

Dancing With Demons: Pathogenic Problem Solving

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Abstract

This paper explores the way in which we define and deal with social problems such as crime and proposes a new way of thinking about them.

Criminality, poverty, illiteracy, addiction and child abuse are some of society's most acute and intractable problems. Despite countless attempted remedies, these complex social problems have continued to grow around the world. Although we have developed systems to address these problems, their operation routinely increases problem severity and scope. They are, in effect, perfectly designed to grow the very pathologies which they were designed to eliminate.

To confront these paradoxical outcomes, I took a trans-disciplinary approach to develop a new systemic view for designing systems to cope with the emergent meta-problems. Anchored in second-order cybernetics, and ethnography, this research re-contextualized the problem within a self-reproductive economy of interaction and meaning-making, drawing its boundaries on the basis of its systemic operations and conditions of connectivity across intersecting roles related to the problem-solver, the problem host and the identified problem itself.

The result is a model of pathogenesis as nested interactions appearing iteratively from individual to societal levels, revealing a self-referential, recursive and paradoxical structure. Within the multitude of self-referential systems, both biological and social, this research provides a new framework which exposes those factors that initiate, reinforce, escalate and perpetuate unintended evolutionary consequences and identifies specific alterations required to systemically produce beneficial results.

An ethnographic case study from the criminal justice system serves as the starting point for this research which provides the basis for an innovative systems methodology relevant to understanding the human condition, and a model for effective, sustainable decision-making processes.

Keywords: autopoiesis; second-order cybernetics; social systems design; epistemology; wicked problem; vicious circle; complexity; sustainability

Introduction: Crime is not a new problem

In all of recorded history, crime has been present. For over two thousand years, we have struggled, from every conceivable philosophical position, to contain crime and its associated social ills - and today we are no closer to improving this situation than we were two thousand years ago. In fact, the situation is actually worse. (Schlosser, E 1998) How is it that the efforts of so many dedicated people and organizations have failed to solve or even contain this

problem? In just the last fifty years, countless reform efforts have been launched by dedicated, albeit frustrated, individuals and organizations to solve this profound problem, but in the wake of every attempt, the problem we call “crime” rebounds and grows. Despite our best efforts, crime and terrorism have reached epidemic proportions, the escalating effects of which threaten to destroy our very culture. The “doctors” (experts) have prescribed their best cure, but the patient (society) is dying. Why? To fully comprehend this issue, we must return to “ground zero” to the very way we observe crime as a phenomenon, then encapsulate and define it.

Observers and Epistemology

In ancient Greece, scientific, philosophic and religious thought were combined. Over time, they were separated and pursued as separate activities by professionals in different disciplines. Since the turn of the century, we have further specialized into yet smaller categories of distinction within a reductionist hierarchy of sciences. We have become a culture of specialists who fail to grasp the interrelatedness of the whole.

In any given discipline or science, academicians, theorists and practitioners interact with one another in a community for the mutual exchange of ideas and to maintain intellectual interaction. Professional associations provide a formal organization to carry out this function. Such organizations, both formal and informal serve as thought collectives which pervade its culture and act to constrain, inhibit and determine a way of thinking. Operating mostly beneath awareness, individuals are linked together by a shared thought style which influences perception. (Fleck, 1979) Our attempts at reform have been generated by such thought collectives.

It is our habit to perceive something in a certain way and then act upon that perception. The act of observing is to focus attention upon a specific part of one’s experiential field through categorization as a means of separating figure from ground. Key to understanding is the role of observer. (von Foerster, 1979; 1984b) Traditionally, scientists have placed themselves outside and separate from observed phenomena, presenting their findings as objective, explanatory maps. This “outsider’s” view, however, fails to account for the role of the observer in shaping and framing research questions, hypotheses and results.

Second order cybernetics as epistemology emphasizes the connectedness between the observer and the observed through perceptual processes. Rather than experiencing ourselves as outside the system we attempt to describe, we can examine the mental models we employ to explain its behavior. Instead of describing properties of an external organization or system, we can examine how people create the relation among the parts and the relations among the relations that define the identity of the organization. This perspective allows for the inclusion of the observer in the system which is, through recursive interactions, generated from perception, and socially created by way of meanings, roles, and rules which comprise its organization. (Maturana, 1985; Maturana, 1989; Maturana, Mendez, & Coddou, 1988; Mead & von Foerster, 1968; von Foerster, 1979; von Glasersfeld, 1988)

Unraveling Complexity: Language and Epistemology

Even as “system thinkers”, it is nearly impossible to escape the constraints of language. The act of defining a problem takes place in thought which arises from language. Despite our attempts to avoid it, our language requires us to make unidirectional, causal statements. Try as

we might, we haven't been able to grasp the patterns that give rise to the problem we label "crime".

This issue of language is central to our failure to conceptualize such problems. (von Foerster, 1984b) Whether we are using the language of mathematics or sociology, hard science or soft science, the phenomenon of human behavior defies the Aristotelian-Cartesian-Newtonian language that forms the structure of our epistemology. In our attempts to understand living systems, we have been drawing analogies and metaphors out of physics and trying to map human behavior, love, hate, beauty, ugliness onto those metaphors (Bateson, 1991) This conceptual force-fitting leads to distorted abstractions. Thus we can ask, "How much do you love me?" as though "love" has properties of volume or weight.

We point to "crime" as though it were a "thing". To communicate about it, I must begin with an analog idea called "crime", and then digitize it using grammar to take my idea apart and out of my context in hopes that you can reconstruct it. It is more useful to describe crime in terms of dynamic patterns. The epistemology for forms and patterns is different from the implicit epistemology of hard science. Korzybski's map is not the territory. (Korzybski, A, 1933): The phenomenon we call "crime" is an abstraction, not the pattern itself. We can compile crime statistics or list events we can point to, but how do we capture the full multidimensional pattern? If I am on a roller coaster, I could measure the speed, but how would I "measure" the multi-sensory experience we call fun? And what would be the "accurate" measure of such movement on a roller coaster? The way we "language" perception, which has produced linear one-level models, is key to our misunderstanding of this issue. "The central problems of today are societal. ...the gigantic problem-solving conceptual apparatus that evolved in our Western culture is counterproductive not only for solving but essentially for perceiving social problems." (von Foerster, 1979)

Theories are important shapers of behavior. They help us organize and describe experience, predict consequences of future actions and enable us to better control the conditions which influence us. (Argyris & Schön, 1974) We could say that the social system is the very embodiment of its theories. (Schön, 1971) To get to the DNA or "genetic code" of the problem we have labeled as "crime", we must investigate beyond our current theories and describe this problem in terms of its "network or matrix of interlocking message material and abstract tautologies, premises, and exemplifications". (Bateson, 1979) Our primary dilemma, then, is how to do this in a way that minimizes the intrusion and distortion of language. As Bateson observed, "there is no conventional method of describing such a tangle. We do not even know where to begin". (Bateson, 1979)

What is missing to unravel this complexity is any language that can address the structure, (Simon, 1973; Gödel, 1962; Hofstadter, 1979; Bateson, 1972; Bateson et al., 1956) behavior and phenomenology of social patterns at the multiple levels of intra-psychic, interpersonal and organizational behavior across time: A language which captures the dance.

Social phenomena are all aspects of a greater whole: a dynamic, complex, network of behavioral patterns – a dance - extending across many interlocking systems. (Bateson, 1979) In order to understand the complex issues we face, we need to examine, not the labeled phenomenon, such as "crime," but the underlying contextual patterns that connect such phenomena to the rest of society. The most persistent and paradoxical problems we confront today have defied traditional analytic methods. A major perceptual task, therefore, is to examine the ways in which we have bounded a phenomenon to perceive it, and to discover a different perceptual device to generate new solutions. (von Foerster, 1979)

In order to do this I employ a mode of expression that allows a more effective elicitation of the dynamics of this phenomenon using four tools: pictures/diagrams, poetry, stories and grammar. My method is four-fold:

- To maintain the problem of crime in its context using natural story telling which provides clear examples of the phenomenon (Glaser & Strauss, 1967; Spradley, 1979). The story emerges as a phenomenologically-oriented ethnographic case study, from which patterns may be elicited, enabling a multilevel system model from the lived experience. The story provides us “something to look at” while cybernetics provides a language for describing what we see.
- To examine synergy in human interaction as a separable, viable, self-organizing system which interacts with other systems to create and cultivate a problem such as crime via the act of attempting to solve it.
- To examine the phenomenon of crime as sets of coupled, entrained systems operating (or dancing) as a unity - what Bateson refers to as a “dance of interacting parts”. Rather than treat the criminal justice system as one system in an environment containing the criminals and citizens, I reconceptualize system boundaries at the interface between structurally coupled populations such as police, criminals and citizens at all levels of recursion.
- To construct a model that incorporates the structural, the cognitive, the affective, the economic, the chronological and the spatial aspects of this phenomenon (Bateson, 1972) as facets of a unified complex . In order to examine this pattern, its qualities, attributes and adjectives refer to at least two sets of interactions in time. In order to model its mechanics, I emphasize this system’s structure, behavior, and phenomenology or experience.

Continuing in the tradition of Gregory Bateson, this article presents a grounded formal theoretical model:

- To provide a shared perceptual framework,
- To bring underlying assumptions into awareness, and
- To provide a language enabling discussion among diverse people with differing points of view.

In the next section, I present one story – a first person narrative. Contained in the story are the matrices that give rise to the patterns of interaction I highlight. A story could be described as a little knot of connectedness or relevance. (Bateson, 1979) Its parts are patterns, woven and connected through time, in a context. Without this context, words and actions are devoid of meaning. Thus, stories and myths tell what is “true” about a person, a family, an organization or society. Such is not the “truth” found in official records, reports, statistics or other artifacts, (which are removed from their contexts) but rather it is an understanding, or sense-making, in terms of present consciousness. (Mc Whinney, 1992) The way we perceive events in order to construct “truth” serves to maintain the coherence of our world view, but may prevent us from perceiving different aspects of events. (Kuhn, 1970) My purpose, therefore, is not to persuade the reader that the story is true, but rather to provide a first person account from which to build a new way of examining the crucial problems we, as a society, face today.

One Man's Story: Cops and Crooks

The following story was captured on tape during a workshop I conducted. The speaker was a police officer describing “a day in the life of a cop.” He was speaking spontaneously and “off the cuff.” I have transcribed it below without editing. Since I will refer later to statements in the story, I have numbered the paragraphs to enable the reader to return to the source of the statement.

1. “I have been a peace officer for twelve years. I have a B.A. in Administration of Justice with a minor in Sociology and I'm about half-way through my Masters. I have served as a homicide detective, deputy coroner, worked with sexual assault cases, probation officer for juveniles and adults. So I have been around the board, so to speak. I was injured in the line of duty last year so I am working at a desk job. But I prefer to work on patrol – with people.
2. There was a case where a biker was murdered over possession of a car. We had no solid leads. We had an outlaw biker group who sell drugs, carry illegal weapons and are fairly anti-police, but, like most bikers, are pretty pro-American. It's kind of an odd combination. You know there is a thin line between crooks and cops. We do basically the same thing, we carry guns, we look for bad guys, and we're always in trouble. That's kind of what our business is about. So there's kind of a shared interest there. So when you have a situation like this – where the victim is a biker, an outlaw, these bikers are demanding justice and they are willing to cooperate with the police which they don't normally do. Sort of a strange role for them to be in. A strange role for me to be in. Then you have the rest of the citizens who live next door, who knew this guy saying, “Good riddance.” A common term among homicide inspectors is that if a bad guy gets murdered, they call it a “community service killing.” That's basically how citizens perceived this guy who was murdered: he was a “bad guy.”
3. One day, a woman called me. She was high on something – but she's entertaining, so I talk to her 'cause I like people. After going into all these bizarre scenarios, she tells me, “I know where the vehicle is they stole from biker Bob.” So I grabbed a partner to check it out and sure enough there is the truck – good information. You know we can't just go in there and start going through it. We get a search warrant, we seal the truck, tow it, take it to inside storage in another county, come back here, type up the affidavit and the search warrant, get the magistrate to sign the warrant, have the warrant sealed so nobody will have access to it and then we execute the search warrant. The back of this truck is just full of garbage. So we're going through this garbage with rubber gloves on – just typical of cops, like you see in the movies – and I find this paper bag that stood out because all the garbage was wet but this bag was dry. I opened it up and there was a front license plate. Through some composite drawings we got from one of the eye witnesses to this homicide, I found this kid who knows all the bikers up in the mountains and he gave me an idea who this might be. So we take this license plate and dust it for a print, and we found in his record a thumbprint to compare. We found shell casings with his thumbprint, a set of keys that were taken from one of the witnesses. In short, we found this beautiful evidence. So the next thing you know we're arresting three people for murder and the case is solved.
4. It's really strange, one moment you can be sitting there on a slow investigation and the next moment you're on the phone and finding this out, you're getting a search warrant.

Before you know it it's two o'clock in the morning and you're getting your case together, you've got to be in court the following morning and it just snowballs. You're working fifteen hour days on other cases too, and after a while your wife wonders where you are, because you're never home. When you do get home, your family has needs. So it's more "gimme, gimme, gimme." So you take your cop hat off and put on the father hat or the husband hat. The little ones want to sit on your lap, your wife wants to talk or for you to fix something, or call someone. So you deal with that. By the time you're done with it all you're ready to fall into bed. Then you may get called out at three in the morning and it starts again. On my anniversary, for example, there was a party for us at a great restaurant in town. Presents, friends – the whole thing. I got called out on a homicide and basically didn't show back up for a couple of days. I was working on the case and I was enjoying it more than my anniversary dinner, by far.

5. People think that officers can simply do this and that, but you've got to consider the liability, especially nowadays after Rodney King. That case has really driven the point home that you can be sued, personally. We all have homes, cars, boats; we want to protect our assets. We want to do it right. It's a big burden. We don't want to get into court, in front of everybody – your peers, the District Attorney's office, judges, defendants– where everybody finds out you really screwed up a really good case. You've got all these things going on and you've got everybody to answer to. Once a case gets further along, as we all know in some of the rape cases for example, you've got defense attorneys who lean on you to put a good word in to the DA. "This guy wasn't really that bad. He had this type of history... you know...."
6. Everybody's got their own little special interest. The defense attorney wants to get their client off, the District Attorney's office wants to prosecute and get a victory, and you're really stuck in the middle. You get up on the stand and get badgered by the defense attorney and they start attacking you for personal things and get your reputation threatened. They call you liar, perjurer. Citizens are inclined to buy into that because there have been some definite abuses in this business. That thing down in LA with Rodney King was just unforgivable. But it underlines what has happened to me on duty. My partner got murdered a few years ago and people forget that he got shot doing his job. It just goes on and on. People get hurt everyday in this business. And everybody seems to have forgotten. How many times have I been kicked in the balls and sworn at?
7. This business can get pretty stressful. It's ironic, that after a big drug bust, the cops all go to a bar and drink to celebrate and to anesthetize themselves. You know, recently there was this sergeant who got drunk off duty and went over an embankment and injured himself pretty badly. It's big news. There's an editorial in the paper that says we should be held to a higher standard than everybody else. But when you become a cop, you become a second-class citizen. You give up your rights. I don't think that's fair. Why should I have fewer rights than anyone else? You're trying to live a normal life at home; you've got your health to be concerned about. It gets pretty crazy.
8. Like the war on drugs – what a joke. Now we're into the business of prosecution for profit. It's one of my big complaints. Because government is affected by the economy and there's not enough money to go around and we are able to seize assets – that's become our big focus. We go after crook A who has more assets than crook C who has fewer assets. Now, we are no longer in the business of justice. We're in the business of how much money we can get, which determines our priorities. In some ways, it's great. All of our

new weapons were bought with asset seizure money. We are using the money for community education, too. But it also goes to fund deputies, pay salaries, and buy equipment. What scares me is that, in a sense, we are looting. We can fund our ineptness, our inability to fiscally be responsible through asset seizure.

9. Why do I do this job? Well, quite simply it's the most exciting job in the world. It's wonderful and any cop that tells you different – it's just B.S. I have these mental images driving down the freeway at nighttime, going to a hot call where guns are involved and knives. Driving becomes surrealistic. Time slows down. As lights are spinning, they illuminate you periodically as the lights turn, and reflect off other vehicles. I can perfectly envision the light hitting my badge and bouncing off, and automatically reaching over and hitting the electric lock to disengage the shotgun as I formulate my game plan and talk on the radio. Where am I going to come in, where are my cover units, what side of the car am I going to get out, what am I going to do if somebody's on foot – you go through all these things. Your whole body's there and it's great. You really are in charge. It's a serious situation and it tests you to the max. You're most alive when you're closest to death. I think that's what gets people addicted to this business. It's so damned interesting. You run across so many different people living such different lifestyles... and when you think you've seen it all – you realize you haven't.
10. A few years ago, when I transferred to another jurisdiction, they gave me the standard psychological examination given to new officers – the MMPI – and one of the questions is “Have you had strange and bizarre things happen to you?” And I put “yes.” My response came up on the profile during the interview as a lie. I said, “Well, when you go out on what is reported as a homicide and you go into the house and see someone swinging from a rope wearing rubber underwear, a vibrator taped on to their penis still vibrating – that, to me, is strange and bizarre.” That's the kind of stuff that you come across in this business.

Understanding the Story by Modeling

The story presents a number of key relationships relating to *citizens*, *crooks*, *cops* and others in the criminal justice system. The cop describes the full multi-sensory experience: the excitement of going out on a call: the strange, the bizarre and the mundane.

I explore the three sets of relationships in two ways. First, through the interactions among actors, and then via the processes which generate their behavior. I employ the storyteller's language and metaphors to describe people and events. Since our conceptual system in terms of which we both think and act is metaphorical in nature and communication is based upon the same conceptual system that is used in thought and action, language is an important source of evidence for what that system is like. (Lakoff & Johnson, 1980) Therefore, I use the storyteller's words referring to police officers as *cops*, those suspected of violating the law as *crooks* and people in the community as *citizens*. When referring to the way these roles function within a problem solving system, I use the language of the model: The *cop as Expert (the one who must solve the problem)*, *citizen as Host (the one who “has the problem.”)* and the *crook as Problem*.

Micro Level System

The primary structure and network of interactions the *cop* discusses can be visualized as three interlocking dyads at both individual (micro) and collective (macro) levels. Figure 1 depicts

the three micro-level sets of functional relationships generated by the story as three intersecting dyads: *Expert-Host*, *Expert-Problem* and *Problem-Host*. The storyteller's words are in parentheses. The system boundaries are drawn at the interface where the synergy in their interaction is represented by the shaded portions. The first dyad I address is the *Expert-Host*. (*cop-citizen*) (I use the term "Expert" for the role of a problem solver or professional such as, but not limited to, a police officer, therapist, physician, social worker or educator. In the following description of the micro level system, the expert is a "cop")

Over the last fifty years we have been swept up in a maelstrom of change. We are bombarded with information (Bateson, 1972) and new technology. Social and emotional pressures fueled by the media create derivative needs, promote gratification of every kind of desire and convey a world where anything can happen in an instant, any wish is attainable and means justify ends. At the same time we are aware that the ozone layer is disappearing, the tropical rain forests are being rapidly depleted and every day another creature becomes extinct. The

AIDS epidemic continues to escalate and each day the world seems more dangerous. To survive we develop adaptive (or maladaptive) coping strategies. (Lipowski, 1971)

This barrage of information, both technical and emotional, creates a condition of overload. (Milgram, 1970; Toffler, 1970) Put in systems language, the variety generated by the rate of change and increased options in society-at-large is not matched by the variety-absorption capacity of people in society. As a result, combined with a disintegration of supportive structures and core values, we increasingly turn to experts for help. We have incorporated "Help me" as a meme (Dawkins, 1976) which labels a context within a complex category which might be called coping. Hofstadter describes the meme in terms of self-referential sentences, which like a virus, "enslave larger and more self-sufficient host objects, getting the host object to carry out a complex sequence of replicating operations that bring new copies into being". He uses the example: "The villain is wronging the victim" By replacing the terms "villain" and "victim" with real people or groups, one is driven by a desire to protect the victim from the villain, which may lead to an attack on the villain. "Such statements are the bait which attracts the fish and conceals the hook. Once the hook takes hold, the fish will lose all its fishiness and become instead a busy factory for the manufacture of baited hooks." (Hofstadter, 1985)

In any society oriented toward "open-ended enrichment", people come to believe that technology can be used to change the human condition and we have adopted the paradigm that specialists or experts, armed with technology, can transform the human condition (Illich, 1976) This affects the way we approach problems such as crime. In times past, the cop on the beat had a personal relationship with the neighborhood. When there was a problem, he responded in a personal way – often with the aid of *citizens* – to keep the peace. However, as situations and problems became more complex even the cop on the beat has responded by becoming increasingly specialized. (Beer, 1974) Over time, we have dealt with complexity

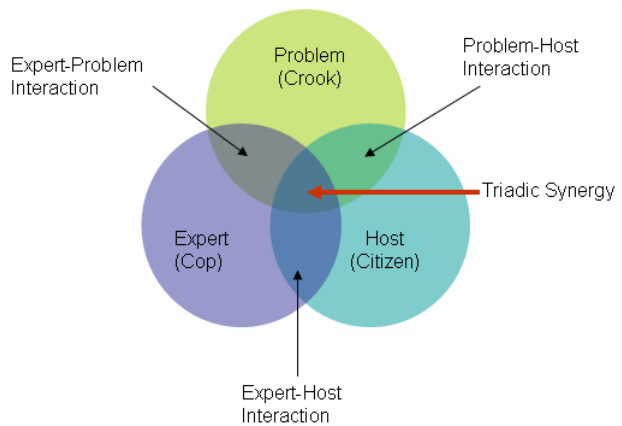


Figure 1
Micro-level System

through a reductionist “engineering paradigm” from which we identify and apply depersonalized (Weber, 1947; Parkin, 1982) scientific rules to classes of problems. (Taylor, 1947) Most problem-solving systems, including the criminal justice system, are organized as bureaucracies. That is to say that there are task-specific divisions of labor, vertical hierarchies with power at the top, promotion by seniority and clearly defined rules and regulations. Weber’s ideal was the completely dehumanized structure which eliminated from official business all purely personal, emotional irrational elements which escape calculation. We generate “solutions” in hopes of producing an engineered, problem-free existence and we proliferate programs and specialties to reduce “variety overload”.

In so doing, we have separated people from their problems, (Matson, 1964) and problems from their contexts. This paradigm pervades our thinking. Isaac Newton’s image of the universe as a great machine banished man from the center stage, transforming man from subject to object. Although we may espouse humanitarian values, the underlying machine-like structures we have created to solve human problems, point to human as object with experts as observers, standing apart.

More and more we rely upon specialists and experts, and increasingly we abrogate personal responsibility for the future into one that is managed by experts and their agencies (Illich, 1976) and we rely on them to manage and control (Bookchin, 1982; Haley, 1991; Szasz, 1974) our internal states and milieu. As experts have discovered new pathologies and new cures, (Pask, 1970) we have increased our dependency on them. The result is lowered levels of internal coping and reduced tolerance for discomfort. (Illich, 1976) There is a fine line between helping and social control and this change has been gradual and difficult to detect, because although we are sensitive to rapid change, in cases of gradual change we tend toward accommodation or habituation. This change has produced increasingly symbiotic relationships between hosts and experts. We can see how this relationship is manifested in the relationship between the *citizen* and the *cop* in the story.

Expert-Host (Cop-Citizen)

If we can imagine this system as a colossal machine, in order to see how it works, our first step is to activate the relay or “on switch”. (Bateson, 1979) In the domain of ideas, it takes a relationship between two parts to activate a third component (receiver). What the receiver responds to is “difference” or “change”, an event (a reported crime) which activates the system via the relationship between the cop and crook. In the story, there is little direct mention of the relationship between the *cop* and the *citizen*. This omission is notable since it portrays the role of *citizen* as catalyst to the *cop-crook* system. The “switch”, when considered as a part of an electric circuit, does not exist when it is in the “on” position. From the point of view of the circuit, it is not different from the conducting wire which leads to it and the wire which leads away from it. It is merely “more conductor.” Conversely, but similarly, when the switch is off, it does not exist from the point of view of the circuit. In other words the “switch” is *not* (it doesn’t exist) *except* at the moments of its change of setting, and the concept, “switch, has thus a special relationship to time. It is related to the notion, “change,” rather than to the notion, “object.” (Bateson, 1979) The only time the *cop* discusses his direct relationship with the *citizen* is when the “on-switch” to the machine is not where it is “supposed” to be – for example when the switch is activated by the *crook*.

So when you have a situation like this – where the victim is a biker, an outlaw, these bikers are demanding justice and they are willing to cooperate with the police which they don't normally do. Sort of a strange role for them to be in. A strange role for me to be in. (Paragraph 2 in the story)

When he encounters this, after a momentary hesitation, he reasons that in this case, even though he has classified the person as a *crook*, he is actually functioning in the role of a *citizen*. In this way, he can make sense of the relationship.

Once the *Expert-Host* system is formed, the *cop* and *citizen* enter into a social contract (Berger & Luckman, 1966; Bateson, 1972) that each party constructs and understands through perceptions and mental models of the problem and roles.

(Maturana et al. 1988b; Illich, 1976) A mental model (depicted within each circle), is a conceptual representation of essential features of a phenomenon as it is perceived by an observer. Such models operate mainly outside our awareness, using metaphorical constructs and images to inform us of the state of our environment, our relationship to it and how our actions will influence it in space and time. Embedded in our mental models are cultural assumptions, values and attitudes. We experience “reality” in such a way that culture is already present in the very experience itself. (Figure 2)

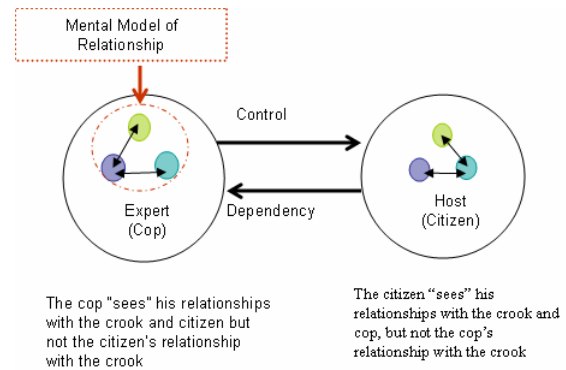


Figure 2
Expert-Host System

When, as Gregory Bateson would say, we receive “news of a difference” from which we construct information, our preexisting metaphors and mental models are accessed. In social differentiation, the behavior patterns of each element of a system fit together producing mutual relevance between the characteristics of one to the other in a bipolar unity. (Bateson, 1972) Where we find overt expression of one half of the pattern, the seeds of the other half will be found. The model of *Expert-Host* in Figure 2, expresses a bipolar complementary pattern of control-dependency.

One day, a woman called me. She was high on something – but she's entertaining, so I talk to her 'cause I like people. After going into all these bizarre scenarios, she tells me, “I know where the vehicle is they stole from biker Bob.” (Paragraph 3)

Expert-Problem (Cop-Crook)

The *cop's* whole raison d'être is crime. Without crime, there is no need for the *cop*. Crime and *crooks* define who he is professionally. He derives meaning based upon his interaction with the *crook* and from this view he feels useful and expresses his concern. In his education and training, he is taught how to detect crime and pursue the *crooks*. A state of “no crime” is a state of rest (Bateson, 1979) until the system is again activated. This state of “no crime” is analogous to the electrical switch in the “off” position which does not exist from the point of view of the circuit. In other words, the *cop's* singular focus is battling the *crook*.

Bateson presents the point that in any relationship system, each element of the relationship must contain a model of the entire relationship. (Figure 3) In order to catch the crook, the cop must ‘think like a crook’. Since crooks have greater variety (behavioral options) and fewer constraints, they are able to dictate the ‘rules of engagement’ and in effect, control the behavior of the Cop-Crook dyad. Even while incarcerated, crooks shape and influence the behavior of prison guard/cops. (Zimbardo, 1971) In the story, when the *cop* enters into the mentality of the *crook* we can see a shared cultural and emotional understanding:

“You know there is a thin line between crooks and cops. We do basically the same thing: We carry guns, we look for bad guys, and we’re always in trouble. That’s kind of what our business is about. So there’s kind of a shared interest there.” (Paragraph 2)

Interestingly, he characterizes “our business” in the context of cop-crook. In addition to the carrying out of a “shared business,” the *cop*’s behavior mirrors the *crook*’s. He makes another reference to the emotional component of this relationship when he discusses the adrenaline rush of flirting with death and feeling really “in charge.”

“Your whole body’s there and it’s great. You really are in charge. It’s a serious situation and it tests you to the max. You’re most alive when you’re closest to death. I think that’s what gets people addicted to this business.” (Paragraph 9)

There are several references to the cops mirroring the behavior of the crooks in his story:

- When he talks about “community service killings.”
“A common term among homicide inspectors is that if a bad guy gets murdered, they call it a “community service” killing.” (Paragraph 2)
- When, after a drug bust, the cops get drunk.
“It’s ironic, that after a big drug bust, the cops all go to a bar and drink to celebrate and to anesthetize themselves.” (Paragraph 7)
- When he describes the seizing of assets from crooks as “looting.”
“All our new weapons were bought with asset seizure money. What scares me is that, in a sense, we are looting”. (Paragraph 8)

In this dynamic, the *cop* enters into the same behavior patterns as the *crook*. Most people recognize sayings such as: Psychiatrists are “crazy,” (Maeder, 1989) social workers are “whiners and complainers,” “police are brutal,” and “those that don’t know, teach.” This dynamic is not limited to cops and crooks; each such occupation seems to have its own particular “occupational disease.”

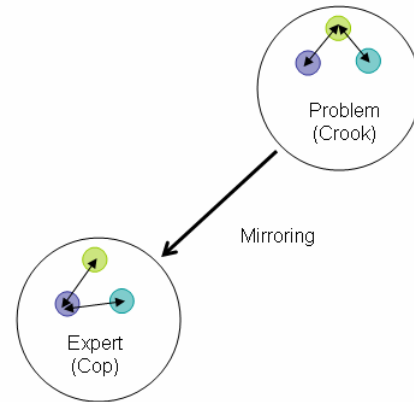


Figure 3
Expert-Problem System: 1st aspect

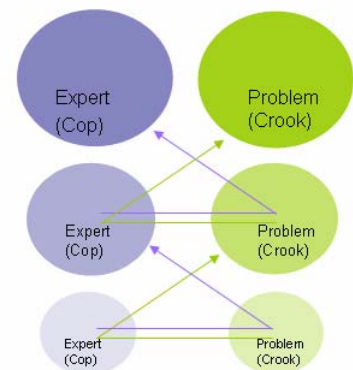


Figure 4
Competitive Dominance: 2nd Aspect

When the *cop* and the *crook* enter into a consensual domain, they are both governed by the entrainment of a shared dance (Bateson, 1972; Bateson et al., 1956), in an escalating competitive battle for dominance. This symmetrical schismogenesis is like the arms race during the cold war. (Bateson, 1972) and over the years, we have seen it escalate. The more guns the *crooks* have, the more guns the *cops* must have. The higher technology the *cops* employ the higher technology the *crooks* employ (Bateson, 1972). Each side perceives the relative strength of the other and increases their arsenal accordingly – ad infinitum. In Figure 4, this strength is represented by circles that become progressively larger. The darkening color represents increasing intensity of the interaction. In this “arms race”, the *crooks* have become increasingly well equipped, obtaining whatever tools and resources they need to dominate their territory. The *cops* can’t compete unless they are equally well equipped, but they are constrained by the limits of government funding.

“Because government is affected by the economy and there’s not enough money to go around.” (Paragraph 8)

This means that *cops* can’t generate tools and resources as fast as the *crooks* because the tax base will not permit it. So, how do the *cops* stay in the battle? They appropriate the *crooks*’ *resources* by seizing their capital and assets.

“We go after crook “A” who has more assets than crook “C” who has fewer assets.” (Paragraph 8)

Host-Problem (Citizen-Crook)

This brings us to the *Host-Problem* relationship. (Figure 5) It doesn’t matter whether the “problem” is identified as a person or a disease, a concept or a condition. The key idea is that the “problem” is split off from the host and reified as a separate entity imbued with the ability to “behave.” As long as the entity satisfies the set of relations which specify it, (Maturana, 1981; Maturana & Varela, 1988) the “problem” can be anything. The *Host-Problem* system is structurally similar to the *Expert-Host* system in that it is based upon a complementarity, similar to a predator-prey dynamic. The weaker the *Host*, the more vulnerable he is to the *Problem*. The weaker the citizen, the more he falls prey to the crook. In the *cop*’s story we can see several examples of the *citizen-crook* relationship. Crooks prey upon the citizenry in a number of ways mentioned in the story, including theft, murder and sale of drugs.

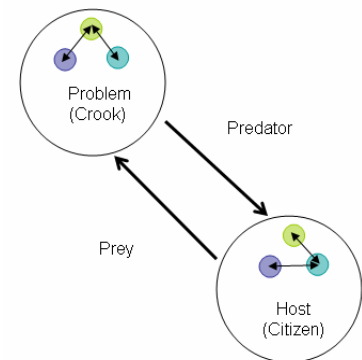


Figure 5
Host-Problem System

Summary of Interaction

The *cop*, *citizen* and *crook* are the three braided elements in the *Expert-Host-Problem* triad. In Figure 6 we can see its structural organization represented by the three circles. In examining structure of the triad, we can see that each element contains a mental model of its relationships, each of which is missing one segment of the triad. When we put them together,

something happens: completion. At this point the triadic system is viable and functional as a separable entity. The descriptions on the perimeter illustrate the way the behavior of each element sustains the entire system.

Once this dance begins, the dancers rotate easily from one role to another among the *Expert*, the *Host* and the *Problem*. Eventually everyone becomes the *Host*, *Problem* or *Expert* from some actor's point of view. Because the cop is the storyteller, we can see examples of this rotation in 'cop as expert', the 'cop as *citizen-host*' and the 'cop as *crook-problem*', discussed below. For example:

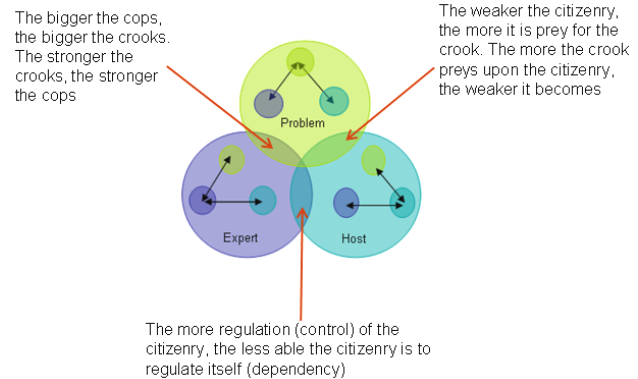


Figure 6
Summary of Interaction

- Cop as Expert fully engaged in winning the war on drugs:

“I can perfectly envision the light hitting my badge and bouncing off, and automatically reaching over and hitting the electric lock to disengage the shotgun as I formulate my game plan and talk on the radio.” (Paragraph 9)

- Cop as citizen struggling to cope with overwhelming demands:

“The little ones want to sit on your lap, your wife wants to talk or for you to fix something, or call someone. So you deal with that. By the time you're done with it all you're ready to fall into bed. Then you may get called out at three in the morning and it starts again.” (Paragraph 4)

- Cop as crook, killing and stealing:

“A common term among homicide inspectors is that if a “bad guy” gets killed, they call it a “community service killing.” (Paragraph 2)

“...in a sense, we are looting”. (Paragraph 8)

Although it is not the cop who does the killing in this example, it is included to illustrate the mentality of the cop as aligning himself with the murderer (a good guy who performed a community service) In addition; we can see examples of both the *cop* and *crook* as *citizens* plagued by *crooks* and *crime* in Figure 7

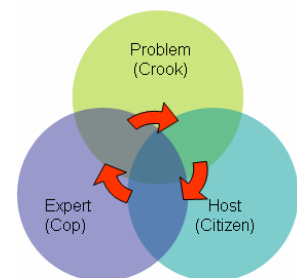


Figure 7
Rotating Roles

- The *cop* as a murder victim

“My partner got murdered a few years ago and people forget that he got shot doing his job.” (Paragraph 6)

- The crook as a murder and theft victim. It's interesting to consider that crime has become such a Problem that even the crook turns to the cop to fix it.

“So when you have a situation like this – where the victim is a biker, an outlaw, these bikers are demanding justice and they are willing to cooperate with the police which they don't normally do.” (Paragraph 2)

When the *cop* discusses the Rodney King incident in Los Angeles, although he states “*that thing was just unforgivable*” (Paragraph 6) he also asks: “*why should I have fewer rights than anyone else?*” (Paragraph 7) He discusses his partner being murdered, his being “*kicked in the balls and sworn at*” and that “*everyone seems to have forgotten*”. Although he is a *cop*, he is also a member of the *citizenry* who fall prey to the *crooks*. He describes the *cop* as a “second-class *citizen*” with fewer avenues of protection and fewer rights than “normal *citizens*.” In this case the *cop* is transformed into the *citizen*.

“But when you become a cop, you become a second-class citizen. You give up your rights.” (Paragraph 6)

The cop (as citizen) views the citizen (as crook) as preying upon him. For example, citizens (like King) can seize the cop’s personal assets: his home, his boat, and his cars.

“That case has really driven the point home that you can be sued, personally. We all have homes, cars, boats; we want to protect our assets.” (Paragraph 5)

The *cop*, *crook* and *citizen* are only three of many actors in this story. When he refers to other actors, such as the District Attorney, judge, defendants, and his peers, he also frames their roles within this triadic structure: The dynamics can shift from:

- The defense attorney (*Expert*) representing the crook (*Host*) battling the DA (*Problem*) to
- The DA (*Expert*) representing the *citizenry* (*Host*) prosecuting the *crook* (*Problem*) to
- The DA (*Expert*) representing the *citizenry* (*Host*), blaming the *cop* (*Problem*) for “screwing up a good case.”

How the problem is defined is also determined by each actor’s perception.

- The *cop’s Problem* is a family that makes overwhelming demands
“When you do get home, your family has needs. So it’s more “gimme, gimme, gimme” (Paragraph 4)
- The District Attorney’s *Problem* is a *cop* who blew a “good case.”
“We don’t want to get into court, in front of everybody – your peers, the District Attorneys office, judges, and defendants – where everybody finds out you really screwed up a really good case.” (Paragraph 5)
- The *cop’s Problem* is the Defense Attorney who personally attacks him to destroy his reputation
“You get up on the stand and get badgered by the defense attorney and they start attacking you for personal things and get your reputation threatened. They call you liar, perjurer.” (Paragraph 6)

Given the present rate of growth of social problems, ultimately everyone has been or will be recycled into the role of *Host*, *Expert* or *Problem* in some system as the actors rotate from one role to another. In each role, for each actor in this drama, there is a different yet conflicting “truth.”

In the story, the *citizen*, *cop* and *crook* are dancing together to a shared melody. Imagine Fred Astaire and Ginger Rogers whirling around the ballroom. As individuals, they are separate entities, but when they dance together, they become a coupled system exchanging energy and developing a resonance in which the rhythms of one are related to those of the other, creating entrainment. Entrained systems move as one and transfer energy efficiently through nonverbal

communication. Although each partner has different steps (Ginger dances backwards, for example) each partner must know and be able to anticipate the moves of the other. But dancing takes energy. What is its source?

Systemic Energy

It takes two forms of energy to move this system: emotional drive and the flow of capital. The pathogenic problem-solving system is fueled by shifting blame and funded by shifting capital assets. Capital assets (or revenue) can shift in two ways. One way is by rotating assets among citizen, cop and crook (host, expert and problem) and their extended networks in the macro system. For example, lawsuits against cops, such as Rodney King's, can cost in the millions of dollars. Stated differently, such lawsuits generate work and revenue for all the individuals and organizations involved and their suppliers.

Another way is through problem generation. This occurs when problems are continually divided into smaller units of specialization or when new problems are "discovered," requiring new specialties, programs or services. For example, one pregnant teenage drug addict generates revenue for an army of service providers including police, probation officers, drug rehabilitation therapists, foster parents, parent educators, public health nurses, judges, social workers, attorneys and special education teachers as individuals and as collective organizations with overhead costs.

As roles are performed and rotated, the emotional drive is manifest by projecting responsibility, and shifting blame. Liability assignment is part of blame. (Paragraph 5) When the *cop* talks about the Rodney King incident, he frames it in terms of personal liability. His emphasis was not that it was morally reprehensible, but rather, that someone could seize his assets: his house, his boat, etc. He blames citizens for "holding the cop to a higher standard," thereby rendering him a "second-class citizen." (Paragraph 7)

Just as the *cop* is resentful toward both the *citizen* and *crook*, the *citizen (Host)* is resentful toward both the *cop*

"They call you liar, perjurer. Citizens are inclined to buy into that because there have been some definite abuses in this business." (Paragraph 6)

and the *crook*:

"Then you have the rest of the citizens who live next door saying "good riddance." (Paragraph 2)

Each actor in the triad resents, blames and projects responsibility to the other two.

The funds necessary to sustain the system are derived from shifting capital and assets. We can see in the story, that the relationship between the *citizen* and *cop* is funded directly and indirectly by the *citizen*. The direct source is through taxes. Indirectly, the *cop system* is financed in part through confiscation of capital and assets acquired from *crooks* (Paragraph 8) which are the product of the fraud, theft and looting from *citizens*. Although the *citizen* can recapture capital and assets from the *cop* by way of lawsuits, (Paragraph 5) ultimately, the *citizen (Host)* foots the bill for both the criminal justice system and crime itself. The implied message in the example of *cops* looting from *crooks* is that crime is rising faster than the citizen's ability to fund the resources to handle it. (Paragraph 8)

In the natural world, living plants and animals are subject to violation from predators and parasites that prey upon a weakened, vulnerable host. In pathogenic problem-solving systems, the *Expert-Host* and *Problem-Host* relationships are both parasitic. Their interaction weakens the *Host* sufficiently to grow the *Problem* which is the lifeblood of this system. The net effect is that the *cop* and *crook* ‘work together’ to cultivate the crime which sustains their dance.

Dynamic Organization

A number of researchers have explored the concept of “group mind” and “group emotion” as an aspect of reciprocal roles. Parallel process describes unconscious dynamics in one system which may be played out, in parallel form, by another system with which it interacts. Such parallel processes occur in unconscious ways, invariably becoming active long before their impact is visible. They may begin at micro levels and cascade upward to infect more macro levels, or vice-versa. (Elmes & Gemmill, 1990; Searles, 1955; Wells, 1985; Alderfer, Brown, Kaplan, & Smith, in press.; Beer, 1979) In an organization’s culture, patterns of interaction are structured in certain ways providing a framework which prescribes how to view a given situation and how to behave in relation to it. (Gemmill, 1988) In this case the framework is the triad within which interactions are organized (Watzlawick, 1984) When there is a role vacancy another actor will be “organized in” to play the part. (Gemmill, 1988; Hoffman, 1981; Redl, 1942) Acting in this role, it becomes the perceptual lens through which the actor’s world is viewed. (Raphael et al., 1983; Talbot, 1990; Powers, 1973, 1988) This structure is revealed when the *cop* says “everybody’s got their own little special interest,” and “you’re really stuck in the middle.” (Paragraph 6) The structure of interactions in the micro-level system then mirrors into the macro-level system manifesting recursively - generating, maintaining and recovering the same complex of processes which produced them - as unconscious parallel processes. (Gebser, 1985; Mandelbrot, 1977; McWhinney, 1990; Raphael et al., 1983; Smith & Berg, 1987; Smith & Crandell, 1984; Smith et al., 1989; Talbot, 1990; Zeleny & van Gigch, 1980) In this cognitive/social system “cognition computes its own cognitions through those of the other” as eigen-behaviors which manifest spontaneous equilibrium by generating themselves and creating their own closure. Autopoiesis, a concept grounded in neurobiology, is an example of such eigen-behaviors. (von Foerster, 1984a) The notion of autopoietic organization applied to social systems (as opposed to biological systems) has generated some controversy. (Bailey, 1991) At the core of the controversy, is a concern that autopoiesis as an analogy or metaphor for social processes misses the mark and when working with concepts borrowed from mathematics or biology, there may be inadequate concern for the appropriateness of the transition. The concept of eigen-behaviors, however, directly applies to social and cognitive systems.

To understand the mental framework for this kind of policy decision, we must examine the links among individual actors (micro level) and collective actors (macro level). In the diagram below (Figure 8) we can see how this set of patterns from the micro-system cascades up into the next level of recursion, the macro-system. (Beer, 1979) In the next section I will describe the policy-making process that institutionalizes the *Problem*.

Macro Level System

The poet Yeats recognized that the essence of the “great chestnut tree” (Yeats, 1928) is its unity (“Great-rooted blossomer”) Similarly he also acknowledges that it is impossible to separate the dancer from the dance as one without the other would not exist. So it is with pathogenic systems.

When we examine complex living systems, we must take into account at least two different levels simultaneously. The patterns of the micro system are mirrored into and manifested within the framework of the organizational system. These are not two separate systems, but a single complex pattern. The micro-level makes visible the macro-level, which doesn’t exist without the micro-level.

Individual events, such as a crime, are an instantiation of the macro system which produces policy including laws, and it is the policy/law that defines the event as crime.

Crime then, is an instance of something policy has defined as criminal. Rather than discovering crime, we could say policy or law invents it.

Because in a recursive system each level of the hierarchy contains and is contained by a system likewise organized (Beer, 1979; Luhmann, 1986), when we examine the collective system, the same organizational patterns that characterize the micro-system are found. At this level of recursion, the entire set of interactions and impacts from the micro system become the *Problem* in the macro system. (Figure 8) The *Host* is now the *community* and the *Expert* is the *law enforcement system*. If the *cop* must “think like a crook” to solve the *Problem* individually, then, law enforcement must do likewise to solve it collectively within the organization. This is the level of policy making and priority-setting. When the *cop* makes the statement:

“Now we are no longer in the business of justice. We’re in the business of prosecution for profit. ... which determines our priorities.” (Paragraph 8)

He is making a statement about the mentality of policy-makers. Policy is the institutional rule for how the organization will do what the individual actor does. Policies, such as asset seizure, arise from the structure of triadic relationships, out of the mentality of “*cops* and *crooks*” because that is the framework through which the actors view the situation. (Hofstadter, 1985)

*Labour is blossoming or dancing
where
The body is not bruised to
pleasure soul,
Nor blear-eyed wisdom out of
midnight oil.
O chestnut-tree, great-rooted
blossomer,
Are you the leaf, the blossom or
the bole?
O body swayed to music, O
brightening glance,
How can we know the dancer
from the dance?*

W.B. Yeats⁴

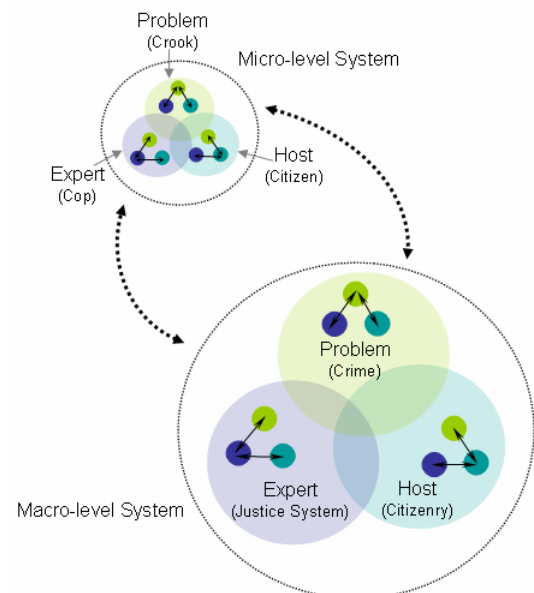


Figure 8
Micro-Macro Interaction

What we have now is the *cops* looting the *crooks*. Although their looting is institutionally sanctioned, nevertheless, the action and the activities are exactly the same. The difference is the *cops* are protected by policy, and now the looting has been blessed by the institution. For most of us outside the system, it seems crazy. How can policy be created to direct *cops* to do this? (Figure 8)

Although people inside the system – competent people – often sense there is something wrong, they seem unable to “see the forest through the trees” to grasp the entire pattern. The irony is that, at the local level, looking through the maze of trees, the behavior and decisions made seem appropriate. We could say that the *cop* in this story is

- Conscientious – he follows the rules and procedures (Paragraph 3)
- “People-oriented.” – (Paragraphs 1, 3, 9) He enjoys people of all kinds and can see them beyond stereotypes
- Reflective – he can reflect on his behavior in both his personal and professional lives (Paragraphs 4, 6)
- Able to consider the moral dimension of policies and incidents (Paragraphs 6,8)

In short, he is a decent man, doing his job the best he can within the framework of laws, regulations and professional standards. In this, he is not much different from you or me. In our education, health, welfare, mental health and other systems are similar decent, competent, conscientious people doing their best. How can decent, competent people participate in such behavior?

The Epistemological Error

To understand, we must examine the process which generates this behavior by examining the ways in which normal cognitive processes of identity coherence, self-organization and self-generation occur. Cognition, as an adaptive process, is at the core of all problem solving.

A major underlying premise in a pathogenic problem-solving system (and western culture in general) is that a separate “self” as agent, can perform an isolated “purposive” act upon an independent object, or externalized problem. (Hofstadter, 1985) Bateson refutes, as an epistemological error, the myth of “self power” as a disastrous variant of Cartesian dualism which divides mind and matter; conscious will (self) and the remainder of the personality. (Bateson, 1972) According to Bateson, in any system showing mental characteristics, one part cannot have unilateral control over the whole because, the mental characteristics are immanent, not in some part, but in the system as a whole. (Bateson, 1972)

Pathogenic problem solving systems suggest the same sort of epistemological error Bateson ascribes to the alcoholic. In his view, alcoholism is not a disease, but an error in epistemology. In taking the first two of twelve steps, (Alcoholics Anonymous handbook 1976) the alcoholic surrenders to a greater Power, which is the first step in correcting the epistemological error. In surrendering to a greater power, the alcoholic places himself in the same system as the “problem”. The concept of autonomy is central to healthy surrender. The autonomous individual surrenders control, not accountability.

Similarly, in pathogenic systems, the focus and primary engagement is between the “*Problem Solver*” and “the *Problem*.” The *Host* (the one who “has the *Problem*”) seems to exist mainly to catalyze the dance of escalating competitive dominance between the *Expert* and the *Problem*.

When separated aspects of the problems are rejoined and internalized in a second-order context which includes the problem solver, the emphasis, in the case of alcoholism, is on achieving and maintaining sobriety rather than conquering addiction. In the case of crime we focus on “chasing the crook”, rather than in achieving and maintaining safe communities where citizens can thrive. In shifting the emphasis, we don’t solve the problem, we dissolve it.

When we look again at the cop’s story – from what he says, and from what he doesn’t say – we can see some clues to this structure. In times past, the cop was called a “peace officer,” however over the years cops have come to be called “law enforcement officers.” The World Book unabridged dictionary defines enforcement from the old French meaning “on force,” to force obedience to. The emphasis has shifted from an internalized, contextual role of keeping the peace (creating well-being in our communities) to an externalized, de-contextualized role of enforcing the law (chasing the crooks).

For example, the cop doesn’t mention anything about keeping the peace in his community so his children and other citizens can be protected from harm. However, when he speaks about how he derives meaning and enjoyment he mentions several things:

“I prefer to work on patrol – with people.” “...–but she’s entertaining, so I talk to her ‘cause I like people.” (Paragraphs 1, 3)

When he mentions people, he talks about them from his fascination with, and his interest in analyzing, their behavior from the perspective of a detached observer.

“You run across so many different people living such different lifestyles...and when you think you’ve seen it all–you realize you haven’t.” (Paragraph 9)

But what really gives his life meaning is his flirtation with death when he is embroiled in hot pursuit of a crook:

“Why do I do this job? Well, quite simply it’s the most exciting job in the world. It’s wonderful and any cop that tells you different – it’s just B.S. I have these mental images driving down the freeway at nighttime, going to a hot call where guns are involved and knives. Driving becomes surrealistic. Time slows down. As lights are spinning, they illuminate you periodically as the lights turn, and reflect off other vehicles. I can perfectly envision the light hitting my badge and bouncing off, and automatically reaching over and hitting the electric lock to disengage the shotgun as I formulate my game plan and talk on the radio. Where am I going to come in, where are my cover units, what side of the car am I going to get out, what am I going to do if somebody’s on foot – you go through all these things. Your whole body’s there and it’s great. You really are in charge. It’s a serious situation and it tests you to the max. You’re most alive when you’re closest to death. I think that’s what gets people addicted to this business.” (Paragraph 9)

In this statement, the intensity of his emotion and passion is evident. Here is what he values, what is most important and why he does this job. His romance is with the crook. His meaning is derived from the structure of the “dance,” (Carse, 1986) chasing the external problem rather than from the reason for it. (creating safe communities).

In this triad, the cop and the crook each have a parasitic relationship with the citizen and they work together to grow crime which is the lifeblood of this system. Although the story is about

cops, crooks and citizens, it is archetypal. The patterns of relationships described herein occur in many problem-solving systems which both

- mirror, within the organizational framework, the dynamics of the particular client system with which they interact, and
- perpetuate via policy decisions the very problems they try to solve.

Expansion and Growth of Pathogenic Systems:

This system expands in a fractal-like pattern in three ways by:

- Rotating roles through the system and expanding horizontally
- Subdividing problems to create new experts and specialists
- Generating supportive industries and cradle-to-cradle supply chains

(Figure 9)The triadic structure of pathogenic systems connects across professions and disciplines to link horizontally, like a fractal. (Mandelbrot, 1977) Roles rotate through the system, expanding horizontally. (Figure 9) In addition, as problems are further subdivided, new professional specialties are created as in the example cited earlier, the problems of one pregnant adolescent drug addict support a legion of professionals and the organizations they inhabit including police officers, probation officers, attorneys, juvenile court workers, social workers, welfare workers, foster parents, special education teachers, addiction counselors, doctors, nurses, and more. Each professional resides within an infrastructure which includes administrative personnel, equipment and facilities- the supply chains -that help to sustain and grow this system.

The supply chain for problem production is long and wide. Problems are profitable. In the criminal justice system, direct suppliers include weapons-related manufacturers – guns,



Figure 9
Fractal Expansion – Micro level

Kevlar, Mace. Then there are prison construction and maintenance costs and all the related suppliers. The economics of pathogenic systems represent an alarming portion of our GNP. The economic impact of pathogenic systems is far-reaching and the complexities involved in

dismantling them are significant. These cradle-to-cradle pathogenic supply chains within the criminal justice system resemble the cold war military-industrial complex, and which some are calling a “prison-industrial complex”. How do we dismantle such a system and how do design eugenic problem solving systems (eugenic, from the Greek, *eu* (good) and *genic* (producing, originating or causing))

Creating Eugenic Problem-Solving Systems

My aim in undertaking this research is to put tools in the hands of people who can use them. I don't believe any one person can (or should) be the sole architect for the deep structural changes necessary to reverse the problems we, as a society, are facing. However, together, revitalized with a shared framework, diverse people with differing points of view can examine and bring into awareness underlying assumptions which will enable constructive discourse about the issues. The question now is this: How can we structure problem-solving systems which don't produce such pathologies? Instead of pathogenic systems, how can we design eugenic systems? There are no simple answers – no magic pill, but there are clues within the structure to guide us. There are two sets of three dyads comprising micro and macro levels. At the micro level in our example we see the cop-citizen-crook triad. At the macro level it becomes the Criminal Justice System-Crime-Citizenry triad. Where, in these two triads should we focus our efforts to break this self-perpetuating pathology which produces increasing occurrences of problems like crime while maintaining its triadic structure? In principle, we need to design eugenic problem solving systems from the top (macro) and strengthen individuals at the bottom (micro) of our systems via the multidimensional patterns which include this system's structure, behavior and phenomenology at both levels of recursion. We need to ask different questions. For example:

How do we open this recursive triadic structure to change? How can we disrupt the predator-prey dynamic that characterizes the problem-host (Crook-Citizen) dyad? How do we unhook the control-dependency relationship between the problem solver-host (Cop-Citizen) dyad? These two sets of relationships stabilize the triadic system and are nourished by a weakened host. Therefore, any solution must act to strengthen hosts so they are less vulnerable to problems and less needy of experts. Since Problems begin in the community of hosts, strong hosts who are capable of self-regulation, constructive interdependence, who are reflective and able to engage in third-order questioning and acting are unlikely to generate or become problems to society, thereby reducing the number, scope and severity of problems society must address. With respect to crime, an accountable, literate, emotionally and socially intelligent citizenry produces fewer criminals and requires less policing.

Next we must redesign the dynamics of the problem solver-problem dyad. How can we re-contextualize our problem solving systems within a second-order framework to incorporate economic, behavioral, spatial dimensions? What will we do to correct the epistemological error that stimulates the dynamic of competitive dominance? How will we redesign the psychic and financial rewards and incentives? How will we shift rewards from the side of the equation which generates and sustains the problem to the side which dissolves it? How can we ensure that experts have the requisite variety, autonomy and accountability to effectively handle problems within a framework of shared values? Since crooks have more behavioral options (variety) and fewer constraints, enabling them to effectively control the behavior of the Cop-Crook dyad how do we empower Cops and how do we balance this dyad in a democratic society? At the macro level, how do we define new policies so that the system

itself stops producing crime? How can we redeploy the vast workforce employed in and supplying goods and services to the “prison industrial complex”? How do we prevent its fractal-like growth horizontally through rotating roles and vertically through supply chains?

Dismantling this system will require insight to understand the deep dynamics that drive it and political savvy coupled with courage to take on the deeply entrenched special interests that protect it from political disturbances. We have created a malignant system, and like cancer, the cure could be more painful than the disease in the short-term. We will need to analyze the deep potential consequences of altering each dyad so we can anticipate the effects of our actions. A carefully planned and implemented “therapy” which addresses the issues outlined herein could, in time, transform this system from pathogenic to eugenic and alter the trajectory of our future.

Understanding the Model by Storytelling: Dancing With Demons

I began with a story and used a number of models as devices to help convey the dynamics of pathogenic problem-solving as they were illustrated in the story. Now I will present a story to integrate the models back into the tapestry of human experience.

Our problem-solving systems are reminiscent of the Winchester Mystery House, a 160-room mansion in San Jose, California. Legend has it that the eccentric Sarah Winchester, on the advice of a psychic, spent the last 38 years of her life building this house to escape torment from the ghosts of all those killed by the Winchester rifle (“the gun that won the west”), invented by her late husband (Randall, 1987).

So, in 1884, she bought an eight-room farmhouse on 45 acres of land. To escape the demon’s curse, she followed the psychic’s advice to continue to add rooms, no matter what the cost, to provide shelter for the ghosts of the ever increasing number of victims of the Winchester guns. (Smith, 1967) Beginning in 1884 and using her monthly income of \$30,000 she kept a staff of 33 at work around the clock for 38 years until her death in 1922. The mansion, occupied only by her, cost over 5 million dollars and contains 40 bedrooms, 47 fireplaces, 13 bathrooms, 52 skylights and more than 10,000 windows. There are 40 staircases containing 376 stairs many of which lead to ceilings or into walls and stairs that take one down seven steps and up 11, gaining only four steps. Of the 2,000 doors, there are doorways that open into air shafts and cupboards that open onto 1-1/2 inches of storage space. In her frantic efforts, Mrs. Winchester never conquered her demons, but she danced with them until the day she died. Like Mrs. Winchester, we too, are plagued by demons. Our demons are *Problems* like crime, child abuse, illiteracy, homelessness and drugs. We have worked diligently. We have spent enormous sums, and we can point to the sprawling, labyrinthine structures we have built to show our labor. Clearly, like Mrs. Winchester, despite the magnitude of our desperate undertaking, our demons continue to plague us.

Who is to blame? No one and everyone. To blame is to maintain the pathology. This is not a story of conspiracy, but rather one of collusion, for at the very core, we as *Hosts* create our own dependency and empower *Experts*.

Summary: “You Are Here”

In this research I have endeavored to achieve the kind of imagination and rigor that so characterized the work of Gregory Bateson. I have incorporated into scientific discourse the languages of storytelling, metaphor, pictures, and fables to discover what is “true” according to the lived experience, about our failed attempts at solving problems. In doing so, I have sought to return the problem to its context (Bateson, 1972) to perceive the underlying contextual patterns that connect such phenomena to the whole and to enable a different sort of sense-making which incorporates its structural, cognitive, affective, economic, chronological and spatial aspects (Bateson, 1972)

Borrowing the device of “metalogue”, (a narrative structure which mirrors its content) from Bateson (Bateson, 1972), I used the language of cybernetics to describe those elements in the domain of quantity: that which we can count, that which contains rules and a grammar. I employed imagery and metaphor and storytelling to evoke in the reader those concepts in the domain of pattern, which cannot be understood by dividing them or making them explicit, such as justice or ethics - that which is in the domain of dance (Bateson, 1972).

Before we can begin to offer solutions to society’s problems, we must gain a deep understanding of the patterns that produce them. My purpose is to expose and make explicit through modeling, the specific sets of relationships and their impacts compounded over time, which generate and perpetuate malignancies in our society. Up to now, we don’t have the cure for society’s cancer. What this paper provides, however, is a model of its “genetic code”.

While this paper employs an example drawn from the criminal justice system, this framework can be applied to any problem solving system from those problems contained within a single individual to the problems we face in our families, our communities and our nations across the globe. This research provides a language and framework to begin this important dialogue.

Years ago while visiting a huge theme park, I became lost. I wandered aimlessly, but each theme area seemed to fold back on itself. Along the way, many people offered directions. But just when I thought I was on the right track, I would reemerge in a new location, equally lost. Just when I thought I would never get out, I came upon a large map of the entire park with one piece of information that made a difference.

On the map was placed a large arrow that read “you are here.” Over the years I have grown to appreciate its simple, profound message: “you are here”– relative to where you thought you were, relative to where you want to be, relative to the tiny balloon stand or viewing from above, the park’s perimeter. It’s a message of context. It empowers me to ask and answer my own questions. It serves to increase the number of choices I have for solving my dilemma.

In our search for answers to the serious problems we face, we too have lost our way. If we are ever to find our way out of this thicket, we must know where we are. At this point, it seems clear. We are here. (Figure 10)

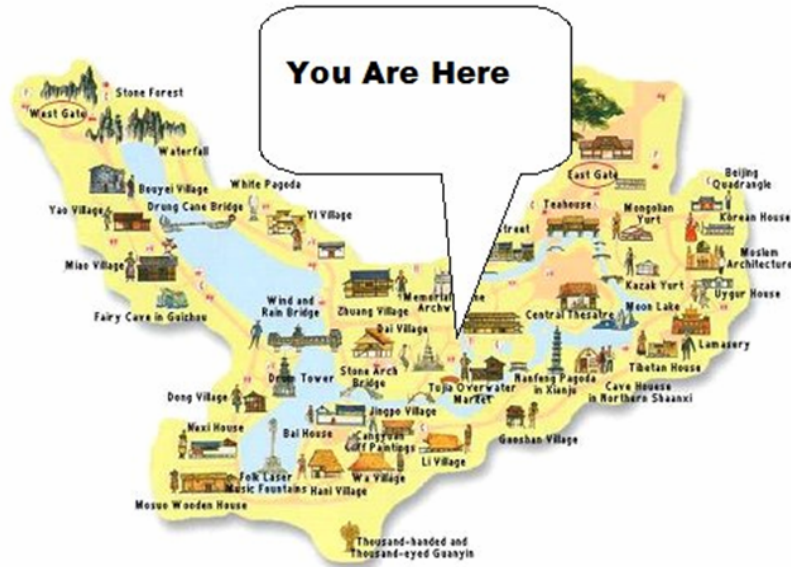


Figure 10
"You Are Here"

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