

General systems theory and criminal justice

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Abstract

Criminal justice agencies are organized sequentially — “output” from one agency is “input” to the next — but most scholars argue that criminal justice is not a system in a theoretical sense. In this article, it is argued that general systems theory (GST) reveals important insights into criminal justice structures and functions. Specifically, it is argued that the criminal justice system processes “cases” rather than people, and that the common goal of criminal justice processing is to “close cases so that they stay closed.” It also is argued that processing capacity progressively declines, in that at each system point the subsequent agency cannot input as many cases as the previous agency can output. Each agency therefore experiences “backward pressure” to close cases in order to reduce input to the next agency. Overall, this article highlights that criminal justice agents and agencies are best understood as operating in the context of the larger whole, thus it is concluded that criminal justice is a system in the sense of general systems theory.

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Introduction

General systems theory (GST) had a long tradition in the natural, behavioral, and social sciences (Bertalanffy, 1968, 1975), where it added substantial insights to the understanding of a wide variety of complex phenomena (Bowler, 1981). GST, however, had not generally been used to add insights to the understanding of criminal justice. Some, such as Duffee (1990), argued that criminal justice was not a “system” at all, noting the lack of integration among institutions and the within-institution differences that existed across different locales. Others, such as Cole (1970), focused on the informal exchange relationships (e.g., Blau, 1964) that existed among criminal justice organizations, arguing that these comprised a system. Even among those who argued that criminal justice was a system, they generally confined

themselves to using GST as a descriptive terminology that added nothing to the understanding of criminal justice. Thus, the debate about whether criminal justice constituted a system often was only an argument about terminology.

In this article, it is argued that criminal justice is a system, although with several unusual characteristics. More importantly, it is argued that GST generates substantial insights into both the structure and functioning of criminal justice agencies and organizations. The article begins by reviewing GST itself, along with past attempts to apply it to criminal justice. Next, GST is applied to the complexity and diversity of criminal justice agencies and organizations. Finally, theoretical insights are proposed about criminal justice structure and functioning, based on the GST perspective.

Basic concepts of general systems theory (GST)

GST can be a source of bewilderment because of the enormous range of different definitions and interpretations.

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For example, Sadowski (1974) listed thirty-five different definitions of a “system.” There also was considerable variety in interpretations of the general systems theory (Mesjasz, 1988, p. 296), ranging from mathematical formulations to metaphors; some even argued that GST was a meta-theory. Through all of this diversity, an essential and common element focused on the interaction of different units toward a common goal. As Rapoport (1986, p. xvi) stated: “A whole which functions as a whole by virtue of the interdependence of its parts is called a system, and the method which aims at discovering how this is brought about in the widest variety of systems has been called general systems theory.”

Originally conceived by Bertalanffy (1968, 1975) in the 1940s, GST argued that a whole system was more than the sum of its parts and therefore the parts of a system were best understood in the context of the whole. GST attempted to explain how related components at different levels interacted with one another in forming a system, including the interaction of these various units at different levels and the interrelationships among the units (Bowler, 1981). In particular, GST attempted to develop useful generalizations across systems: it argued that all systems had some characteristics in common and that it was useful to understand different systems in terms of those common characteristics. In developing these generalizations, GST moved beyond descriptive terminology, asserting that the concepts and propositions of GST were a mechanism for providing a more complete and accurate understanding of the phenomena under study.

GST was “applied to a surprisingly wide range of problems: from the network of reactions in a cell to the dynamics of animal populations to electrical engineering, and to problems in the social sciences” (Bertalanffy, 1975, p. 43). In the social sciences, systems theory was utilized for understanding a fairly wide variety of political and social phenomena (Mesjasz, 1988, p. 291). In both the behavioral and social sciences, the GST framework was utilized in the study of organizations (e.g., Cadwallader, 1968; Haberstroh, 1968; Lewin, 1968). GST applications to social organizations, like in other fields, stressed the openness of organizations and the interaction with the environment in inputs and outputs. Organizations fell under the scope of GST because of their complexity at several levels and their “conscious determination to move toward self-established goals” (Van Gigch, 1978, p. 47).¹

Particularly relevant to the application of GST to criminal justice were arguments about “open” systems, which interacted with environment around them as “inputs” entered the system while “outputs” left the system or parts of the system (Katz & Kahn, 1966; Luhmann, 1995; Miller, 1978; Rapoport, 1986; Van Gigch, 1978, p. 13). Inputs and outputs created a natural “feedback loop” in which the system adapted to a changing environment, which allowed self-regulation and increased the chances that the system itself would remain viable. In all open systems, outputs must

remain approximately equal to inputs (Cortes, Przeworski, & Sprague, 1974). In an obvious sense, if inputs decreased, then outputs also would decrease; however, if inputs increased, then system disruption could occur in the long run by overloading the system. In particular, system overload tended to be associated with inadequate processing of the inputs, and therefore, to increase the rate defectiveness in the products that left the system as outputs. These “defective” products returned to the system for further processing, which further overloaded the system and increased the rate of defectiveness in its outputs. System overload therefore tended to spiral into a more generalized system breakdown. Systems therefore had “system regulators” to control the processing of inputs and outputs to stabilize the system (Cortes et al., 1974; Van Gigch, 1978), as well as “system guarantors” to ensure that activities undertaken by system components were meaningful relative to the objectives of the system (Churchman, 1971).

Previous arguments about criminal justice as a system

Since the American Bar Foundation (ABF) study of criminal justice over forty years ago, scholars often described criminal justice as a system (Walker, 1992). Taken literally, this implied criminal justice agencies and institutions (police, courts, and corrections) were interrelated and worked toward common goals. Most scholars who referred to criminal justice as a system did not intend this implication and instead simply used the term as a convenient way to refer collectively to those agencies and organizations.

In contrast, Van Gigch (1978) used GST as a framework for understanding the major criminal justice components (i.e., police, courts, and corrections), as well as additional levels of agencies and institutions. Van Gigch identified the inputs and outputs of each agency or institution and argued that these were regulated by the needs of the overall criminal justice system. In sum, Van Gigch argued that there was a whole criminal justice system that was greater than the sum of the individual parts. Van Gigch also argued that there were multiple interlocking and overlapping systems in criminal justice, as was true with any complex organization (pp. 23–25). Specific criminal justice agencies and agents were subsystems within the criminal justice system, which itself was a subsystem within larger political, economic, educational, and technical systems. In addition to these vertical (or hierarchical) systems, there were also horizontal system connections. For example, courts that handled civil law functions had little (or nothing) to do with criminal justice.

More recently, Kraska (2004) argued that the systems approach to criminal justice facilitated the observation of criminal justice in macro-terms (i.e., looking at the big picture) and was a useful perspective for potential reforms/improvements of criminal justice because the practical goal

of systems theory was to make systems more effective by detecting problems and focusing on organization and management concerns. Kraska argued that systems theory was not resonated with criminal justice scholars because it was not “adopted in its entirety. Instead, bits and pieces were included and excluded where convenient” (p. 44). In particular, criminal justice was an open system that interacted with larger societal systems, but in practice criminal justice scholars proposed closed system arguments, focusing only on what happened within the criminal justice system itself or within particular criminal justice agencies.

The most common objection to applying GST to criminal justice, however, was the lack of clearly defined goals across system components (e.g., Skoler, 1977). Duffee (1990, p. 3), for example, asserted that “police, judicial, and penal agencies — even those operating in the same locality under the same law — often have such contradictory objectives, and such independent sets of constraints, that it becomes very hard to imagine that the primary determinates of criminal justice agency action are the actions and needs of other criminal justice agencies.” Other criminal justice scholars, however, took a different stance on this issue. For example, Maguire, Howard, and Newman (1998, p. 38) argued that criminal justice systems (and the subsystems within them) shared at least three common goals: effectiveness, fairness, and efficiency. Hagan (1989) took a position in between these two extremes by arguing that criminal justice was a “loosely coupled” system. All of this suggested that the concepts of general systems theory, such as input, processing, and output, could be used to describe criminal justice agencies and functioning, but that the complex and disorganized operational realities of criminal justice made it unclear whether GST added any insight or content to that description.

Applying GST to criminal justice

The following section argues that GST can move beyond terminology and description and can generate substantial insights into the structure and functioning of criminal justice as a system. In particular, it argues that, at a functional level, criminal justice agencies and organizations share a variety of similarities with each other that are all related to and derived from the flow of cases through the system. In addition, it argues that each part of the criminal justice system is best understood in the context of the whole system, particularly in the context of the pressures generated by the overall flow of case processing.

1. *Criminal justice consists in multiple layers of ever more encompassing systems, each of which can be described in terms of input, processing, and output. In this sense, criminal justice is similar to other complex organizational systems.*

For example, a single police officer can be described as a system that receives inputs (i.e., offenders) and processes

them to produce several possible outputs that range from doing nothing (“counsel and release”) to arrest with referral to the prosecutor.² This police officer is part of a larger system (e.g., precinct, police department) which itself is part of an even larger system (e.g., criminal justice in a particular locale), each of which also can be described in terms of input, processing, and output. Similar statements can be made about criminal justice agents and agencies in the court and correctional systems. These statements are consistent with Van Gigch (1978), but do not go beyond descriptive terminology. That is, in themselves these statements do not add content or insight to the understanding of criminal justice.

One of the central assertions of GST, however, is that all systems must maintain equality between inputs and outputs, and any movement away from equality generates corrections to move the system back towards it. This assertion applies to all the levels of the criminal justice system described above. For example, a police officer who arrests a person (input) normally will do the paperwork on that arrest (i.e., process it) and output it to the courts before going back to the streets to make more arrests. Under exceptional circumstances (e.g., during a civil disturbance), input may exceed output, but only for a brief time. In a similar way, each organizational unit within the criminal justice system (e.g., each police department, each criminal court, each prison) must equalize inputs and outputs. Finally, the entire criminal justice system, as well as entire system components (police, courts, corrections), must similarly maintain equality between inputs and outputs. The full implications of this point will become more clear as the ways in which criminal justice actually functions as a system is further discussed below.

2. *Criminal justice processes “cases,” each of which includes offenders, victims, and the public.*

In an obvious sense, criminal justice agencies process offenders: each subsystem takes offenders as input, does something to them or for them or with them, and sends them as output to the next subsystem unit or back to the external environment. Despite the controversies about conflicting goals, it seems that one common goal of the system is to change offenders into non-offenders. In systems theory, non-offenders could be described as the “completed products” of criminal justice processing, while recidivist offenders would be “defective products.”

Beyond that, and in less obvious ways, criminal justice also processes victims and the public. Victims are processed when police and prosecutors and judges pay attention to their complaints and their views so that they leave the system satisfied in some sense. Satisfied victims can be described as completed products of criminal justice processing, while dissatisfied victims would be defective products. Similarly, to some extent, criminal justice agents process the public separate from victims (Snipes & Maguire, 2003). Much as with victims, a satisfied public would be a completed product of criminal justice process-

ing, while a dissatisfied public would be a defective product.

It might be argued that criminal justice processes people rather than things: offenders, victims, and the public. Instead, it is suggested here that criminal justice processes cases, where each case includes a particular mix of offenders, victims, and the public. For each case, the goal of criminal justice processing is to change offenders into non-offenders while simultaneously satisfying both the victims and the public. This is a complex goal with several elements, more or less of which may be attained in any particular case. In addition, these elements are not always consistent with each other. In the past, for example, a tendency to focus on changing offenders into non-offenders might have resulted in dissatisfaction among victims and the public. More recently, a tendency to focus on satisfying victims and the public might impede efforts to change offenders into non-offenders. This mix of goals however it plays itself out, it seems best to conceive of criminal justice as processing cases rather than processing offenders, since the production of non-offenders is not the only goal of criminal justice processing.

3. *When processing terminates prior to completion, products tend to return to the system as “defective.” That is, products that previously were defined as “output” return to the system as additional “input.” This is inefficient and therefore undesirable.*

Criminal justice agencies “input” offenders and then attempt to “process” them in order to produce non-offenders as “output.” If those people subsequently commit more crime, they can be described in systems theory as defective products. These people will, in one way or another, tend to return to the system for additional processing until the processing is complete — i.e., until they actually are non-offenders.

Similar arguments can be made about victims and the public as products of criminal justice processing. If a victim or the public is dissatisfied with the way a case is handled, then criminal justice agents may have to continue dealing with it in one way or another. For example, criminal justice agents may have to defend their actions in some public forum. That is, a case that should have been closed instead now requires additional processing, thus increasing the workload of the agency. This is inefficient and therefore undesirable.

Systems theory would predict that, like other systems, criminal justice tends to be self-correcting in relation to these defective products. For example, criminal justice agents who consistently produce too many defective products, either in terms of recidivist offenders, dissatisfied victims, or a dissatisfied public, may eventually be identified by their agencies, which then will move to correct the situation. This self-corrective loop occurs in the context of the widespread view that all criminal justice workers experience extensive failure to achieve completed products. Nevertheless, criminal justice workers are still held to some

standards of achievement with respect to offenders, victims, and the public. Exactly what constitutes too many defective products can vary from time to time and place to place, but some standard of achievement inevitably exists.

4. *There is little agreement on how to achieve the goals of criminal justice processing (the production of non-offenders, satisfied victims, and a satisfied public).*

The essential characteristic of a system is that disparate parts work together toward common goals. Even when considering the most obvious group of people that the system processes — offenders — there may be multiple, overlapping, and contradictory ideas about how to achieve the “completed product” of non-offenders. Thus, even if this is the common goal of system processing, it appears that different parts of the system frequently do not work together to achieve it (Duffee, 1990). For example, a police officer may believe that deterrence changes offenders into non-offenders. This officer may ignore the wishes of victims and the public, believing instead that the production of non-offenders through deterrence will produce victim and public satisfaction in the long run. The prosecutor who handles this case may believe that no one can change offenders into non-offenders, but that retribution tends to produce a satisfied victim and public. The judge who sentences this offender may believe that rehabilitation is the only way to produce non-offenders, while the correctional institution that receives the offender may have abandoned rehabilitation years ago and be organized solely to incapacitate. Beyond failing to work together, these differing views may actually work against each other. A police officer may respond to public demands to “get tough” on crime and ignore the wishes of a victim who does not want the offender arrested. The prosecutor in the same case may ignore public pressure and respond to the victim’s wishes by dropping the charges. This extensive diversity of goals and means is the reason most scholars do not believe that criminal justice actually constitutes a “system” since its various parts often seem incapable of working together toward a common goal.

5. *This lack of agreement arises because criminal justice agents lack objective standards for assessing whether processing is “completed” or “defective,” so they tend to rely on “educated guesses.” This means that, at every stage, criminal justice agents have the option to decide that processing is complete. The “product” then leaves the system and is returned to the external environment as “output.”*

In most systems — e.g., assembly lines — products become output only at the end point of the system. In addition, there are objective measures for determining whether processing is defective, and predetermined sub-systems for correcting those defects. The absence of objective standards for processing in criminal justice, however, means that products can leave the system at any point, not merely at the end point.

For example, a police officer at a scene of domestic violence can decide that processing is complete at this point — i.e., the police efforts to counsel the victim and the

offender constitute the processing of the case, with the result that the offender is unlikely to re-offend, the victim is satisfied, and the public will not object. Alternately, the officer can decide that the product is still defective (the offender is likely to re-offend, the victim is dissatisfied, and/or the public would be outraged), and therefore requires further processing (i.e., arrest and referral to the courts). In general, the police officer does not have any objective criteria for making this decision and so makes an “educated guess.” Such guessing exists across the criminal justice system (Gottfredson & Gottfredson, 1980) and makes it different from other systems.

As a result of this guessing, considerable amounts of output from one stage of the system do not become input for any succeeding stage of the system. Instead, products leave the system and return to the external environment as output. To a considerable extent, that was what Hagan (1989) meant when he described criminal justice as a “loosely coupled” system: the output of one system component often did not become the input of any succeeding component.

6. *Declining capacity to process cases generates “backward pressure” across the system to reduce the flow of cases to the next system stage. Each stage therefore is pressured to output a certain portion of its cases to the external environment.*

Another unusual characteristic of criminal justice systems, as opposed to other systems, is that each system stage has less processing capacity than the stage before it. For example, police can make more arrests than the prosecutors can prosecute, prosecutors can bring more cases to trial than judges can hear, and judges can sentence more people to prison than the prisons can hold. This progressive narrowing of the system’s processing capacity tends to generate backward pressure across the system to discharge cases – i.e., not to send so many cases forward to the next stage for further processing. For example, prosecutors in various ways can exert “backward pressure” on the police either to not arrest as many people or at least to not forward as many arrests for prosecution. Prosecutors themselves can drop the charges (Cole, 1970), but for various reasons they may prefer not to receive so many cases in the first place and they can communicate those preferences to the police. Police would then have their own self-interest in restricting the number of arrests forwarded for prosecution – these cases are not being prosecuted anyway and it is easier not to make the arrests in the first place. Similarly, judges can exert backward pressure on prosecutors not to bring so many cases to trial as the court dockets fill and the waiting times get longer and longer. Judges themselves can receive backward pressure as probation caseloads skyrocket and as jail and prison space evaporates. Parole agents can exert backward pressure on prisons by restricting the release of inmates in order to limit the size of their own caseloads. All of this backward pressure is possible because there are no objective standards in criminal justice to determine when processing is completed.

7. *This backward pressure supplements the fact that it is quicker and easier to decide that processing is complete than to send the case to the next stage for additional processing.*

Declining processing capacity generates “caseload pressure” across the system, which motivates criminal justice agents to complete processing of cases as quickly and as easily as possible. In general, it is quicker and easier for a criminal justice agent to decide that the processing of a case is complete and that it should be output to the external environment than it is for the agent to send the case on to the next system stage for additional processing. Thus, it is easier for a police officer to *not* arrest an offender than it is to arrest the offender and refer the case for prosecution. It is easier for a prosecutor to drop the charges than it is to bring the case before a judge. It is easier for a judge to dismiss the case than it is to convict and sentence the offender to the correctional system. It is easier for probation and parole officers to terminate supervision than it is to revoke probation and send the offender to an institution. It is easier for prison officials to release a prisoner outright than to release the prisoner to parole. At all stages of the criminal justice system, criminal justice workers receive immediate benefits from making the “educated guess” that processing for this offender is complete and the offender can be returned to the external environment rather than being sent to the next system stage for additional processing.

This decision, of course, is more efficient for workers at the next stage of system processing because it reduces their input. This is the reason they exert backward pressure on workers at earlier points in the system. The main point here is that it is easier for workers who currently have the case: it is always easier to simply close the case than it is to send that case to the next system component for further processing.

8. *Countervailing “forward” pressure arises because sending cases to the next stage of the system limits the criminal justice agent’s exposure to blame for defective processing.*

For example, the benefits a police officer receives from releasing an offender without arrest is offset by the officer’s need to ensure, at least to some extent, that this offender does not re-offend in the future. If the police officer decides not to arrest an abusive husband and then the next week that husband kills his wife, the officer may be held accountable because the officer did not adequately process the product (“counsel and release” didn’t work) so that product was defective (i.e., the offender went on to offend again). Beyond that, even if the husband does not re-offend, the wife may complain and the police officer can end up in trouble. The point of not arresting the husband is that it is quicker and easier, but instead the case continues to take up the officer’s time and energy, which is what the officer wanted to avoid in the first place.

As on any assembly line, defective products in criminal justice normally are inefficient in that more work is required

to correct the defect than would have been required to process the product to completion in the first place. More importantly, the incomplete processing exposes the criminal justice worker to the risk of being defined as incompetent. Referral to the next system stage largely eliminates this problem. It does not matter whether additional processing decreases the chances the offender will re-offend or increases the chances that the victim will be satisfied. As long as the case has been referred to the next system stage, then the blame for whatever happens next will be placed on the worker who takes the case. For example, if the police officer arrests the abusive husband and refers the case for prosecution, and that husband later kills his wife, the officer will not be held accountable. The prosecutors who receive the case will be blamed for failing to prevent the homicide. The point is that, regardless of anything else it accomplishes, referring the case to the next stage of system processing normally accomplishes the goal of blame avoidance when the formal goals of system processing (e.g., stopping the husband from killing his wife) are not achieved. In contrast, moving the person out of the system is quicker and easier, but it also exposes the worker to the charge of incompetence if things go badly. Similar points can be made about judges, probation officers, prison officials, and parole agents.

9. *These conflicting pressures require that criminal justice agents be able to “close cases that will stay closed.” As a result of the feedback loop in which cases reopen, incompetent criminal justice workers have difficulty concealing their incompetence.*

The progressive narrowing of processing capacity means that all criminal justice workers must discharge a certain portion of their caseloads back to the external environment, but they expose themselves to the risk of being seen as incompetent if too many of those cases re-open because the offender re-offends and/or the victim or public is dissatisfied. On the other hand, the failure to close a sufficient number of cases also exposes the worker to charges of incompetence. Ultimately, this is an unavoidable “feedback loop” within the criminal justice system. Criminal justice agents who do not possess a certain minimal level of competence – i.e., those who cannot close a sufficient number of cases in such a way that those cases stay closed – eventually will be identified.

Theoretical implications

The previous section argued that criminal justice was a system and that General Systems Theory was useful as a framework for gaining insight into its functioning. Like other large complex organizations, the criminal justice system has multiple and overlapping levels, where each level can be described as a system that involves input, processing, and output. At each system level, criminal justice obeys the general rule that output must equal input.

The next section describes some larger theoretical implications from this general description of criminal justice as a system.

1. *The whole criminal justice system is greater than the sum of its parts, and therefore the parts of the criminal justice system are best understood in the context of the whole.*

Throughout the system, the progressive narrowing of processing capacity encourages workers at each stage to exert backward pressure on workers at earlier stages, but forward pressure is generated by each worker’s attempt to minimize exposure to blame for defective products which return to the system for additional processing. Thus, criminal justice workers experience similar pressures across the system, so that the system is best understood as a whole in itself. In addition, it is not possible to fully understand the pressures that workers in any part of the criminal justice system experience without understanding how other system parts affect that worker’s input from prior points in the system and backward pressure from later points. Finally, the system itself provides a natural feedback loop, as described above, which enforces a certain level of competence in criminal justice workers.

2. *The common goal of criminal justice agents and organizations is to close cases so that they stay closed.*

The absence of common goals is probably the main criticism of the view that criminal justice is a system, because the interaction of different parts toward a common goal is a principal aspect of all systems. The argument here, however, is that the common goal of criminal justice is best conceptualized as “closing cases so that they stay closed.” This goes to the argument, above, that criminal justice is best conceptualized as processing cases rather than people, where the case involves a mix of offenders, victims, and the public.

For any particular criminal justice worker or organization, an open case essentially is some situation (input) that the worker/organization is required to do something about (process) in order to resolve in one way or another (output). The occurrence of a crime does not in itself open a case. Rather, most cases are opened when someone calls the police and the police make a record of that call. Other cases may open because criminal justice workers personally observe something happening. In general, as the starting point of the system, police have more discretion in selecting which cases to open, while criminal justice workers at later system stages tend to receive cases that are already formally designated as open.

Once a case is open, then the goal of criminal justice processing is to “close the case so that it stays closed” — i.e., to terminate the case in such a way that it does not re-open in the future. From the point of view of any particular criminal justice worker, referring the case to the next system stage for additional processing always closes the case, since the case is “not my problem” any more. What makes it impossible to do this all of the time is the progressive

narrowing of processing capacity, combined with backward pressure from workers down the line. Thus, criminal justice workers must decide which cases can be closed so that they stay closed. The methods used to decide this vary greatly, but all are in service of the same goal.

For example, one virtue of plea-bargaining, from the point of view of a prosecutor, is that the defendant gives up the right to appeal and therefore cannot reopen the case at a later date. With a plea bargain, the case is closed and, with few exceptions, it stays closed. Even so, the case in a larger sense may not stay closed: the victim may go to the press and complain, the public may be outraged at the deal, and the offender may walk away and commit more offenses. When this happens, the case is going to re-open and cause the prosecutor more headaches. The goal of the prosecutor always is to close the case so that it stays closed in this larger sense. This usually can be accomplished by sending the offender to prison since, if the offender rapes or murders someone in the future, it's not the prosecutor's fault. The problem is, of course, that it is more work for the prosecutor to send the defendant to prison than give the defendant an attractive bargain, and everyone cannot be sent to prison because there are not enough beds. So the conflicting system pressures generate a continuing dilemma for the prosecutor.

3. *The requirement of competence.*

In Greek mythology, Odysseus in his wanderings had to sail the narrow waters between two monsters (Scylla and Charybdis), only a bowshot away from each other, each of which exerted powerful pulls on passing mariners. Drifting ever so slightly off course, either in one direction or the other, would lead to inevitable death. In some ways, systems theory suggests that criminal justice agents, in the routine operations of their work, must also sail the narrow waters between the pressures of two powerful forces.

For criminal justice agents, Scylla is the pressure to move products out of the system, generated by input that exceeds processing capacity, as well as by backward pressure from points further down the system that also receive input that exceeds their processing capacity. Charybdis is the pressure to send products to the next stage of system processing, generated by the demand for complete system processing, the tendency to attribute processing defects to worker incompetence, the zero tolerance for defects, and the opportunity to protect oneself from charges of incompetence by referring cases to the next system stage. Each agent, no matter where they are in the system, must sail skillfully between these two competing pressures, each of which exerts a powerful if deadly attraction. The "death" that waits for those who venture too close to either of these monsters is the charge of incompetence. The only solution in this situation is to have sufficient competence to discharge enough cases to relieve the backward pressure, but to not discharge cases that later blow up in your face. Without this level of competence, agents will find themselves drifting into one or the other trap. Thus, the only way to survive in a

criminal justice position is to have a certain minimal level of competence.

4. *The paradox of efficiency.*

In most systems, too high a rate of defectiveness casts doubt on the competence of system agents, but too low a rate of defectiveness suggests an under-utilization of processing capacity. Systems normally strive to achieve an optimal rate of defectiveness that balances quality and efficiency — zero defectiveness is not normally a desirable system goal.

In contrast to other systems, criminal justice officially is committed to having zero defectives — that is, to having no cases reopen because of incomplete processing. In systems theory, this leads to a "Type I – Type II" error situation in which very small increases in quality (i.e., very small reductions in defective processing) are associated with very large decreases in efficiency (i.e., enormous increases in unnecessary processing). This is the efficiency paradox: the attempt to improve quality beyond a certain point produces few increases in quality at ballooning costs to efficiency.

What is problematic is that criminal justice has an official policy of zero-defects, even though both systems theory and common sense suggest that this is unrealistic. Beyond a certain point, intolerance toward defectiveness (e.g., recidivism) becomes exponentially costly while providing smaller and smaller gains in quality (e.g., reductions in the recidivism rate). Thus, for example, if the parole board releases a parolee and that parolee commits a new crime, the parole board itself may receive considerable criticism for being incompetent. The parole board, instead of defending its own actions, typically will engage in public self-flagellation, accepting and even embellishing the charge of incompetence. The parole board then further restricts its release decisions, ballooning the prison population with offenders who do not pose serious risks. This actually can increase recidivism although the parole board achieves the goal of blame avoidance. Similarly, police officers who in the past would refrain from arresting particular types of offenders – e.g., juveniles who are minor first offenders – may begin arresting all of these offenders after being criticized for the failure to arrest one who goes on to commit a serious crime. Among criminal justice practitioners, this would be part of the CYA (cover-your-ass) mentality (Van Maanen, 1974).

Conclusion

Despite recent attempts (e.g., Kraska, 2004), the theoretical tradition in criminal justice is in its infancy and devoid of many working theories (Bernard & Engel, 2001). This weak theory tradition is due in part to the youth of the discipline, which originated in the 1950s, and in part to the abundance of descriptive, evaluative, and policy-driven research that tended to short cut the iterative process of theory construction. Of the criminal justice theories that do

exist, most focus on one component of the system (police, courts, corrections) and propose a theory limited to that component. Few theories look at criminal justice as a whole and attempt to explain the interdependence of its parts in some type of “system.” The foundations for a theory of the criminal justice as a whole are sketched in this article.

This article argues that general systems theory reveals important insights into the structure and functioning of criminal justice. In doing this, it avoids the problems with earlier efforts that propose “closed system” models that focus solely on what happens inside a criminal justice agency or component. Instead, it argues that these agencies must be seen in the light of the backward and forward pressures generated from the agency location in the overall system. Descriptions of “hydraulic” (McCoy, 1984) or “thermodynamic” (Walker, 2001) pressures in the system similarly suggest the inevitable relations of criminal justice agencies to adjacent agencies, but this article systematizes this description in a general systems theory.

This application of systems theory raised some interesting and unexpected insights. For example, it argued that backward and forward pressure created a situation that required a certain level of competence from criminal justice workers throughout the system. This would contradict a public perception that incompetent people easily could take refuge in criminal justice jobs. This assertion about competence could be tested with empirical research.

In addition, the application of system theory raised some disturbing issues. For example, the theoretical argument about the efficiency paradox and the costs of the criminal justice system’s zero-tolerance policy was a testable research question. Certainly, public pressures for zero tolerance might prevent any implementation of any alternate policies. Nevertheless, researchers could seek to determine the optimum tolerance level toward defective processing. For example, a zero-tolerance policy toward recidivism could be expected to increase recidivism, although it would certainly allow criminal justice agencies to avoid being blamed for this result. What actual policy would generate the lowest possible level of recidivism and other social costs?

Finally, if one is to embrace systems thinking as a potential theoretical backbone for the understanding of criminal justice, one must evade the possible pitfall of merely putting GST stickers on otherwise poor or confused ideas. This warning is included not as a provocative statement, but as a lesson from history. The 1960s and 1970s were a period of proliferation for systems’ theorists in many fields, from philosophy to engineering, but many of these applications were poorly conceived and ultimately had little utility (Mesjasz, 1988, p. 300). Peace studies, for example, embraced GST and systems thinking as a theoretical and methodological perspective (Dedring, 1976; Galtrung, 1985).³ Like criminal justice, this area of study belonged to the large family of various young scientific disciplines shaped in the twentieth century

(Mesjasz, 1988, p. 292). A systems approach was seen as a desirable methodological and theoretical support for dealing with the complex problems involved in preventing wars, particularly because of its interdisciplinary and holistic value. Mesjasz (1988) addressed an important question: Was systems thinking successful in explaining peace-ensuring and peace-threatening social phenomena, and under what conditions? According to Mesjasz (1988, p. 305), systems approaches in peace studies and other social and behavioral sciences generally started with a period of fascination from academic circles, followed by a period of criticism and disenchantment, and then continued in a period of balanced opinions and decreasing interest. The problem was basically that GST and other “systems approaches” (i.e., game theory, chaos theory, computer simulations) first made a technocratic good impression and created great expectations, but then often failed to meet these expectations over time (i.e., being a *super-theory* or a *super-method*). Mesjasz (1988, p. 313), however, indicated that these various systemic models helped to strengthen the scientific status of peace research. So, even if GST was relevant to understanding criminal justice, experiences from peace studies should encourage one not to overestimate its potential.

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Notes

1. Comparable arguments were made by “institutional” theorists, who asserted that the external environment affects all organizations (including criminal justice agencies), through a process of isomorphism (DiMaggio & Powell, 1983; Meyer & Rowan, 1977). Either through a process of “coercive,” “mimetic,” or “normative” isomorphism (DiMaggio & Powell, 1983) organizations adopted various features from other, similar organizations. Coercive isomorphism occurs when organizations adopt specific features due to pressures exerted from other organizations or general society. Mimetic isomorphism is the modeling or mimicking of other “successful” organizations in an attempt to reduce the ambiguity and uncertainty associated with specific organizational goals and tasks (DiMaggio & Powell, 1983, pp. 151–152). Finally, normative isomorphism occurs when larger standards developed by professional bodies are incorporated into the organizational structure of similar organizations (DiMaggio & Powell, 1983, p. 152).

2. Although cases can enter the system by means other than police input (e.g., citizens can file charges directly with a prosecutor), the modal way for cases to become part of the system is through the hands of police officers.

3. Classical figures of peace studies as Boulding and Rapoport were among the pioneers of GST (they were both, with Bertalanffy, founders of the Society for General Systems which started its activities in 1954).

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