RECIPROCITY AND CRIMINAL JUSTICE USING EPIGENETICS RULES TO DESIGN A PROGRAM

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This Essay is an attempt to demonstrate the use of epigenetic[1] rules as a paradigm shifting mechanism in designing human structures. As such, it does not attempt to prove any science, but uses the science that is emerging as a new human story, to create new metaphors, new memes.[2] E.O. Wilson (1995) says that the integrated assessment of behavior in context is the way to derive meaning (he says that with regard to ants and wasps, but the application is generic). The Essay also draws freely from the unpublished work of William R. Page, who has categorized the epigenetic rules into engineering specifications and design principles.[3]

I. UNDERSTANDING RECIPROCITY FROM A PRAGMATIC PERSPECTIVE

A. Step One: The Positive Reciprocity Machine

The reciprocity machine works in the positive direction to encourage cooperation and in the negative direction to sanction and dissuade defection. In the social environment of early humans, one key to survival was the ability to keep the ledger of social obligation balanced and to detect when one was being cheated in the process. The necessity for cooperation among the relatively weak humans in a world filled with lions and tigers and bears (!) meant doing favors for one another—hunting together, sharing food and labor, showing a new way of binding the club head to the shaft, passing on the skill of drying strips of meat, the strong protecting the weak, older teaching younger, younger caring for older—in the constant day-to-day interaction between members of the band.

Favors are the social glue that holds groups of humans together; if you do something for me, then I am likely to do something for you later. You do a big thing for me, like save my life from a charging rhino at considerable risk

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1. Charles J. Lumsden and E.O. Wilson define epigenetic rules as "any regularity during epigenesis that channels the development of an anatomical, physiological, cognitive, or behavioral trait in a particular direction." *See* CHARLES J. LUMSDEN & E.O. WILSON, GENES, MIND, AND CULTURE 370 (1981). Bill Page, building on the work of John Tooby and Leda Cosmides, defines epigenetic rules as "brain-information-processing rules" that govern how humans deal with their environment, social and otherwise. *See* THE ADAPTED MIND (John Tooby & Leda Cosmides eds., 1992).

2. *See generally* RICHARD DAWKINS, THE SELFISH GENE (1976).

3. *See generally* THE ADAPTED MIND, *supra* note 1.

to your own life, then you can count on me to back you up for the rest of my life. Pulling me out of a pit, at not much cost to you, but huge benefit to me, creates a feeling of great obligation, so that the next time you are in trouble, you can probably count on me if it does not involve too much risk or effort. If you do a small favor for me, I will calculate my debt and be willing to do a small one in return. If you buy me a drink, the next round will probably be on me, but don't expect me to make your mortgage payment. However, if we perform frequent ritual exchanges of favors, we are likely to reciprocate more freely with less calculation. We seem to add things up to a level of confidence, and then not worry about the details. If we perform an ongoing series of rituals, the rituals themselves become the expectation of largesse. As we continue to do small favors, to practice the exchange, we build trust that our risk will be reciprocated.

As trust builds, humans become more willing to perform larger favors for one another. For example, if we meet weekly and exchange small gifts or favors, ranging from the gift of conversational grooming to pushing your car out of a snowbank, we are likely to be willing to do larger favors. Thus, I may help you pack and move, or you may help me stack three cord of my firewood. This is the root of service clubs and military unit cohesion. Group and cultural survival depends on a social structure based on individual members helping one another in small ways to achieve shared benefits. We practice cooperation by rehearsing with ritual favors, triggering the genetic structures predisposing us to cooperate rather than compete.

Perhaps the most important precursor to doing favors for one another is creating the opportunity to do favors. We must first get permission to do the favor, since both parties know that the recipient then incurs an obligation. I have to first ask "Can I buy you a drink?" because by allowing me to do so, you incur a debt. If you accept, I have you in a "power situation" because you now owe me a favor. We agree, in an implicit contract, that you will buy the next round of drinks. That is unless there are sexual overtones, in which case the understanding of the reciprocal obligation is more charged and will take a great deal more communication, mostly non-verbal. (That is for another paper.)

We are, after all, designed not to compete all the time, but to rest, to sit around and "shoot the breeze," and to "hang out."[4] Competing all the time takes far too much energy, and worse yet, puts us at risk of getting hurt. Before "hanging out" may occur, there must be a threshold level of trust among the members. You start by "hanging out" with your family. In this setting, you learn the structure of gift giving and reciprocal obligation; the

4. *See generally* ROBIN DUNBAR, GROOMING, GOSSIP AND LANGUAGE (1996).

ceremonies of undifferentiated positive regard for babies; the gift of food and nurturing; the training in the construction of a gift for a parent; the preparation for social contact with non-kin, within which sibling competition for all the attention prepares one for later interaction and creates a sense of fairness.

Then, we advance to the serious business of building reciprocity with friends. One of the gifts a friend can give is listening to your stories. This comes after you have created some stories together and rehearsed telling them. Another gift a friend can give is picking you for his team and letting you play first base. This doesn't happen until you have both watched each other play; you learn that he usually picks a winning team, and he learns that you are pretty good with a glove. A primary gift a friend gives is the opportunity to demonstrate value to others, i.e., to find a niche where others will find you increasingly indispensable.

The cooperation-building activities between us take up most of our time. We are constantly cooperating, most of it by routinized activities that keep us from having to do the hard work of calculating the risk/benefit ratio for every choice we make. We satisfice—meaning we do just enough to get by—most of the time. Hard work is to be avoided at all costs, unless we really have to do it. Then we only do the hard work grudgingly (and as long as we are allowed to complain). We respect hierarchy and follow leaders when we calculate that it is in our best interest to do so (especially if the authority has fresh meat). If, however, obedience to authority gets us nowhere, we will avoid that authority, subvert it, or simply disobey it. But that is only occasionally—most of the time we sit around and "hang out:" gossiping, bragging, getting ready to rehearse the behaviors that count.

B. Step Two: The Negative Reciprocity Machine

In the primitive environment, the reciprocity machine also worked in reverse, to sanction and dissuade defection. The response to a violation of a reciprocal obligation was probably both more swift and more certain than our justice system, but it was not likely that the sanctions for misbehavior were Draconian. The band had to be careful not to go too far in sanctioning you, lest it lose your value as a contributing member. After all, the band needed everyone to hunt, forage, raise children, and defend itself against the external environment. The band that spent a great deal of time and energy punishing to maintain order was one that had less time to hunt and gather, less time to build a culture, less time to learn.

The problem is the defector, the so-called "free rider."[5] We all start out as free riders when we are children. We then grow up, move out, get a job, get married, and carry on the line. Biophilia is the mechanism that allows us to tolerate the free riding of children. For example, it allows you to tolerate the five year old nephew who kicks you hard in the shin, as his mother (your sister-in-law) exclaims, "Isn't he cuuuuute?" with that rising inflection implying permission to keep kicking all the dominant males in the room. That is, until one of the dominant males breaks protocol in some way.

We tolerate free riding to the point where the child increasingly is expected to demonstrate some value in return for our support. The Piagetan stages of development lend some credence to the notion that brain development follows from an interaction of propensities to respond to stimulation of the reciprocity module. The ability to perceive others as more than objects of satisfaction or denial becomes fundamental in the development of the child as a social being. The interactive effect of brain and environment in building the capacity for reciprocity is worth looking at. Sociopathy and reciprocity are linked.

To work, reciprocity needs to have a mechanism to detect cheating. The detection of cheating in the primitive environment is easy. The sense of unfairness is fundamental—I didn't get my share. My needs are paramount; I want more.

However, the mechanism of kinship puts a brake on that, allowing tolerance. The mechanism of respect for hierarchy gives us pause. The recognition of the need for food tomorrow holds us back. We calculate what we think we want, what the traffic will bear, what we can get away with, and what the odds are of getting caught if we take too much. But, that calculation results in an expenditure of energy. The energy results in a level of emotion which, depending on our level of seratonin, gets displayed physiologically as fear, shame, and guilt.

Controlling those impulses (delaying gratification) simply requires a brain chemical process. The mechanism seems to be some kind of mental ledger. We keep track of who owes us, whom we can count on, whom we owe, on who have hurt or betrayed us, who has power, who doesn't, and who is blameworthy. When the negatives add up to a threshold, we act. The threshold is lower if there are more of us doing the adding up, and when we add it up together, out loud. This is the power of the group. We keep a group ledger and we add it up together. When the total reaches a point that the group can no longer tolerate, the group acts. There had to be a mechanism to rid the band of "berserkers"—either brain mutations or maladaptives who

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5. *See generally* ROBERT AXELROD, THE EVOLUTION OF COOPERATION (1984).

didn't conform to the niche and who threatened survival—but, to keep a few of them around in case they were needed for combat. (Maybe that's built into the male of the species.)

As we expanded out of the Serengeti, we needed a mechanism to build reciprocity beyond the bonds of kin and the immediacy of power. We developed negative reciprocity, which is not merely the absence of positive reciprocity (the withholding of privileges), but the unleashing of the controlled negative response (the invocation of consequences).

There are two kinds of consequences. One is pain, and the other is work. Pain can be physical, or better yet, from a survival perspective, emotional. Work is painful, but productive.

II. UNDERSTANDING JUSTICE FROM AN EPIGENETIC PERSPECTIVE

The concept of fairness is a complex one, requiring five pages in the Oxford English Dictionary to define and illustrate the usage of the word ("fair weather," "fair decision," "fair performance," "fair maiden," a "fair estate," "fair hair," "fair understanding," to name a few). Anything with this much definitional-use baggage must be epigenetic. In the early environment, justice was a direct process. All of the forms of justice were present, only not as complicated as we have made them.

A. Distributive Justice

In the primitive environment, distributive justice was much like it is in the most primitive environment we see today—an eight year old and a six year old dividing a candy bar. The older, bigger and stronger will break the bar and decide which half is his. This presumes that his mother has told him to share with his sister, and that the reason for such generous behavior on his part is his premonition of what will happen the next time. Each culture had to develop some understanding of fair distribution. This is the fundamental force behind the structure of culture—who gets what, when, where, and why.

B. Commutative Justice

The redress of unfair distribution is easy when there is power. The mere gesture of threat by the dominant male is enough to persuade most to shape up. The reciprocity involved is straightforward and negative. The calculation is easy, especially when there is a history of remembered or witnessed consequences and the number of players is small. If you steal more than your share of meat, you will not get your share tomorrow. Rather, it gets reduced.

However, there is never absolute power, only temporary coalitional

power or dominance. In the band, most of the time, the resolution of conflict is negotiative, involving the entire community. The technologies are the same as they are now—discussion, confrontation, mediation, arbitration, an appeal to the elders—but all in the presence of the band.

C. Retributive Justice

In the primitive environment, the response to a violation of commutative efforts was likely instantaneous, because everyone involved was right there. If you stole more than your share of meat and blame and anger didn't dissuade you, rocks and sticks followed. However, the band also recognized that retention of members was critical to the survival of the group. Although it might be more peaceful if the older adolescents went away, if there was an attack by another band, it was handy to have the older adolescents around. Likewise, adolescents recognized, as they watched their parents age and require support, that they would need the band in the long run.

The need for a band to have a group of strong males around, to deal with predators and other bands, creates a dynamic tension between the competition of the individual males for mates, territory, food, and the need for cooperation and conservation of energy within the band. Consequently, it is likely that retribution was a last resort. Conflict and dispute were not likely resolved with violence. However, conflict between bands was not as directly restrained by the need to preserve the gene pool. The structures of reciprocity had to be more ritualized, because until the development of artifacts, food storage, or the impedimenta of culture, there wasn't anything in it to reciprocate, except maybe genetic diversity with its attendant parasite reduction. Yet, while indirect, genetic diversity was probably potent enough in the primitive environment to promote rape, inter-band marriage, and revenge.

D. Procedural Justice

All humans are good at bureaucracy. The development of procedures ("This is the way we do it around here!") is both idiosyncratic and generalizable. We all make rules to try to define human behavior and the response to it. Every bureaucrat knows that the fundamental obstacle to getting anything done is turf. However, not many bureaucrats know that the way around that is reciprocity. That is the difference between bureaucrats and politicians.

Procedural justice is a learned culture. In fact, the legacy of law as precedent is the fundamental civilizing force. For example, a good trick with the candy bar scenario is the rule: one person breaks the candy bar and the other one gets to pick first. This may lead to inordinate scrutiny of the cutting

procedure, which may result in "hi-tech" measuring devices, but it works well the first few times.

E. The Current Paradigm for Justice

The retributive model of justice can be characterized symbolically by the goddess of Justice and her scales.[6] On the scales of justice are two pans linked by a balance arm, so that if one goes down, the other goes up. Justice has been seen as balancing the scales with punishment meted out in an amount of "pain and suffering" equivalent to the loss experienced by the victim. What is even stranger in the Meme of Justice is that this suffering is presumed to balance the scales, thereby raising the victim of the crime to some equilibrium. Therefore, we take the offender who has stolen a five hundred dollar television set (to sell for drug money) and put him in jail for a year. This calculus—called sentencing—is a profoundly human activity, and a completely relativistic application of game theory.

This modern western *quid pro quo* reciprocal system began almost one thousand years ago.[7] It was on October 14, 1066 that the American system of justice went wrong when William beat Harald at the battle of Hastings. But, William had a problem. Although he had won, he was deeply in debt. He was able to pay off his knights and nobles and their vassals with the spoils of war, but he still had his obligations back home in Normandy. While waiting for the invasion fleet to assemble, William had provisioned his men by writing "IOUs" to the Norman merchants and farmers. He could tax the Anglo-Saxons—which of course he did, in true medieval mafia style—but he still needed more.

William decided to implement a new form of justice. Prior to his victory, the Anglo-Saxons had a village system of justice—the Danelaw—with the fundamental purpose of righting the wrong done to the victim. If an offender stole a sheep from a farmer, he owed the farmer a sheep or the value of it. Even a man's life had the wergild (the man-gold). Thus, if I killed your son, I owed you a son. If I had one, you got an indentured servant, and I also paid

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6. The goddess was variously known as Astraea or Themis, but more accurately as Dike, who was one of the Horae—the Hours, or the Seasons: Eunomia was Order, Eirene was Peace, and Dike was Justice. These goddesses were one of the sets of daughters of Themis, the goddess of Law and Order [Celestial, Natural, and Physical] and a Titan, who was Zeus' second wife (Themis' sister, Metis, was Zeus' first wife and the goddess of Wisdom. However, Gaea told Zeus that any male offspring of that union would be more powerful than Zeus, so he swallowed Metis and their unborn daughter, who would turn out to be Athena.). It is of somewhat more than casual interest that Justice was born from the union of Power with Law and Order, not Wisdom—but I digress.

7. Charles W. Thomas started my thinking in this direction. *See generally* CHARLES W. THOMAS, CORRECTIONS IN AMERICA (1989).

the wergild. This was decided in a village moot, by the elders of the family or the village council. The job of the elders was to determine the value of the victim's loss and the means of compensation.

William, as a conqueror, had a different perspective, derived more directly from Roman law. Since all of the conquered Anglo-Saxons were his subjects, they were his property. Therefore, a crime against one of them was not a crime against a person, but rather against the property of the King. The injured party was the King, and the wergild went to the treasury, not the victim. It took five years to impose this system, but once in place, it was very effective as a revenue enhancer.

The English spent the next 710 years trying to undo the power of the King, with the Magna Charta, the Glorious Revolution, and Parliament. When America's turn came in 1776, we made sure to limit the power of the King. We replaced the King with the State and, after some discussion, those seeking to ensure the survival of the republic chose to balance the powers of Congress and the President with the rights of the individual. This has evolved into an elaborate set of procedures we call the "Justice System," which protects the individual defendant from the overwhelming power of the State. Very early on in America, we abolished corporal or capital physical punishment and replaced it with imprisonment. Recently, since a set of major Warren Court decisions in the 1950s, those rights have become increasingly better defined, resulting in huge changes in the abilities of courts and police to invoke discriminatory and questionable punishment. Most of the reform efforts of the twentieth century have been directed at limiting the use of imprisonment, reducing prison terms, equalizing them, or otherwise making the punishment fit the crime and/or the criminal.

F. A Different Paradigm for Justice

The problem with the metaphor of the scales is that the balance arm on the scales is rigid and attached solidly to the pans. It is presumed that if the victim's loss is the offender's gain, then the offender's loss will somehow be the victim's gain. This meme is powerful, so much so that the general dissatisfaction with the American justice system has resulted in a call for ever more punishment to balance the dissatisfaction of the victim and the public with the process and the outcomes. Thus, prison sentences should be longer. If judges are to blame, harness their discretion. If parole boards are lenient, replace the members with tougher appointees or abolish parole entirely. If corrections commissioners are too lax, fire them. Make the laws tougher. Declare more behaviors criminal. If it doesn't work, do more of it. Three strikes and you're out. There is a call for truth in sentencing!

The retributive model is a male dominance problem-solving model—if there is a problem, find out who is to blame, punish him, and move on to the next problem. This is the power model.

If we change metaphors from the scales to economics (still maintaining the concept of value, but from a commutative sense), we can get somewhere. That way, the scales are not rigid, but elastic. If we punish the offender by taking value from him, equivalent to the victim's loss, we have negative math on both sides of the equation. Both sides lose. Even worse, under our current system, not only does the victim lose what was stolen or destroyed, but the offender gets put into a $25,000 a year jail cell at the victim's (as a taxpayer) expense! Plus, the victim's taxes go up to pay for more prisons! This would make some modicum of sense if, by putting the offender in jail, we somehow reformed him, making him less likely to reoffend when he gets out. However, the opposite is true: Jail makes him more likely to reoffend. If the retributive model doesn't work now, what makes us think that it worked in the early evolutionary environment?

G. Thinking about Programs from an Epigenetic Perspective

The first step in designing a program used to be defining the program's goal: which deviant behavior needed to be changed into normal behavior. This meant dealing with the individual as being somehow different from others, and focusing on these differences. Corrections, however, deal with humans in groups and categories; we create environments in which groups of deviant individuals get housed together. Over the past twenty years or so, we began to recognize social learning theory as more effective than individual psychotherapy. We also began to recognize the ecology of the environment as far more influential than the particularities of the offender *in situ*.

First, all programs, like all human intentional endeavors, all human organized structures, and all groups of more than four or five humans who stay together for more than a few hours, create and maintain a community culture. This culture has all of the attributes of human communities and is influenced by broad predispositions (epigenetic rules) of human brain information processing. Every culture, at least in the freshman anthropology texts, has the following elements:

Purpose:	Generally, survival of the organization or the subordinated goal;
Values:	What the group cares about, in primary and indirect reciprocity;
Principles:	How the group does business—the rules of order and ethics;

Language:	Promoting recognition of kin and creating the structure of thinking;
Education:	The means of communication of purpose, values, principles and language;
Sanctions:	The reinforcers, positive and negative.

These are undergirded and routinized by rituals and ceremonies.

Next, humans are directed by the selfish gene that insists on survival of self as the primary priority.[8] The number one job of humans is to get through the day. For most animals, that task requires the calculation of risk (effort) and benefit on a constant basis. Fortunately (or not), we have a brain that recognizes the future. It also recognizes the others in our species not merely as autonomous agents of self, but as potential supports or threats to that survival. We have a brain that especially remembers people who have been a help or hindrance to us, and tags those memories with markers of intensity or potential. We recognize that any group is bigger than an individual, and that in order to survive, we must form coalitions and alliances. We recognize and respect hierarchy, focusing on those who pose a threat and those who can provide a benefit. We respect hierarchy, not dominance *per se*. The respect for hierarchy derives from the pragmatic recognition that a coalition is almost certain to overpower a single adversary. The dominant human male may be able to defeat any other single male in one-to-one combat, but he cannot maintain dominance effectively without forming a coalition. Once a coalition is formed, it becomes the principal task of the leader to maintain it, which he does with routine doses of small humiliations and reminders to keep the seratonin in check. The seratonin response evolved, perhaps, because it is almost always more survival-enhancing to submit than to fight. When it is time to actually fight an external threat, having a leader to point the way and having depressed seratonin to allow adrenalin to overwhelm the fear may just work.

We know that aggression is muted when a male who has challenged the dominant order is defeated and publicly chastised by an authority he respects. Acknowledgment of guilt is the equivalent of acceptance of subordination to the dominant coalition. We are genetically inclined to reconcile with the authority that subordinates us, making gestures, offering gifts, reciprocating for our transgression. This is the process of making amends.

We know that bluffing and threatening are typical male responses to stress. We also know that when the threats are not occasionally carried out, the aggression is not muted. In fact, the primary source of aggression in the

8. *See generally* DAWKINS, *supra* note 2.

primitive environment occurs precisely because the young male perceives that he can win because the dominant coalition has not carried out its threats. Often the young male miscalculates, pushes too far, and is punished.

H. Thinking About the Village

The purpose of the village is to survive. A village is composed of males and females, categorized by their age group, and each group's capacity to ensure the survival of the village. Thus, there are infants, children, adolescents, adults, and elders. The village functions like an organism, with its cells (the individuals) taking on different functions at different times in their lives. The cells must be nurtured and cared for while they grow; then they are given opportunities to demonstrate value; then they are trained for further value. After that, the individual cells grow up to take on role and function in a niche of support to the village, growing wise and becoming part of the governance, until aging into rest and care. The village cannot survive without its components. It cannot survive without infants to grow into children, who learn and grow into adolescents, who find a niche and gain skill, who become adults adding value to the village by reproducing, nurturing and supporting one another and their families, who then finally age into wisdom. Those villages that did not figure out a way to support their members became extinct.

One of the more effective tools for the survival of the village is passing knowledge about what works down through the generations. The culture is the set of culturgenetic rules, those built-in propensities for behavior that manifest in the social environment, rather than in the personal or interpersonal environment. These rules govern how we behave in company rather than with just the family unit.

When you are in the village, you know where you are. You know everyone and vice versa; others know your parents, uncles, cousins, step-children, and anyone else who lives there. You know who is related and who is a stranger. Everyone helps you learn the rules of the game. It is in their best interest to do so; if you contribute to the well-being of the village, everyone wins. The village is the natural product of the tit-for-tat game. It is evolutionarily stable. Even when equilibrium is disturbed, as by a criminal act, it is in the best interest of the village to maintain the village as the priority. The village is best maintained if the victim of the offense is restored to her *status quo ante causa*, and the offender participates in the restoration, with himself or his family paying a penalty of wealth to the victim and her family as compensation for the injury done. This is commutative justice, with the village elders making the determination of fair restitution owed, ritually reinforcing the known rules. This sense of fairness of restitution is innate.

The village, as did the band, knows and voices agreement when the judgement is fair.

The purpose of village justice is to return the village and the victim to the *status quo ante*, as well as the victim. A crime is recognized as a disturbance to the equilibrium (as well as a loss to the victim), and that equilibrium must be restored as the survival priority. However, no such agreement is available from the retributive system of justice: an eye-for-an-eye results in two one-eyed men, neither as productive or valuable to the village.

The model for the current Anglo-American system of justice is a colonial model, imposed by conquerors on the conquered. A few years ago, a group of East African jurists were visiting Vermont to learn about our public defense system. After discussing this model of justice, the Chief Justice of the Supreme Court of Tanzania exclaimed, "But this is what we have done! We have taken the model of our colonial masters and tried to outdo them!" He then explained that the penitentiaries in his country were cruel and primitive, with the sentences far harsher than they were in the colonial days, because he and his peers wanted to have an even better system of justice than that with which they were left. He said the problem is that when a member of a rural community comes home after surviving, for instance, ten years in prison, he is treated as a stranger until he has gone through the rituals of tribal justice. The justice rendered by the State does not matter. From the tribe's perspective, it is as if it did not happen, because it didn't happen in their village.

Alternatively, if the State thinks of itself as belonging to a different band than the taxpayers and the State owns the prisons which the townspeople regard as a foreign invasion of outsiders, and the private sector (another band) sees a buck in it, then the retributive model is the more likely choice. This is especially true if it is the model left behind by the dominant colonial power.

Fundamental to a reciprocal relationship is that both parties perceive the relationship to be in their interest. The ultimate reciprocity between government and the governed is the transfer of authority and value in return for the assurance of safety and the opportunity to prosper. Conceiving of the State as a separate tribe is not difficult. It is done by every merchant or business owner who pays taxes to the State, every landlord who makes repairs because the State tells him to, and every citizen who is caught speeding by a trooper. As the State has become more distant from the governed, its interests become separated from the interests of the community and the victims of crime. The interest of the State is in the maintenance of order at the most efficient level of expenditure. The interest of the citizen is for order and justice. The interest of the victim and her family is for restoration. The interest of the offender, as the adversary of the State, is the minimization of

the consequences to himself. The interest of the politician (and the media) is to capitalize on conflict.

The problem is that the means to achieving these interests are counterproductive to the other interests. The issue then becomes who decides which interests to pursue. In the closed loop of the offender and the State (the constitutional model), the resultant benefit analysis is a two-player prisoner's dilemma that results in the plea bargaining process. The prisoners, however, are not involved; it is the lawyers who engage in reciprocity. Ninety-eight percent of the criminal justice budget in America is spent on people who are not the original disputants. Rather, it is spent on the process. And the interest of the process, overwhelmed by a worse than dysfunctional system (a counter-functional system), is expedience. This results in less confidence in the system, exacerbating the problem.

III. RESTATING THE PROBLEM IN EPIGENETIC TERMS

A. Violations of Reciprocal Agreements

The rituals and ceremonies of the justice process have become more distant and, consequently, less meaningful to the bands and tribes who are governed by it. The problem is that the boundaries of the process for redress of the breach of the reciprocal agreement include only the State and the offender. They do not include the victim or the community as participants. It is in the State's interest not to go to trial and not to incarcerate. It is certainly in the offender's interest not to go to jail.

So long as the community perceives that crime is under control (that is, occurring at an acceptable level), the community is willing to trade off increased prosperity in the form of lower taxes for marginal decreases in safety. However, the community is made up of victims and potential victims. When there is both a sufficiency of victims to coalesce as a band and reinforcement of the separation of the State as a group of strangers, then the ledger has not been balanced and the band detects cheating.

The cheating becomes apparent when the crime occurs close to home and the victims and potential victims see the system they have paid for being unable to respond with adequate safety. The offender, who has been convicted as a result of a plea agreement, may also feel that he is owed by the State. This may explain the outrage many offenders show when they perceive that the State has not delivered on its end of the bargain, as when it increases supervision, holds them more accountable, or when they see another offender with a lesser sentence for the same crime.

The system further distorts the offender's sense of unfairness by focusing exclusively on the relationship between the offender and the State. Most, if

not all, offenders already feel they are victims and are owed debts by their parents, schools, society, and the system. The abstraction of the victim and the community into the Law and the State depersonalizes the offenses and contributes to the distortion of the obligation. The sentence imposed becomes a further abstraction, allowing the offender to perceive that all he has to do is serve his time to satisfy his debt to society.

Serving time in prison further distorts the perceptions of the offender. He has to survive in the inmate culture, where intimidation and force are the means of resolving disputes, and the fundamental reciprocity is allegiance to the band of criminals, as opposed to the guards or the State. Even correctional treatment (education, vocational training, counseling) may reinforce the inmate's sense of being owed a debt from childhood deprivation.

The absence of closure on the debt to victim and community also allows the offender to avoid the emotional response of shame. In the absence of personalization of the wrongs he has done, the offender is able to see himself as the victim. This, then, gives him permission to find someone to blame (male model) and punish (another victim).

B. Some Avenues for Reform

Understanding the drive for reciprocity offers opportunities for action that can result in restoration of faith in the criminal justice system, as well as improved outcomes. The focus of reforms must put a higher priority on the set of obligations owed by the offender to his victims and his immediate community, rather than his obligations to the Law and the State. Replanting the flowerbeds torn up during a burglary may be more important to the victim than seeing the young offender sent to jail for six months. The agonizing scrawl of a letter of apology from a functional illiterate may have more meaning to the offender than the guilty plea.

Some of these reforms are beginning to happen in other states, in such arenas as victim restitution orders, where part of an offender's sentence is to make monetary restitution for damages. In practice, however, the order is carried out through the bureaucracy, with a state official determining the offender's ability to pay, subtracting the amount covered by the victim's insurance, and then working out a payment schedule. The connection between the offender and the victim is less than direct, with a medium of monetary exchange and an official go-between. There is no direct exchange of face-to-face justice.

Other jurisdictions have experimented with victim-offender mediation.[9] Such a system calls for the victim to be contacted by a trained mediator. If both offender and victim are willing, in addition to whatever sanction is imposed by the court, a facilitated reconciliation is attempted. Often, this reconciliation is a healing process.

More recently, in several jurisdictions—notably in New Zealand and the Yukon in Canada—justice processes based on tribal forms have been implemented.[10] The New Zealand model, taken from the Maori justice system, is called Family Group Conferencing. It is a police intervention model involving a facilitated conference with all of the participants in a criminal dispute, including the police, the victim, the offender, their families, and other interested parties. This is an extensive and ritualized confrontation and re-integrative shaming exercise, primarily used with juveniles. A number of American jurisdictions are experimenting with this model.

The Yukon model is called Circle Sentencing.[11] It is akin to the tribal justice of the Inuits of Canada and the Navajo of the Southwest. In this model, the judge, lawyers, offender, victim, families, and supporters sit in a circle and discuss the offense. The discussion includes both the impact on victim and community, and the remedy for it. The circle reaches a consensus on the offender's sentence.

C. Vermont's Reparative Boards

Vermont has built a different model called Reparative Boards. This model is built on epigenetic design principles. We reciprocate and keep a ledger of obligations. This is, of course, the core of the program. It is designed to create a new opportunity for offenders to demonstrate that they can add value to the community. The board and the offender reach a formal agreement that encompasses four outcomes: (1) to restore and make whole the victim; (2) to make amends to the community; (3) to learn about the impact of the crime; and (4) to learn ways to avoid re-offending.

These outcomes are not retributive. They are commutative in terms of justice, but encompass more than that. They are designed to restore the relationship between the offender and his community of victims and potential victims.

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9. *See generally* HOWARD ZEHR, CHANGING LENSES: A NEW FOCUS FOR CRIME AND JUSTICE (1990).

10. *See generally* RESTORATIVE JUSTICE: INTERNATIONAL PERSPECTIVES (Burt Galaway & Joe Hudson eds., 1996).

11. *See generally* DUNBAR, *supra* note 4.

These outcomes are designed to take advantage of the epigenetic rules that operate in all of us. We are designed to work in small groups. The concept of a board emerged from this, to replace the confrontational model of a probation officer (usually male) imposing the decision of a judge. The board is not empowered to confine the offender, to punish him, or to prescribe treatment regimens for him. The process is designed for a small group to reach an agreement.

We create and act in social networks. Using community members who know their townspeople and the values and mores of the community allows the network of the village to operate. Attaching offenders to outcomes that are connected to the community encourages further reciprocity. We become anxious in the presence of strangers. The board is made up of community members who are familiar to the offender, rather than judges and lawyers who speak a different language and function in an arcane process that diminishes the reality and defers consequences. The community board members do not necessarily know the offender personally, but they usually know someone involved. There is a connection that allows the victim, family members, and interested parties to participate.

We are secure with things that are connected and that are perceived as similarities. Resemblance to a formal court process by the board is discouraged, with emphasis rather on a meeting or circle format. The board's role is to provide the offender the opportunity to become connected to the community and the victim, recognizing similarities. The meetings are public and not held in a courtroom. When they are most effective, they are held in libraries or common buildings.

We invest boundaries with intense meaning. The definition of a person as an offender has enormous power to separate "him" from "us," allowing blame and punishment. Formally inviting the offender back into the fold is also powerful because it seeks to restore equilibrium. All parties will return to a perceived level of stability in relationships. If that stability is the goal and has a defined end point, all parties will be satisfied. If the victim, the community, and the offender are all satisfied, what further need is there for intervention?

One key to the success of the board is that the offender does not know the outcome of the board meeting in advance, unlike most of the judicial process. This uncertainty provides some anxiety on the part of the defense lawyers when the program started. The defense bar was used to being able to offer its clients a known deal. However, as the bar has gained some experience with the program, many members are recommending it.

We categorize our experiences in binary fashion. The board process is designed to counteract this tendency: to get past fault, to remedy. The interactive process between offender, board, and victim is a soft process, with

a reintegration from out-group (outside the community) to in-group (inside the community) through the accomplishment of tangible steps.

We tend to obey authority. We respect hierarchy that we perceive to be in our interest. If the community leaders are seen by the offender as interested in his welfare and offering him the opportunity to demonstrate his worth, and if the victim and her needs are seen as an obligation, then the reciprocal agreement can be enforced by the board. If the victim sees that the community is interested in her, she will be more likely to participate in the justice process.

While this is a new process, it is also an old one. Connections to existing structures and support from corrections personnel provides a sense of security.

D. Outcomes

As of July, 1997, the boards have seen 1,060 offenders. About six hundred have completed their ninety-day periods of contract. Eighty-two percent of those have successfully completed their agreements, and have been recommended for satisfactory discharge by their boards. Of the 154 offenders who have completed their contracts and have been done for six months (and on whom there was complete data), 8.2% have re-offended. This is an improvement on an 11.4% rate of re-offense for the first six months of normal probation. In terms of offender outcomes, many offenders have continued to work or volunteer for the organizations where they performed their community service. The statistics pale in comparison to anecdotes of significant transformation.

Perhaps more important, 180 citizens have volunteered as board members. There are a total of twenty-seven boards operating at this date, with more under construction. The boards themselves are becoming autonomous, cloning themselves to deal with increased workload, meeting with judges and prosecutors to demand that they receive more cases, hosting dignitaries from other states and the federal government, including Attorney General Janet Reno in July, 1997.

We strive for competence and control of our surroundings. All of us—victims, offenders, citizens, criminal justice professionals—want to be better at what we do, and to have an influence on what happens to us. The traditional criminal justice system denies the community, the victim, and, to a large extent, the offender, from any sense of control over the outcome. The justice system is a black box to most people, including the ones who work inside it. Giving all of the participants a voice and the authority to act is a huge step forward. These citizens have taken back their justice systems.