and will have been replaced by cooperative behavior. Competitive strategies might still provide benefits in exigent circumstances where autonomous or cooperative measures are impossible, ineffective, or significantly impeded. Yet, even then, fundamental priorities and the mutuality of our relationship with other individuals may curb our justification. It would be limited to occasions where we or others would suffer significantly greater harm than the harm of a saving competitive infraction or where we must defend against competitive aggression. In the past, humans may have regularly faced existential exigencies that made a generally competitive attitude vital and customary. Many of these emergencies were caused by human inability to control environmental aspects. However, a large portion appears to have been caused by human competitive demeanor itself. With the development of cooperative interaction, competitive strategies among humans should become extinct with very few possible exceptions that would be based in technical circumstances beyond our control.

Although this insight is supported by reason and by cooperative traits, implementing it might be difficult not only because we have to overcome countervailing aspects of emotional traits that appear to be deeply lodged in genetic and acquired traits. The strain of experiencing competition and of the actual or threatened deprivation of means may reduce our behavior to a persistent emergency response. That response may provoke similar emergency responses in others. This way,

a competitive mode of relating to other humans may perpetuate itself. We might experience hardships trying to escape competitive environments even if we acknowledge the superiority of cooperation. We may wish we could avoid resorting to competitive strategies. Our comprehension of a cooperative mode and our promising experiences with it may inspire us to work on expanding a cooperative manner of pursuit. We might succeed in establishing aspects of cooperation that might develop into a cooperative system. But engaging in such practices and overcoming competitive antagonism might be challenging in an environment that is dominated by competition. The disparity of power in such a system may make it difficult or impossible for victims to carve out a cooperative existence. Competitive forces might only permit cooperation to the extent it serves their interests directly or as a distraction or to the extent it does not imperil their interests. Although there might be movement engendered by cooperative practices, we may also register the exposure of such cooperative ventures to competitive manipulation and more direct assault. We may fear that cooperative behavior invites competitive exclusion and exploitation and that we will be unable to mount an effective defense against them. As long as competitive interests keep threatening our pursuits or interfering in them, we may perceive a need to engage in exclusion and predation against competitors as defensive measures. Moreover, we may perceive no alternative in a system permeated by competition than to engage in offensive competition to secure means. We may combine these two aspects into a belief that we can best protect our interests if we discourage actual and potential competitors by establishing a more powerful competitive position and if we preempt them by procuring, dominating, or destroying the resources that might be used against us.

Our lack of confidence that a cooperative mode of pursuit can be established and maintained, our fear of being exposed to competition, and our opportunism may strengthen the grip of competitive behavior on us and others and prevent the establishment of a cooperative system. We may keep ourselves as well as others in a competitive mode that may only allow limited cooperative aspects. The motivation to migrate toward a cooperative system is likely to be least developed in successful competitors. As long as they can sustain power and reap overproportional benefits, they may have little incentive to change the system. Competitive forces might attempt to assuage their conscience and accusations that their advantages arise at the cost of others by asserting productive merits of competition in traditional or conservative hierarchic and tribal settings, particularly if it is regulated to guide its purposes and prevent excesses. The next chapter explores this claim.