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CREATIVE PROBLEM SOLVING:

PURPOSE, MEANING, AND VALUES

THOMAS D. BARTON*

As California Western School of Law embarks on developing its mission of educating creative problem solvers, a strong conceptual foundation must be laid. What does creative problem solving mean in a legal context? Why is it needed? What goals should animate our efforts? Finally, importantly, what values are implicated in its advancement?

I. INTRODUCTION: THE NATURE OF PROBLEMS

Problems are an unavoidable feature of human existence. This is trivially true in the sense that all people experience difficulties in life. Yet to think of problems as human also has a more profound meaning: “problems” do not exist in a purely natural realm. Whatever turbulence, destruction, or deprivation may occur in nature is simply part of natural processes, and inappropriate for the label “problem.” This is so because only humans can construct their environments in alternative ways; and only humans can respond to their environments by significantly changing them. A fire that burns in a wilderness will certainly alter the survival chances of the plants and creatures living within it, but without human intervention nothing can be done to change the odds. Nature will simply take its course. The fire and its implications are not strictly speaking “problems,” because the very idea of a problem implies the capability of conscious adjustment to the physical, social, relational, or psychological environment in which the problem arises.

By making problems exclusively human and by tying that human quality to the ability to manipulate the environment, an encompassing definition of problems suggests itself: Problems are mismatches between the environment and human purpose. As this article proceeds, three possible ap-

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approaches to problem resolution will thus be at least dimly visible. One approach is instrumental: it seeks to bend the environment to human demands. The second approach is persuasive adaptation: it urges an adjustment of human purpose to fit within environmental constraints. Finally, for problems beyond human comprehension or control, resignation may offer the only possible "solution." One may simply acknowledge both the enormity and intractability of the problem, and understand it as a reminder of human limitation.

Legal solutions traditionally are instrumental, relying on both power and truth to fashion rules that attempt to conform social environments to the purposes of a person or group. In part, the aim of creative problem solving is to make law a more sensitive and respectful shaper of the social, physical and relational environment. Further, however, creative problem solving seeks to give lawyers the understanding, skills, and attitudes needed to apply tools of persuasion and reconciliation where that may be more appropriate. This article cannot attempt to specify those skills; such an inventory must await further research. I can only sketch a justification for the search and perhaps point in directions where we may look.

Before the search begins, however, one important point should be underscored. Creative problem solving does not disrespect the law. Far from it; the rule of law represents a dramatic advance of self-governance. In its consistency and assumptions of formal equality, the rule of law acknowledges the fundamental human dignity of every individual. Yet the search for better procedures for solving problems—legal or otherwise—should never be considered concluded. Legal procedures are liberating, yet they may also be isolating or destructive of spirit. To regard traditional legal procedures as beyond improvement is to deny the power of human imagination to propose something better. "Conceiving the lawyer as creative problem solver" is an attempt to expand and refine the repertoire of procedures and skills for resolving legal problems, so that those problems will be resolved more efficaciously and respectfully of human relationships. Whatever skills may be identified, their application should proceed with values of inclusiveness, decentralized decision making, and respect for both human differences and the bonds of non-coercive relationships.

In exploring legal problem solving, Part II below begins at a general level by identifying the common fallacy of defining and classifying problems according to the procedures typically used to solve a particular type of problem. That misconception leads to inertia in problem solving and a failure to imagine alternative procedures to solve a given problem. Part III then examines how procedures should be conceived as fitting with the demands of problems. Legal problems are distinguished from mechanical problems, marketplace exchange problems, and technical problems by two special demands made by legal problems: the subjectivity of the contexts in which they arise, and the complex blend of power and truth required for their solution. Part IV describes the features of creative problem solving by first
analyzing the decisional features of the traditional common law, and then contrasting creative problem solving with viewpoints of both Critical Legal Studies and the Human Identity School. Part V concludes the article by offering examples of how new tools for legal problem solving may be conceived. Through examples concerning access by disabled persons to public spaces and limiting access by children to Internet pornography, Part V suggests a social vision to guide the development of this new approach.

II. PROBLEMS EXPLAIN PROCEDURES; PROCEDURES DO NOT DEFINE PROBLEMS

Problems are, as suggested above, exclusive to human beings. In a sense, all problems are thus of human making. So too are the procedures conceived to solve those problems. As Lon Fuller long ago observed, decisional procedures are social inventions and their diversity a sign of social evolution. Devices like casting lots or enforcing promises are so old that we take them for granted. “Flipping for it” and contractual exchange are accessible, fair procedures that offer consensual, decentralized decision making with little disruption to underlying human relationships. Yet both these techniques were humanly conceived. They stand as reminders of the potential to reduce dependence on force or tyranny to resolve problems.

These devices were invented to cope with chronic problems of particular types. The procedures exist merely to serve the problem; they neither create nor define the problems. In other words, problems preexist decisional procedures, and arise independently of procedures. This is self-evident: were it not the case, one could presumably eliminate all social problems by simply abandoning any procedures for solving them.

In common parlance, however, problems are often erroneously defined by the decisional procedures that traditionally attempt to solve those problems. A “market exchange” problem is typically classified as one that plays out through reciprocal exchange; a “technical” problem is one that an expert attempts to fix. Yet thinking about problems through the characteristics of procedures is illogical. Notice how little sense it makes to say, “I have a random selection problem.” The truth is that one has a problem, and it may make sense to resort to the procedural device of random selection in solving it. The confusion arises because there is a correlation between particular kinds of problems and particular procedures employed for their solution. The causal direction, however, is clear: problems have their own attributes and migrate to particular resolving procedures. Typically, the migration occurs because the procedure uses techniques suitable to the demands of the problem. But sometimes by tradition or lack of imagination, a problem is imprisoned within a decisional procedure that offers little prospect of solv-

2. See id.
ing the problem. Defining problems by procedures obscures the possibility that a given problem may be better solved within a different decisional context than the one in which it typically resides. The practice, therefore, of conceptualizing problems according to the procedures commonly used to solve them is not a harmless, clumsy turn of phrase.

This article compares three institutional procedures for solving problems—market exchange, experts, and the law. Doing so will permit an analysis of problem solving that focuses on the attributes of the problems rather than the procedures for solving them. Each of the three procedures will be discussed as the best response to problems with particular features. Once this central premise is established, a logical case will exist for the central thesis of the article: that better problem solving by lawyers requires expanding the diversity of alternative procedures they may call upon for resolution. Problems present the solver with a choice of procedures. The greater the range of procedures available to resolve a problem, the more likely it is that a procedure may be found with decisional features that conform to the demands of the problem.

III. FITTING PROCEDURES TO PROBLEMS

A. Why Law Needs Its Own Problem Solving Analysis

All problems make demands on the procedures invented to try to resolve them. The demands posed by various kinds of problems, however, are not necessarily alike. For that reason, concepts of problem solving have been developed within many different disciplines—for example, mathematics, cognitive psychology, and management theory—each with a slightly different focus that reflects the typical attributes of problems faced by professionals within that discipline. Although the perspectives in the existing problem solving literature may be useful to the lawyer, none addresses the particular difficulties of solving problems in a legal setting.

For two reasons, legal problems are more sensitive and complex than the logical and analytical problems commonly encountered as examples in traditional problem solving books. First, legal problems tend to arise in subjective environments that resist manipulation for ethical and practical reasons. Resolving legal problems thus often requires careful sensitivity to the various contexts of human relationships in which they are embedded. Second, legal problems often cannot rely for their resolution on a strong version of truth that is consistent with physical, mechanical, or biological properties. To compensate for this lack of empirical underpinning, legal solutions nearly always rely to some extent on power as well as truth. Yet a too

4. I am indebted to Professor Arthur W. Campbell for suggesting the depth and frequency with which legal solutions depend on power.
heavy reliance on power risks disruption of the human relationships that accompany legal problems. Moreover, solutions based too strongly on power tend to unravel over time, leaving social disrespect or fear of the law.

These two features of legal problems—the broad variety of their relational settings and the special truth demands they make—require that legal problem solving proceed according to a unique set of meanings, purposes, and values. To set the stage for that inquiry, the demands posed by legal problems will be contrasted with the demands made by simple mechanical problems, by market exchange problems, and by expert or "technical" problems. Each type of problem will be compared by two variables: the subjectivity or objectivity of the settings in which it may arise, and the blend of power or truth typically required for its solution.

B. Mechanical Problems

Many mechanical problems make narrow demands on the appropriate tool for their solution. The settings of mechanical problems are strongly objective, and their resolutions rely heavily on empirically demonstrable principles. Suppose an object is fastened by a screw that has become loose. No subjective relationships are involved between the object and its fastener: there are no feelings to be hurt, no deception, no power plays, no issues of love or loyalty. The problem demands employment of a simple problem solving device (a screwdriver) to effect a fully containable and well understood environmental intervention (tightening the screw). This resolution may be carried out within the narrowest possible range of concern for error or for side-effects such as relational disruption or social controversy. The solution has truth on its side, and the only attachments concerned are physical rather than emotional. This problem and its solution obviously fit neatly together because the mechanism and the tool were specifically designed for one another. Designing specific tools for specific problems, however, is largely a luxury enjoyed within objective realms where the properties of the problem environment are well known.

A different tool than a screwdriver could conceivably tighten the screw, but probably less effectively or with undesirable side effects. If, for instance, a hammer is used to force the screw back into place, then the immediate problem may be solved: the screw may be tightened in its hole, thus fastening the object more securely. Using the wrong tool, however, carries an obvious cost. The threads of the screw are likely stripped so that removing the screw for any later repair is made far more difficult. Use of the hammer ignores the mechanical principles demanded for efficacious solution. The hammer solves problems by pushing; the problem of the loose screw instead demands a solution that involves turning. Hammering as a problem solving procedure is not well conformed to the contours of this particular problem.

Where a decisional procedure is not naturally compatible with the de-
mands of the problem, the procedure must rely more on power than truth. The procedure forces the problem to conform to a relatively artificial shape that will succumb—however imperfectly—to the assumptions or attributes of the procedure. In the case of the hammer and screw, this is done by forcibly stripping away what was unique to the screw, namely its threads. As a consequence, the future functioning of the screw is compromised. Problem solving is more effective and more sensitive to the contextual demands of problems, and there is less risk of producing side effects, where the procedure conforms to the problem rather than where the procedure forces the problem to adopt a shape that is easy for the procedure.

The harmony between mechanical problems and manipulative solutions contrasts starkly with issues that arise in the subjective social, political, and financial worlds. Such problems often seem to entail solutions that manipulate behaviors, attitudes, or environmental arrangements in ways regarded as threatening to human dignity and independence. Tools for solving human problems are thus ethically constrained by an underlying respect for individuals and their relationships. Problems arising in these settings are also less patterned and more idiosyncratic than those arising in the mechanical world, raising questions of human motivation and emotional needs that are not well understood. Tools for solving human problems must therefore be fairly general. Yet general tools lack precision and often risk side effects from their use. Paradoxically, human relational problems require tools that are less refined for specific tasks, but these same tools must be used with much greater care than the tools of the mechanical world. Furthermore, the knowledge on which intervention is based is far thinner than the relatively simple principles governing the physical world. With that backdrop, the following sections consider institutional procedures for solving human problems: market exchange, experts, and the law.

C. Market Exchange Problems

Problems typically labeled as “market exchange” problems could more accurately be labeled as “exit” or “substitution” problems. That is, market exchange problems are better conceptualized by their attributes: the feasibility of escaping a troubling or deprived environment, and the subsequent embracing or acquisition of some substitute state. For example, one may “fix” the problem of a wet basement by selling the house and finding one that is better constructed. One may “solve” the problem of an underperforming mutual fund by discarding it and acquiring a substitute investment. Markets, in the form of the availability of alternative goods or environments, are responses to problems characterized by the human decision and power to

5. See GEORGE P. FLETCHER, LOYALTY: AN ESSAY ON THE MORALITY OF RELATIONSHIPS 4-6 (1993) (construing ALBERT O. HIRSCHMAN, EXIT, VOICE AND LOYALTY: RESPONSES TO DECLINE IN FIRMS, ORGANIZATIONS, AND STATES (1970)).
abandon existing arrangements and substitute new ones. These attributes of market exchange solutions therefore attach to particular problems by conscious human choice. A demand for foodstuffs arises and a market develops when people seek to avoid an environment of food deprivation. A demand for, and hence a market for, exotic foods is created when people who are bored with their existing diets have the power to acquire something different. A market exchange solution is simply an escape to alternative arrangements.6

Using a non-financial example may illustrate the attributes of a market exchange problem, and thus reveal the mistaken practice of defining a problem according to the procedures by which it is typically resolved. Suppose two lovers quarrel and both parties seek to split up and find new partners. This problem is not usually conceptualized as a “market exchange” problem because it does not involve the medium of money or organized exchange. But viewed from the perspective of what the people want to accomplish, the lovers’ quarrel is indeed a market exchange problem. It is resolved by exiting and finding alternatives. The solution simply abandons the troublesome environment—in this case a troublesome relationship—in favor of a new one.

Locating market exchange problems along the two continua of objective/subjective and truth/power reveals their tremendous variability. First, market exchange problems may theoretically arise as easily in the subjective world of human relationship as in the more objective realm of physical deprivation or environmental annoyance. Of course a given problem may be easier or harder to escape, and substitutes may be more or less plentiful; but whether the irritants and substitutes are people or mechanical objects does not in itself affect the desire to exit and substitute. If the problem is a noisy neighbor, one could alternatively move to a different neighborhood, or pay the neighbor for silence, or invest in earplugs7. Sustaining human relationships may or may not be important to the holder of a market problem; this would depend on the holder’s preferences when choosing substitute arrangements.

The second notable aspect of market exchange problems is that the “truth” of the problem is, in most respects, irrelevant to the solution. Marketplace solutions do not require uncovering the etiology of the problem. If two lovers are quarreling, they may exit and find substitutes without any clear declaration of the cause of the relational breakdown, and without attributing fault to either person. The feasibility of market exchange solutions expands not by refining an understanding of the irritation, but rather by increasing the power of the problem-holder to obtain more substitutes. Flexibility as well as efficacy in marketplace problem solving comes through

6. See id. at 4.
market power—i.e., control of resources—rather than through moral truth.

In a market exchange problem, the people wish to go beyond merely “lumping it,” i.e., simply putting up with the physical or social environment which is raising perceptions of deprivation or annoyance. In a market exchange problem, people consciously seek to substitute or restructure so as to eliminate the cause of the annoyance. The problem-holder does this by employing the procedure of a market: abandoning and moving to a different position, or somehow buying out the irritant in the preexisting environment. The existence of a suitable market reflects an appropriate fit having been achieved between problem and procedure. Where no such market exists, however, the problem is still one of “market exchange.” The problem will, however, not be resolved effectively using marketplace procedures. A different procedure will be required—perhaps frustrating the problem-holders. Conversely, where marketplace procedures are applied to inappropriate problems (problems not given to environmental abandonment or in which moral values are especially salient) we apply especially scathing labels like “inhuman” or “monstrous.” Market exchange solutions that contemplate the abandonment or purchase of children, for example, are inappropriate. Similarly, if one person’s problem is a failing kidney, our culture deems unacceptable the solution of that person purchasing someone else’s kidney.

D. Technical Problems and Expert Advice

A market exchange problem may be contrasted with a “technical” problem. Suppose the quarreling couple considered above wanted to preserve their relationship through better communication and understanding of each other’s needs, rather than abandon their relationship. In such a case, the couple does not want an exit and substitution; they are “not in the market” for new partners. Instead, lovers with this sort of problem may want counseling from a therapist to uncover and change the underlying dynamic that lead to their quarreling. Their problem is thus a technical one, in which the parties seek to understand or redesign an interaction or environment rather than to eliminate or escape it. Technical problems frequently employ the procedure of expert advice for resolution. Experts recommend changes in environmental structure, social role, or individual behavior that result from the insights the experts gain in investigating a problem. The procedure works where human knowledge is sufficient to diagnose the problem, and a solution known to rectify the cause or the symptoms is applicable.

To illustrate again the mistake of defining the problem by the available procedures, consider the following example. Suppose a hopelessly terminal

cancer victim turns to a conjurer in a desperate attempt to find a cure. Here, the procedure of expert advice is applied inappropriately. Due to the limitations of human understanding about the disease, the problem cannot be improved through technical insight. Where "experts" proceed in the face of ignorance, we apply the labels of "incompetence" or "quackery." Even though the problem cannot be resolved by experts, and the traditional procedures for solving a technical problem are inappropriate, the problem may nonetheless remain technical if the problem-holder seeks improvement of the environment through insight and understanding. The problem-holder may stagger through successive attempted fixes only to be frustrated, like the holder of a market exchange problem for which no market exists.

Alternatively, the holder of a technical problem for which no solution exists may simply become reconciled emotionally to the fact that the problem exceeds the current state of human technology necessary to solve it. The terminal cancer patient, for example, may seek the advice of clergy or a hospice director to cope better with the inevitable. Although the environment of the illness cannot be altered through medical treatment, the victim's mentality toward the illness may be reconciled through spiritual or psychological/philosophical counseling and understanding.

Regardless of whether a technical problem is resolved in a traditional sense by "fixing" the environment, or by a reorientation of attitudes or emotional reaction, the solutions take far stronger positions toward truth than market devices for problem solving. The efficacy of technical solutions depends on accuracy of diagnosis and appropriateness of recommended solution. Reliance on power rather than truth is virtually antithetical to the idea of an "expert" or to the emotional reorientation through deeper understanding of the problem. However, like market exchange problems, technical problems may or may not be concerned with the preservation of human relationships. Such relationships may be central to the issue (as with the quarreling couple), or may be virtually nonexistent in solving the problem (as with the mechanic who diagnoses the loose screw). Frequently, relationships may accompany an objective problem in some significant way (as with concerned relatives, co-workers, and friends of the cancer patient).

E. Legal Problems

Law is sometimes said to be a residual problem-solver, a device of last resort.\textsuperscript{11} Translating that into attributes of the problem rather than the procedure, one may say that holders of legal problems have nowhere else to turn. Legal problems may often be characterized as market exchange or technical problems whose resolution is frustrated. Exit may be impossible or undesirable, or substitutes unavailable. Where a problem shows up on the doorstep

of the law, social arrangements are not easily abandoned. If the environment could easily be abandoned, it often would have been by the problem-holder, with another substituted in its place. Similarly, legal problems are often characterized by the lack of a refined body of knowledge to treat the problem through applied technology, or even to promote reconciliation of the problem through understanding its intractability. If the source or treatment of the problem were completely within the realm of technical understanding or emotional reconciliation, the problem would likely have succumbed already to some fix or psychological resignation. Once again, the law’s intervention would not have been needed.

In evaluating the historical performance of the law in solving problems, recognition should thus be given to the especially challenging nature of many legal problems. They are often set within a troubling but virtually inescapable subjective context, and they present issues on which human understanding is limited. With such constrained malleability of social arrangements and incomplete comprehension about the propriety of possible intervention, the law depends on “voice”: the articulation of alternative positions that typically seek a normative rather than empirical restructuring of the environment.12 In adopting one or the other normative alternatives, the best instincts of judges and legislators must substitute power13 wherever truth leaves off.

Suppose, for example, our quarreling couple decides to divorce. They must first secure a court decree dissolving their marriage. This in itself is simply a ministerial change in status. Thus far, the law is merely acting as an adjunct to a marketplace solution in which the couple has decided to escape their relationship. The legal problems arise in dividing the couple’s property, and even then the problems are only potentially “legal.” Although property allocation may be difficult, the couple could escape their problem by selling assets, splitting the proceeds, and finding substitutes. Where they cannot agree on the particulars or are unwilling to liquidate the assets, they must turn to the law instead of a possible marketplace solution.

The couple’s dispute begins to present uniquely legal qualities where a disagreement emerges over custody or visitation of their children. For this problem, all of the parties—both biological parents and their children—are tied together in significant and inescapable ways. Exit and substitution will not resolve the problem where both parents want custody. Moreover, there neither is a technical fix available,14 nor will either parent easily be emotionally reconciled to the absence of his or her child. Neither science nor ther-


14. No doubt some people—though not me—would advocate the application of cloning technology to this problem.
apy, in other words, will expertly resolve the issue. The law must determine this issue by invoking social norms, under conditions in which the parties are likely frustrated with their lack of decisional options, and where the “truth” of any proposed solution is elusive. The law will perhaps simply follow prevailing cultural wisdom, be that a presumption in favor of the father, the mother, joint custody, or the “best interests of the child.” Yet this problem, situated squarely in legal decision making for lack of a better alternative, makes special demands due to the inescapable human relationships and the limitations of human empirical or emotional understanding. In this sense, it is quintessentially legal.15

Hence, when others have written about problem solving from mathematical, operations research, systems analysis, or brain functioning approaches, their suggestions do not necessarily apply well to the lawyer’s task. The crisp, clean-edged solutions of logic games may not be available to the law as it attempts to regulate the incidents of social relationships that are not wholly voluntary, and concerning aspects of life for which there are no simple empirical truths. At least a beginning may be made, however, in describing how law traditionally has attempted to solve problems, and how in the future it may do so with more creativity and sensitivity to the side-effects of using its imprecise tools.

IV. DESCRIBING PROBLEM SOLVING IN A LEGAL CONTEXT

In starting to identify the meaning and values of creative problem solving, it is useful to begin with the prevailing mentality about the law. In Part III(E) above, the demands of problems on the legal system were described as special due to the troubled relationships in which they tend to be embedded, and the frequent indeterminacy of their solutions. This Part evaluates how well the traditional processes of the common law meet these especially challenging attributes of legal problems. It concludes that the common law process supplies a tool of broad and enormously useful generality, but one that is insufficiently nuanced and flexible in its understanding of human motivation and the provisional, contingent ways in which human environments are structured.

The common law tends to approach human problems with a flattened vision of humanity. Applying traditional tools of legal problem solving to such narrow human conceptions may be like using the hammer to tighten the screw. Finding no harmonious fit between legal rules and human circumstance, the law may rely too heavily on power to conform the problem forcibly to the requirements of the procedures designed to resolve disputes.

15. This conclusion agrees with Martha Fineman’s reluctance to release child custody cases from the domain of the law in favor of social workers or psychologists, on the grounds that human truth has not advanced to the stage in which experts may be trusted on such matters. See Martha Fineman, Dominant Discourse, Professional Language, and Legal Change in Child Custody Decisionmaking, 101 Harv. L. Rev. 727 (1988).
The legal system does this by defining problems as exclusively involving adversarial contests of rights. Such conceptual constriction of problems reflects the needs of the legal procedures—rules supplemented by litigation. It risks, however, stripping away valuable attributes of problem environment (usually people and their relationships). Conceiving lawyers as problem solvers tries to do the opposite: it attempts to develop and use legal procedures according to the variable demands of legal problems, rather than force problems to conform to the needs of legal procedures.

Creative problem solving is thus offered as a more flexible alternative which will better respect the human context of legal problems, and at the same time serve as a catalyst in redesigning environments that are conducive to solutions. Creative problem solving is also held up against two alternative critiques of the traditional common law mentality, namely Critical Legal Studies and what I term the Human Identity School. By establishing how a creative problem solving mentality differs from both the common law approach and from the primary alternative approaches, the meaning and values of creative problem solving will emerge.

A. The Common Law Heritage: Law as Machine

The meaning of a law based on creative problem solving may be contrasted with the meaning of law that has prevailed, roughly, over the past four hundred years. From the earliest stirring of the Enlightenment in the sixteenth century, the common law aligned itself with certain processes for uncovering truth and certain images of human nature.16

1. Legal Rules as Components of the Machine

Briefly, the processes of law are based on a particular form of rationality, a form that James B. White characterizes through the metaphor of a machine.17 Law-as-machine is designed to process human disputes by feeding facts through a series of legal rules that are viewed as hard-edged and permanent (although on occasion they require repair). Legal rules, seen as the mechanical workings of the legal machine—its gears, springs, and wheels—operate more or less on their own, without intervention of human discretion once they are set in motion. All the rules work in conjunction with one another: one component does not fight another in a dysfunctional or counterproductive way. The machine also operates universally, i.e., it processes


claims evenhandedly regardless of the social or economic circumstances of those who seek to invoke the rules. A universalist application of rules combined with an unvarying application of regular procedures is intended to produce fair, predictable outcomes. That is much of the point of a machine: to reduce the level of human discretion and to standardize output in an efficient manner. The reasoning process employed by law-as-machine is naturally mechanical, judging factual input against the parameters defined by the elements of rules. Often, of course, no rule fits the particular need. If that happens, then the inputs may be manipulated so as to apply an existing rule by analogy. Alternatively, the machine itself will be elaborated or refined by the addition of new legal rules that will then treat this newly recognized fact pattern in a universal fashion seeking uniform results. The process spirals on and on.

2. Input to the Machine: Abstracted People and Stereotyped Problems

To achieve the levels of uniformity of process and results demanded by Enlightened legal method, the inputs of the legal machine must themselves be simplified and regularized. Hence, the human beings who bring disputes to the legal system cannot be regarded with much particularity or nuance. To maintain the neutrality and universal rationality of legal process, the people behind the disputes must be abstracted—consigned to a rather deep background. Only the overt behaviors of people (and occasionally their "intentions") are considered important to the legal system. Humanity, with much pounded out except behavior and intention, can then be fed through legal rules for decisional processing, done impersonally and uniformly.

This reduction of humanity ignores the psychological, relational, and social contexts of their problems. Such reductivism is not evil by design. Rather, it likely stems from the inherent limitation of the tools of legal process—the nature of its rules, investigatory tools, and conceptual apparatus. Contextual information, to be processed fairly, would require investigation into aspects of human life beyond the perceived competency of judges and their institutional machinery. Furthermore, it would introduce levels of judicial discretion and variability of results thought to be morally and politically intolerable. As a result, human beings and their legal problems are subjected to various simplifying assumptions: first, that people exist largely in isolation from one another; second, that they live their lives through informed choice rather than through the relational bonds of love, tradition, honor, or spirituality; and third, that people seek self-advancement and decisional validation through legal judgments that pronounce one person right and the other person wrong.

Contemporary thought questions both the prevailing methods of law and the image of people that those methods tend to promote. In the para-

18. See White, Law as Rhetoric, supra note 17, at 686.
graphs below, two schools of thought are described that resist the Enlightenment law-as-machine metaphor and its long-term effects on human identity and cultural beliefs. The ultimate purpose of such description is to distinguish the creative problem solving mentality from other prevailing legal approaches. In so doing, the unique characteristics of the creative problem solving ("CPS") approach will be better understood.

B. Reaction Against Traditional Ideas of Legal Process: Critical Legal Studies

The first of the two movements that oppose the common law tradition is Critical Legal Studies.\(^{19}\) Advocates of Critical Legal Studies seek to unmask the alleged neutral, universal workings of legal machinery as largely camouflage and hypocrisy. They view the legal system as the result of clever manipulations by powerful, privileged persons to gain or maintain a social hierarchy with such privileged persons at the pinnacle.\(^{20}\) The Critical school strongly denies the Enlightenment picture of legal rules as crisply defined tools working precisely and harmoniously to produce standardized output.\(^{21}\) Rather, they regard legal rules as inherently indeterminate in meaning and application.\(^{22}\) As a result, legal decisions are governed by relationships of power and mentalities of prejudice and oppression.\(^{23}\)

Rather than viewing the legal system as a well-functioning machine operating with little human discretion, the metaphor for law among Critical Legal Studies advocates may describe the law as a marionette whose movements are directed—out of sight—by powerful, privileged puppeteers for the diversion or manipulation of the public audience. The central Critical Legal Studies conception is that legal truth is merely camouflage for the exercise of power. The majesty of the law, the supposed universality of its rules, even the occasional appearance of progressive social reform—all mask oppression by the socially powerful.\(^{24}\) The claim to legitimacy by Enlightenment law rests on truth and equality; but for those in Critical Legal Studies, such legitimacy dissolves as both truth and equality are unmasked as ma-


21. See Tushnet, supra note 19.


C. Reaction Against Traditional Concepts of People:
The "Human Identity School"

While Critical Legal Studies directs its attention to legal rules and legal process, a second reaction against the law-as-machine metaphor focuses on the flattened image of humanity that emerges when disputes are fed into the legal system. For want of a better phrase, I call this second objection to traditional legal thought the "Human Identity School." The Human Identity School encompasses views from a broad diversity of scholars, and their concerns for people may be focused at various levels. They may be most distressed at the effects of law on the individual spirit; or they may direct attention to the group identity; or they may be concerned about cultural and political expression within the broader community. Where Critical Legal Studies evaluates the common law largely along the domain of truth versus power, Human Identity proceeds along the subject versus object dimension. According to the Human Identity School, traditional common law neglects "the subject," regardless of whether the subject appears as a discrete individual or as collective humanity. Instead, Human Identity thinkers say the common law protects "the object": property, order, established hierarchy, and stereotyped attitudes about difference. People who are different from the majority population are objectified and devalued, and the outcomes of legal cases reflect these prejudices.

The Human Identity School works to enrich participation in legal process, to enlarge the diversity of voices that are heard by the legal system, and


to strengthen those voices that historically have been disadvantaged or ignored. By expanding and enriching legal discourse through stronger attention to a wider variety of perspectives, a more just and inclusive community is sought. The metaphor of law for those within the Human Identity School is language, in the form of personal narrative or public conversations. By refining personal narrative and carrying it to public and legal places, individual identity is strengthened and human dignity advanced through a broader understanding of human differences.

D. Creative Problem Solving: A Third Alternative

1. How Creative Problem Solving Is Similar To, and Different From, Critical Legal Studies and Human Identity School

Looking at law as creative problem solving is different from, but not completely mutually exclusive with, both Critical Legal Studies and the Human Identity School. Creative problem solving shares some of the dissatisfaction with legal process highlighted by the Critical approach, but without falling into the cynicism or nihilism that afflicts those at the extremes of their thought. Similarly, creative problem solving understands along with the Human Identity School that people may be both over-defined and over-simplified within the legal system. That is, the legal system may have the effect of according too much attention to a narrow set of human qualities or aspirations while ignoring or devaluing other aspects of people and their relationships. For creative problem solving, the primary focus is not so much on enabling self-understanding by individuals or the empowerment of identifiable groups. Creative problem solving fosters self-development and group identity, but that is not the central measure by which legal outcomes would be judged under a CPS mentality.

2. Reshaping Environments Toward Human Purpose

So what is the evaluative measure of law understood as creative problem solving? Consider the truth versus power variable of Critical Legal Studies and the object versus subject concern of the Human Identity School. Creative problem solving assumes that reality can be described meaningfully and morally, not only for the individuals immediately involved in a dispute, but for others who may be subject to similar environments. Creative problem solving thus assumes a stronger version of truth than do some in Critical Legal Studies. Creative problem solving assumes that at least on a pragmatic level, solutions to problems can be identified that are genuine im-

improvements for all persons, not simply masked expediencies for the powerful. At the same time, creative problem solving uses legal power more actively than the common law. Creative problem solving also focuses on the environment—the object—more than would the Human Identity School. But at the same time creative problem solving has a stronger concern for the actual effects of law on individual human subjects than do those who support the traditional law-as-machine metaphor.

Put differently, creative problem solving shares some of the instrumentalist principles of Critical Legal Studies by regarding social environments as manipulable. But creative problem solving assumes that interventions can be called solutions rather than merely politics, and further assumes that solutions can be accomplished in the name of truth, justice, or at least efficacy. In seeking solutions to human problems, creative problem solving shares the impulse of the Human Identity School to embrace a broader vision of what people are and the importance of their relationships. Creative problem solving assumes that problems represent some physical, relational, cultural, organizational, or political environment that is unsupportive or ill-suited to the purposes of people. Thus, when people are distressed, they may be helped more through the understanding and manipulation of their environment than through some pronouncement of rights, vindication of power, or validation of identity. In that way, creative problem solving shifts the focus off an exclusive concern for individuals and either their identities or rights. Instead, creative problem solving moves at least some measure toward a concern for connections, relationships, and the common good.

V. THE VALUES OF CREATIVE PROBLEM SOLVING

Creative problem solving is not pure process. It is not value-neutral technology, nor would that be desirable. Rather, creative problem solving seeks on a pragmatic basis to advance the values of inclusiveness, decentralized decision making, and respect for both human differences and the bonds of non-coercive relationships. Creative problem solving furthers these values by designing interventions into the system defined by the relationships between people and their various environments. As stated at the outset of this article, problems are a mismatch between environments and human purpose. To the extent that environments punish or raise barriers against a more inclusive society, creative problem solving uses legal power to change those environments. Creative problem solving attempts to be pragmatic and concrete: environments that are restrictive or needlessly judgmental should not be perpetuated in the name of some ideology that seeks to preserve the human struggle for its alleged heroic or identity value. Environments that constrain individual choices stifle creativity. Environments that demand binary judgments between people magnify social hierarchy. Such environments should be resisted by changing the dynamics within the system of relationships that comprise such environments.
Enlightenment legal process ignores the role of context and environment on people's problems by reducing all legal inquiry to issues of individuals' rights. Through this neglect, the common law overlooks possibilities for preventing problems from arising. It neglects the potential for affording more people a chance—or a second chance—at social, relational, or intellectual opportunities.

The purpose, values, and creativity of problem solving emerge where, first, one sees and understands problems as structural barriers or dysfunctional links in the relationships between people and their environments. Second, creative problem solving responds to these problems by designing interventions that change human relationships or the objective environment in ways that respect the links that people want to keep and the decisions that they want to retain. The illustrations that follow demonstrate the process of uncovering these barriers and dysfunctional links between people and their environments. The illustrations also suggest ways in which environments may be creatively reconstructed. They are adapted from other writers, primarily Martha Minow, Lloyd Weinreb, and Larry Lessig. However, these individuals would not necessarily regard themselves as using a creative problem solving mentality, and each would perhaps take umbrage at the suggestion. Nevertheless their thoughts seem possibly consistent with the distinctive CPS mentality outlined above. Creative problem solving strikes new positions between truth and power and between human subject and environmental object, toward identifiable values of inclusion and respect for personal freedom through localized decision making.

A. The System of Wheelchairs, Curbs, and Social Attitudes

Consider the example of persons with the physical disability of being unable to walk. At a point not too distant in history, such persons were consigned by a variety of social forces—physicians, school boards, and social prejudices—to a life largely out of sight of the non-disabled population. This treatment may have been the result of a prevailing Enlightenment mentality that was especially good at drawing distinctions. Those who could not walk were not perceived to share certain characteristics with the majority population, and the distinction was thought to matter. It mattered enough that people with this sort of disability—now elevated to a "difference"—were often excluded from various life activities. Conventional schools, participation in sports, and access to cultural events were

32. See generally Barton, supra note 16, at 130-53.

Attempts were no doubt made to justify such separation by suggesting that the disabled persons needed shielding for their own protection. In a socio-legal environment designed using universal, abstract human qualities like the "reasonable man" standard—standards that presumed everyone to have certain physical capabilities—disabled people were more likely to face legal liability in tort. Or, since few workplaces were willing to hire disabled persons, perhaps the argument went that disabled persons needed to be buffered from the economic pressures that would likely reduce them to destitution. In its own way—a way that now seems to us to be strikingly unimaginative and even cruel—these measures to warehouse the disabled followed a certain sort of rationality.

A Critical theorist could look at the regulation of the physically disabled during this past era and interpret it as measures of expediency by the prevailing powers who simply did not want to be bothered by those with a handicap. While expressing hypocritically a paternalistic concern for the disabled, the socially powerful constructed a regulatory regime that conveniently confined the disabled out of sight and largely out of mind. To reiterate, the Critical position may not necessarily be false, but it may be overly simplistic and at least sometimes may verge on cynicism. The rationality of difference may well have been innocently employed—it no doubt grew from hundreds of years of scientific devotion to taxonomies, classifications, and evolution theory. Furthermore, what many see today as offensively paternalistic might have been experienced by at least some individuals as sincerely charitable impulses.

A Human Identity theorist would tend to look at physically disabled persons with concern for a particular individual's sense of belonging to a group, a group defined though its differences from others. The goal may be closer integration with surrounding society. Conversely, the goal may be continued segregation from that society. In either case, the goal would be to further a life based on choice rather than social compulsion. The Human Identity method would stress the development of self-understanding through narratives about shared characteristics, history, social treatment, or aspirations. The Human Identity method would also likely include the development of legal rights for each physically disabled person, to be exercised as a tool to thwart community treatments wrongly based on expediency, stereotype, or ignorance. Such rights could, as suggested above, be used either to force more distinct or better elaborated separation, or alternatively to promote fuller integration and awareness of physical disability.

The development of these identities is certainly not unimportant. Nor is looking at law from a problem solving perspective mutually exclusive with that perspective. But the problem solving perspective does something dif-

34. See Weinreb, supra note 33, at 243-45; Minow, Foreword, supra note 33, at 13-14.
different. Imagine that a creative problem solving approach had been applied during that earlier period when disabled people were restricted from many life activities. Creative problem solving would have regarded physical disability as relationships between disabled people and their physical and social environments that were not working well. Creative problem solving would have looked for the best pressure point, the aspect of the relationships within this system that could be fixed most efficaciously and inclusively. The focus would not be purely on identity and mentality. The focus would not so squarely be on oppressive motives and presumptions about power. The question would simply be: What interventions are most likely to fix this pathological (or at least not fully functional) system of linkages between people and environment?

Creating better wheelchairs is one important step; this illustrates the way in which technology can alter the dynamics within a system. Better wheelchairs give far more mobility to physically disabled persons, mobility which greatly broadens the scope of their activities. This in turn reduces the way in which the physical environment confines them. This part of resolving a problem, conceptualized as a mismatch between environment and human purpose, adopts a completely decentralized, individual approach—and it helps. Yet the technological fix is not the complete or optimal answer. What also helps is to conceive the aspects of the public physical environment which create obstacles to the use of wheelchair technology: namely the curbs on streets and stairs which even the best wheelchairs cannot negotiate. The physical environment, in other words, limits how well disabled persons can be integrated by purely private, decentralized efforts—even as those efforts are enhanced by technology.

Some other, nontechnical device must be used to solve the remaining obstacles of a restrictive physical public environment. Enter legal regulation, namely the Americans with Disabilities Act\(^5\) which mandates cuts in curbs on streets, ramps in public buildings, and restrooms which are accessible to people in wheelchairs. This legal regulation is a more centralized problem-solver than equipping every disabled person with a wheelchair, but of course the two approaches are not inconsistent. Indeed, they work together. Without the technology of the wheelchair, ramps and curb-cuts would be worthless. With legal regulation forcing greater accessibility, wheelchairs are made far more useful.

After the legal regulation has been in place for a while, working to make the physical environment less punishing or restrictive for disabled people, their increased mobility starts changing the social environment. That is, the links among the people in this system begin to change. Based on the frequent interactions between disabled and non-disabled persons in a far greater variety of life circumstances, the “difference” that was perceived

by reason of a physical handicap seems less salient. The difference comes to matter less because it affects behavior far less. Attitudes by non-mainstream people change for the better. People start experimenting to find what previously conceived restrictions can be overcome. One might say that the "problem" of disability—which is now better described as a system in which the physical, legal, and social environments raise barriers to full inclusion by disabled persons—has been approached not by hiding the fact of disability from society and not by accentuating the identity of a disabled person in some ideological way. Instead, pragmatic efforts have attempted to make the fact of disability irrelevant. By opening a physical environment, access need not be forced: it is naturally there for everyone.

B. The System of Internet Communicators and Data Filters

Professor Larry Lessig may have employed aspects of the problem solving mentality in addressing questions of regulation of the Internet. Behavior generally is regulated through three constraints, says Lessig: through the law, through social norms, or through "nature." That is, laws "order me to behave in certain ways"; social norms "say I can buy a newspaper, but cannot buy a friend"; and nature "requires that I do certain things whether I want to or not; the constraints that demand, for example, that when I, unlike the Road Runner, step off a cliff, I will fall." Lessig creates the potential for law to work with both norms and architecture to effect more inventive and comprehensive solutions to problems by discerning that, in addition to law, the social and physical environments regulate our behaviors. Too often (to repeat one theme of this paper) problems have been defined exclusively by the procedures contemplated to solve the problem. "Legal" problems, therefore, have not been analyzed for their susceptibility of solution through peer pressure or through a manipulation of the

36. See Minow, Foreword, supra note 33, at 14.
37. One example in the author's experience is a tennis clinic in which disabled people are integrated with non-disabled. To make this work, the physical environment must be slightly modified—the racquet must be taped onto a wrist and forearm splint of the disabled person, to compensate for the reduced arm motion that is possible from a wheelchair. Then, one rule of tennis must be changed—the rule requiring a return shot prior to two bounces of the ball on one's own side of the court. The rule must be changed for the disabled player to be "prior to three bounces" instead. But with those two interventions—one physical, one "legal"—this sports activity can be played together between disabled and non-disabled people.
38. See Lessig, Cyberspace Regulation, supra note 33; Lessig, Constitution and Code, supra note 33.
39. See Lessig, Cyberspace Regulation, supra note 33, at 181; Lessig, Constitution and Code, supra note 33, at 1-2.
40. Lessig, Constitution and Code, supra note 33, at 1.
41. Lessig, Cyberspace Regulation, supra note 33, at 181.
42. Lessig, Constitution and Code, supra note 33, at 2.
physical or relational environment in which they arise. “Nature,” in Lessig’s terminology, has not been considered in modern legal scholarship because it has been viewed as non-plastic: “we take nature as given.” Yet with the movement of legal problems from “real” space to “cyberspace,” the power of social norms and the potential of manipulating the structural environment to solve problems become far more visible. Social norms among Net users have grown to regulate many potentially annoying behaviors in cyberspace. The environment, or “nature,” in cyberspace is the code in which computer directions are written. Although invisible to users, such codes are constantly at work to enhance or constrain the shape of virtual reality. In recognizing the potential to regulate the electronic architecture of the Internet, lawyers may by analogy gain insight into the potential for reshaping the environments of real space.

One particularly good illustration of how Lessig’s views are consistent with creative problem solving is found in his discussion of the problem of preventing children from accessing pornography on the Internet. For a number of reasons, Net pornography is a more difficult and complex problem than controlling pornography in print media. First, the distribution and production of materials on the Internet is radically decentralized, crossing international borders easily, and by unpredictable routes. Second, users of the Internet can be anonymous. That is, in interacting with others and accessing information on the Net, one can easily camouflage one’s age (and for that matter one’s gender or national identity or virtually anything else about one’s identity). User anonymity results from the computer codes that constitute the log-on environment for the Internet: they are consciously “unzoned”; that is, they are designed not to require passwords or user information to gain access. It need not be so; the log-on code may be altered to require passwords verifying identity. Once identity is established, the specific areas that are authorized for the user become available. A different choice of values is reflected in such a code than in the Internet code: namely values of protection and hierarchy over values of accessibility and anonymity.

But should the Internet be manipulated to control child access to pornographic materials? Lessig says this issue is too often approached by an ideological, absolutist position against any conscious regulatory effort.

43. Cf. Paul H. Robinson, Moral Credibility and Crime, ATLANTIC MONTHLY, June 1995, at 75 (most crime is deterred not by fear of punishment but by social disapproval and personal morality).

44. Lessig, Cyberspace Regulation, supra note 33, at 182.

45. See id.

46. See id. at 188.

47. See id.

48. See id.; Lessig, Constitution and Code, supra note 33, at 10-11.

49. See Lessig, Constitution and Code, supra note 33, at 4; Lessig, Cyberspace Regulation, supra note 33, at 186-88.

50. See Lessig, Cyberspace Regulation, supra note 33, at 188, 190.
Herein lies the danger of failing to understand the relationship of problems and environments. A refusal to consider regulatory intervention amounts to a willingness to be controlled by those individuals who currently shape the environment of the Internet, namely those who write the browser code. As Lessig says, "[w]hat is unavoidable ... is that code is political, that the architectures that are established in cyberspace have normative significance, and that choices can be made about the values that this architecture will embed."  

Child access to pornography on the Internet represents a mismatch between the environment—here the browser code—and the human purpose of protecting children. The problem is not appropriate to a market exchange solution because most parents choose not to abandon Internet viewing by their children in favor of a substitute, such as reading more easily censored books. Further, no market exists for restructuring the environment by buying out those who place pornography on the Internet. A technical/expert solution is available through rewriting the log-on features of browser codes, but thus far the relevant experts—those who write browser codes—hold values about autonomy and anonymity that cause them to resist change. Hence the problem becomes a legal one through the unavailability of either a market exchange or an expert solution.  

Aside from law's role as default problem-solver, the qualities that often appear in legal problems are identifiable in Internet pornography. The problem has a strong subjective element in the form of concern for the effects of the Internet material on child behavior and emotional development. Yet instituting a solution by manipulating the environment is sensitive due to First Amendment liberty interests of free expression. If the law is limited to considering this issue in the narrow context of contending rights—indecency versus the First Amendment—then the problem may not be solved. Only by viewing the problem as a relationship between environment and purpose can more subtle insights such as Lessig's views about the level and perfectibility of control through code be achieved. By being pushed into the kind of binary solution that rights-based litigation often entails, effective and creative problem solving using values of inclusiveness and decentralized decision making is compromised.  

VI. CONCLUSION  

For too long, law has permitted itself to be conceptualized as a system of instrumental rules more or less isolated from relational context or envi-

52. Id. at 14.  
53. See id. at 12. As Lessig says concerning the constitutional challenge to the Communications Decency Act of 1996, "[t]he claims of the ACLU were in part clearly correct—their attack ... on the definition of 'indecency' was ... an extremely strong attack—but in part it just missed the point." Id.
rnonmental influences. Power to effectuate solutions to social problems through enacting rules was taken for granted. As a result, legal practice has been channeled too rigidly into contests of rights created under the rules. Legal problems have been forced to conform to the demands of legal procedures, thus neglecting the possibilities for imagining better solutions with fewer side-effects.

Creative problem solving, in contrast, attempts to broaden the inquiry concerning legal problems and to acknowledge a broader range of skills for their effective resolution. The exclusive point of law should not be for us to feel free or vindicated because we have prevailed in asserting our rights against another person. In part, the point of law should be to shape an environment that is inclusive, non-punishing, and decentralized in offering choices. To do this, lawyers must use their imaginative powers to approach the law as responses to chronic patterns of human problems. Lawyers must generate alternative solutions that are appropriate to the life circumstances of clients and call on a broad array of skills to implement or facilitate those solutions that seem best. Neither these concepts nor these skills are currently taught well to lawyers. The goal, however, is worthy: a stronger, more respectful contribution by lawyers in helping people solve their problems.