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**RAPIDLY EVOLVING RESPONSE SYSTEMS IN CRISIS ENVIRONMENTS:
AN ANALYTICAL MODEL**

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RAPIDLY EVOLVING RESPONSE SYSTEMS IN CRISIS ENVIRONMENTS: AN ANALYTICAL MODEL

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The Policy Problem

In crisis environments, public managers are faced with rapidly evolving situations that require a continual process of assessment of risk, allocation of time and resources, evaluation of actions taken, and reassessment of the current situation. This process involves a rapid sequence of decisions made under conditions of urgent stress and limited time, resources and attention. Decision processes in crisis environments differ significantly from those used in routine agency operations. The dynamics of these processes are driven not only by the context of the crisis, but also by the limits of human information processing capacity and attention (Simon 1981; Cohen and Levinthal 1990).

This paper presents a preliminary model of the interaction between the context of a crisis and the human decision makers who function in it. This interaction is central to defining the parameters within which the collective decision process evolves. Other studies of decision making have focused on the reasoning processes of individuals (Kahneman, Slovic and Tversky 1982; Argyris 1982; 1993; Weick 1993). Crises, however, involve large groups of people whose actions are influenced by the actions and perceptions of others. Collective decision making, especially under stress, is not well understood. This problem presents a serious challenge to managing collective action in democratic societies.

Collective action has long been viewed as a fundamental means of initiating change in democratic societies, and it has taken many forms, both organized and unorganized. Conceived as an expression of “collective will” of the people, mass demonstrations have been adopted with increasing frequency as the strategy of choice by groups who wish to challenge existing policies, practices or governmental actions. Protected by First Amendment rights in the U.S. Constitution, public demonstrations are viewed as a legitimate means of expressing opposition to current authorities, public, private or nonprofit. Given the powerful attraction of instantaneous global news coverage, demonstrations are virtually guaranteed widespread attention for almost any cause, no matter how small its group of supporters or how bizarre their claim for public support. The challenge occurs when demonstrators, in their bid for public attention, overstep the bounds of legitimate action, or when authorities, fearful of escalating disorder, move to limit the range of the demonstrators’ freedom of expression. With mounting tensions, either the authorities or the demonstrators may cross the threshold of legitimate action. If the demonstrators overstep legal bounds, their actions may veer into chaos, resulting in civil disorder and violation of the rights of others. If the authorities overstep their bounds, their actions may lead to repressive order and loss of freedom for the demonstrators. In either case, both freedom of expression and civil order are violated.

The presence of the media alters in important ways the behavior of both demonstrators and authorities against whom the demonstrations are directed. The media are a central

factor in the dynamics of any mass demonstration, with news personnel becoming actors in the civic drama and their cameras, recorders and telecommunications networks serving as a primary technical means of disseminating information among participants. The news cycle creates a “feedback loop” for both demonstrators and authorities, as news reports from one day’s events inform the next day’s actions. This feedback loop links demonstrators and authorities in a cycle of interaction that can quickly veer out of control and into violence. The management of mass demonstrations illustrates the challenge of balancing civil rights against public order in a democratic society.

In this paper, I undertake four tasks. First, I examine the theoretical problem of collective decision making under stress, drawing upon the literature of complex adaptive systems (Peitgen, Jurgens and Saupe 1992; Kaufmann 1993; Roe 1998; Comfort 1999), percolation theory (Stauffer 1985; Stauffer and Aharony 1992), and organizational learning (Argyris 1993; Comfort 1997). Second, I use this model to review two recent cases of collective decision making, the mass demonstrations held at the World Trade Organization’s Ministerial Conference in Seattle, Washington, November 30-December 3, 1999, and those organized at the Democratic National Convention in Los Angeles, August 14-17, 2000. Third, I compare the strategies used by both demonstrators and authorities to balance freedom with order, and seek to identify the point of transition into chaos or order in the two cases. Finally, I offer a preliminary model of decision making in dynamic environments that addresses the problem of maintaining the balance between freedom and order illustrated in mass demonstrations. This model relies upon a sociotechnical design that integrates appropriate uses of information technology into public management systems and civil society.

Theoretical Background

Three sets of concepts offer insight into the problem of collective decision making under stress. First, the problem can be set within the broad theoretical framework of complex adaptive systems (Prigogine and Stengers 1984; Peitgen, Jurgens and Saupe 1992; Kaufmann 1993; Gell-Mann 1994). In this framework, all of the actors in a mass demonstration – protesters, police, civic authorities, visiting dignitaries, business owners, citizens – are participants in a system that operates within a given set of parameters at a certain degree of flexibility. Each set of actors influences other actors, some more than others. The iteration of exchanges among the actors influences the evolving performance of the whole system (Kaufmann 1993). That is, the system as a whole can absorb a certain amount of variation in performance by any one group, but repeated iterations of aberrant performance will alter the performance of the entire system. For example, demonstrators protesting against police brutality and police seeking to control demonstrators are interacting components of the same system. The interaction between the two groups creates a subsystem that may in turn influence the actions of other groups, shifting the performance of the whole system into a new phase.

In classic system theory, this situation would be represented as a simple feedback loop, with an input unit feeding information into a processing unit that produces an output, which is then fed back as new input into the system in a continuing process. A control unit may regulate the processing function in volume, time or content to maintain reliable

performance of the system within stated parameters.

[Insert Figure 1 about here]

Peitgen, Jurgens and Saupe 1992:17

In mass demonstrations, the situation being modeled is the interaction between the demonstrators and the police/authorities. This interaction creates a feed forward loop over time in which actions taken by one group constitute input to the processing unit, the public arena. This input is constrained by a set of controls, such as media exposure, that produces a specific outcome affecting the performance of both groups, demonstrators and police/authorities. The outcome is then used by both groups as the informed basis, or input, for their next day's action. As the information used for decision by each group changes, the ensuing actions taken by other groups in relation to them also change. The performance of one group influences the performance of the others in a spiraling manner that cumulatively may shift the performance of the entire system to a new phase (Prigogine and Stengers 1984). The system then enters a transition toward either increasing chaos or increasing order. The critical point is the flexibility of the system in its exercise of controls on the performance of both demonstrators and police, and the capacity of each participating group to absorb new information and adjust its actions accordingly.

The rate of change in performance by demonstrators and police is modulated by the set of controls through which each group perceives the current state of threat posed by the other group and uses that information as the basis for its next action. The set of controls becomes the critical point at which new information can be introduced that will alter the perception of actions taken by either group in reference to the other group, thereby influencing the outcome of the evolving pattern of performance between the two groups.

Second, the concept of a feed forward process to explain the dynamics of change may be specified more fully by concepts drawn from percolation theory (Stauffer 1985; Stauffer and Aharony 1992). Percolation theory suggests that information may flow through a large number of individuals located adjacent to one another, influencing the nearest neighbors of each person independently with no effect upon collective action. But if the flow of information reaches a certain saturation point in the group, and the dominant number of individuals now share the same perception, the collection of individuals suddenly transforms into a crowd acting in unison to carry out their shared objective. This is the point of transition where a crowd may either turn violent, or withdraw from violence into peaceful opposition.

[Insert Figure 2 about here: Stauffer and Aharony 1992]

In Stauffer's terms, the individuals in the group are perceived as being either receptive or non-receptive to new information. Each individual acts independently, processing information about perceived actions either positively or negatively. Each individual also influences, and is influenced by, by his/her nearest neighbors. As information spreads through the crowd, the individuals' perceptions shift until a dominant perception shapes the actions of the crowd. If positive, the demonstration remains peaceful. If negative, the crowd turns violent. In each case, the members are no longer acting as individuals, but accept the dominant perception of the crowd. Their actions, accordingly, explain the sudden transition to mob violence or collective

withdrawal from violence that is observed repeatedly in mass demonstrations (*Seattle Times*, 11/30/99; *Los Angeles Times*, 8/14/00; *New York Times*, 10/16/00).

Finally, concepts drawn from theorists of organizational learning (Argyris 1982, 1993; Schon 1983; Mohr 1986; Bryson 1998; Rochlin, LaPorte and Roberts 1987) link practices of professional management to strategies of coping with crisis environments. The role of memory, both individual and organizational, in drawing inferences from previous events to inform actions to reduce risk or increase success in future events shapes in important ways the strategies used, and outcomes achieved, in both staging and managing mass demonstrations. To the extent that the demonstrations are successful for both demonstrators and police/authorities, they are likely to have involved communication between the two groups and negotiations over the boundaries of legitimate action. To the extent that either group pursues actions outside the bounds of legitimacy, they are likely to lose the support of the wider citizenry in a democratic society and therefore the opportunity to pursue alternative policies and practices. Organizational memory, however, is largely a product of the review and record keeping practices used by the leaders and members of the organization. Critical events compete with the mundane activities of daily operations for limited attention and resources. Unless there is a conscious effort to review and reflect on actions taken in critical events, the immediate lessons learned from experience in staging and managing mass demonstrations may be lost in future encounters (Schon 1983) for both demonstrators and police/authorities. In complex crisis environments, the intense flow of information among participants and the dynamic pattern of exchanges among many actors require a sociotechnical system that maintains an accurate record for later review, reflection and learning (Comfort 1999).

Mass Demonstrations as Rapidly Evolving Systems

Two recent cases of mass demonstrations provide timely illustration of the dynamics of collective decision making in crisis environments. Demonstrations organized against the World Trade Organization's Ministerial Meeting in Seattle, Washington, November 30-December 3, 1999 offer evidence of destructive interaction between demonstrators and police/authorities. Demonstrations organized for the Democratic National Convention in mid-August, 2000, were largely constrained within legal bounds. The differences in outcome for the two sets of events show differences in dynamic processes of interactive decision making by both demonstrators and police/authorities. Brief accounts of the two sets of events highlighting the collective decision process documented in each case are reported below. The two accounts focus on the interaction between demonstrators and police/authorities and report actions on six general conditions: 1) awareness of potential for civic disorder; 2) preparedness for managing mass demonstrations; 3) mass demonstrations in practice; 4) perception of police actions; 5) use of information technology; and 6) city's self assessment of events. A preliminary content analysis of news reports from the *Seattle Times*, November 28 - December 4, 1999 and the *Los Angeles Times*, August 12 - 18, 2000, document the accounts.

World Trade Organization Ministerial Conference, Seattle, WA, November 29-December 3, 1999.
The World Trade Organization (WTO) opened its Ministerial meeting in Seattle on Monday, November 29, 1999 with some 6,000 officials arriving from 135 countries to debate the strategies, benefits and costs of world trade and its consequences for different groups in the

global community. Accompanying these officials were tens of thousands of journalists, observers, demonstrators and guests. The context for the meeting set a clear tension between those who welcomed international trade and favored the policies and work of the WTO, and those who were publicly opposed to the policies and practices of the WTO and were committed to disrupting the meeting.

Awareness of Potential Risk

Billed as a major global event, the World Trade Organization's meeting attracted attention from a widely varying group of interests. Local officials and civic leaders had lobbied hard to bring the conference to Seattle, anticipating global visibility and expected benefits in trade and tourism for their city. They saw the event as gaining recognition for Seattle as a leader in the global community, a city poised on the edge of the Pacific Rim ready to integrate many of the new technologies and trade alliances that were driving the New Economy. Local civic and business leaders, however, had not anticipated the extent to which other groups in the global community perceived the WTO in negative terms. These groups, instead, had identified the site of the 1999 WTO conference as a venue for expressing their opposition to the organization that had become a symbol for the evanescent concept of "globalization."

The characteristics of world trade, technological advances and global commercial partnerships touted by Seattle civic and business leaders as evidence of progressive economic development and positive benefits achieved through the WTO were interpreted differently by the leaders of at least 25 nongovernmental organizations and their members.¹ In contrast, these groups perceived the actions of the WTO as worsening the conditions of a "humane global community." Globalization, to them, meant actions that generated adverse labor conditions, caused irreparable damage to the environment and exploited disadvantaged populations in impoverished nations. They saw the meeting in Seattle as a stellar opportunity to attract global attention for their opposition to the WTO and its policies. They began planning a major set of demonstrations to shut down, if possible, the negotiations and emerging policies of the WTO, thereby halting the advance of what they perceived as the harmful social, economic and environmental consequences of global trade.

Preparedness for Civic Disorder

Anticipating a positive economic and public relations benefit by bringing more than 6,000 international delegates to Seattle, as well as tens of thousands of journalists, observers and their guests, civic and business leaders made preparations to show their city at its best. They budgeted \$6 million for planning, organization and additional public services for the delegates and their guests, but largely ignored indications that organizations opposed to the activities of the WTO were also using global linkages to plan civic protests to disrupt the meeting. While the City of Seattle has an emergency plan and a professionally trained police force, civic authorities did not anticipate the need to use them for functions other than security for visiting dignitaries, routine traffic control or directing lost visitors.

In contrast, leaders of protest organizations were using the technology of the New Economy to contact one another in nations around the world. Scanning Internet Web pages for information about Seattle and its organizations, bringing up maps of the downtown district and the convention hall, identifying routes for marches and possible obstructions for delegates' entry to

the convention hall, seasoned protest leaders gathered information to develop strategies intended to shut down the WTO meeting. They reasoned that if the delegates could not reach the hall, they could not engage in effective consultation. No agreements would be reached, and the impact of the organization's policies on world trade would be diminished. Ironically, the demonstrations were planned with a degree of global sophistication and organization that reflected the advanced skills, techniques and networks used in the world trade practices that the groups were organizing to protest.

Mass Demonstrations

Although the demonstrations were planned ostensibly as legitimate expressions of opposition to WTO policies and practices, a core group of demonstrators focused their efforts on closing down the WTO meeting. Consequently, their activities were aimed at maximum disruption of the meeting and securing maximum global media coverage for their efforts. Their intent was not merely to express their opposition to the WTO, but literally to discredit the organization's policies and practices before a global audience. The intensity of this effort by the demonstrators to disrupt the meeting apparently caught the Seattle authorities by surprise. Understaffed and unprepared for the determined efforts to obstruct the meeting, the Seattle police reacted with the use of tear gas, pepper spray and batons to break up the demonstrations and to bring the demonstrators under control. These actions were immediately perceived as harsh by the demonstrators, who used the full range of nonviolent tactics to disobey police orders. As the police then escalated their efforts to control the situation by arresting the demonstrators, others in the group turned to violence, breaking windows, trashing police cars, and spray painting graffiti on buildings. Seattle authorities requested assistance from King County agencies and the Washington State National Guard. Police arrested over 600 demonstrators, and local businesses reported \$12 million in damages and tens of millions of dollars in lost sales in the important pre-holiday shopping season. The demonstrations continued for three days, garnering world-wide media coverage but negative publicity for both the WTO and Seattle.

Inside the convention hall, meetings of WTO delegates did take place during the week. Yet, the differences between the member nations on issues ranging from labor standards for workers to trade barriers for agricultural products to duties on electronic commerce finally proved too difficult to bridge. Meeting until 10:00 p.m. on Friday evening, December 3, the delegates were unable to reach agreement and closed the conference without announcing new policies.

The demonstrators immediately claimed victory and asserted their responsibility in shutting down the conference. While it is not clear that their actions were solely responsible for the conference's closing without reaching new agreements, it is clear that the demonstrators achieved maximum media coverage for their efforts. It is also clear that the City of Seattle paid a high price for this global event that met virtually none of its initial expectations. The larger question remains regarding what lessons can be drawn from this event for managing future mass demonstrations.

Police Actions

The interaction between the demonstrators and police was characterized by a fundamental difference in assumptions. Two groups emerged among the demonstrators. One group focused

on the legitimate expression of opposition to the WTO and its policies. A second smaller, but more determined, group focused on disrupting the WTO meeting. The Seattle police were initially prepared to deal with the first group of nonviolent demonstrators. As the actions of the second group began to dominate the attention of the media and disrupt all activities downtown, the police, outnumbered by demonstrators, turned to more restrictive methods of control.

While the Seattle police regained control of the streets by using tear gas, pepper spray, and batons, they did so at high cost to their own perceived legitimacy as impartial protectors of civic order. Instances of excessive use of force by police against demonstrators were caught on videotape and shown around the world. Reports of mass arrests of demonstrators and detention under exceptionally high bail charges spread as demonstrators called home and journalists interviewed both detainees and their parents. Charges of slow response and inadequate preparation for an event that attracted such a highly politicized audience were levied against both the Mayor of Seattle, Paul Schell, and his Chief of Police, Norm Stamper. In the critical reviews following the event, Chief Stamper resigned, leaving Mayor Schell to bear the brunt of the criticism and the burden of reassessing the City's policies and preparation for managing large public events.

Uses of Information Technology in Mass Demonstrations

As stated earlier, experienced leaders of non-governmental groups used telecommunications, e-mail, the Internet and fax to plan and organize their demonstrations. They also used cell phones on scene to communicate among different locations and to coordinate their actions under rapidly changing conditions. Only one reference reported use of information technology by the Seattle Police Department in responding to demonstrations that veered out of control. While there was little reference to uses of information technology in news reports of the demonstrations, this may have been an omission in the reporting rather than an assessment of its use by both demonstrators and police.

More important was the role of the media, with daily news reports, extensive television coverage, and dedicated efforts by professional journalists to probe every angle of this complex event. While it was clear that the demonstrators were seeking the high profile publicity of appearing on the major news channels, the challenge to a major international organization such as the WTO was in fact a substantive event that deserved coverage. The media's use of technology was sophisticated, with videotaped footage of demonstrators, police, delegates and broken store windows beamed around the world via satellite. The media served as the major "feed forward" channel for reporting outcomes of actions taken by both police and demonstrators, as well as reporting events to the world community.

City's Self Assessment

In the weeks after the WTO Conference ended and the international visitors, journalists and demonstrators had left town, civic and business leaders and citizens tallied the costs of damages and expenses incurred, lost business and tax revenues as well as the tarnished image of the city. Inquiries were held to discover how the events could have gotten so far out of control, and what might be done to prevent such situations from recurring in Seattle in the future. But recognition of the city as a complex adaptive system, capable of absorbing change and learning from experience, even negative events, was not apparent. Blame was freely cast in multiple directions, law suits were filed, but acceptance of the need and responsibility for change was minimal.

Democratic National Convention, Los Angeles, California, August 12 - 18, 2000.

Eight months after the WTO demonstrations in Seattle, the Democratic National Convention was scheduled to meet in Los Angeles to nominate its candidate for President on August 14 - 17, 2000. A large political gathering, the convention was expected to attract more than 30,000 delegates, party workers and news media members. Mass demonstrations were anticipated as certain components of this event. The following brief account of managing these demonstrations examines the same six points as presented in the account for the Seattle WTO demonstrations: 1) awareness of potential risk; 2) preparedness for civic disorder; 3) mass demonstrations; 4) police actions; 5) uses of information technology; and 6) city's self assessment of performance.

Awareness of Potential Risk

Los Angeles has an experienced Emergency Operations Bureau that has participated in response to natural disasters – earthquakes, fires and floods – and to civil riots after the Rodney King verdict was announced. The Los Angeles Police Department has had its share of failures, including nasty scandals regarding corruption and brutality. Bringing the Democratic National Convention to town was a high profile event, and the Emergency Operations Bureau was determined to manage this event professionally without incident. A larger city than Seattle, Los Angeles has a different organizational structure for managing emergencies. The Emergency Operations Bureau (EOB) coordinates emergency response involving all first responder departments, Police, Fire, Public Works and Emergency Medical Services. The director of the EOB reports directly to Mayor Richard Riordan, a Republican, who was well aware of the political ramifications of managing the national convention of the Democratic Party for the City of Los Angeles

Preparedness for Civil Disorder

Mindful of the criticism of the Seattle Police Department as inadequately prepared for the WTO demonstrations, the Los Angeles Emergency Operations Bureau (EOB) anticipated mass demonstrations as a major component of activities surrounding the Democratic convention. The Director of Emergency Operations, Ellis Stanley, took 80 emergency response personnel to the Emergency Management Institute in Emmitsburg, MD for training in managing civil disorder. Returning to Los Angeles, the EOB organized training sessions for police, fire and emergency medical services personnel in managing large groups engaged in legitimate expression of opposition to various political causes.² After practicing for months how to manage demonstrators engaged in a range of civil disobedience behaviors – from resisting arrest to outrageous taunts to risky, high profile stunts – the Los Angeles Police Department (LAPD) and the Emergency Operations Bureau were prepared to cope with mass demonstrations. Mindful of the cost of negative publicity, the Los Angeles City Council unanimously passed a resolution that city personnel respect the civil rights of demonstrators at the convention (*Los Angeles Times*, 8/12/2000:p.1).

The leaders of protest groups, equally, had learned from the Seattle event. Many regarded the WTO demonstrations as the high point of their efforts at protest, and were energized to carry their message and their tactics to other political venues. The Democratic National Convention was exactly such a high profile public arena. Students who had met at the Seattle demonstrations

now formed their own organization, Student Alliance to Reform Corporations (STARC) and planned their demonstration over months via conference calls and e-mail. Other organizations sought the publicity and national stage offered by the convention and its attendant journalists with roving cameras.

Mass Demonstrations

The conduct of the demonstrations in Los Angeles differed significantly from that in Seattle. The demonstrations were largely negotiated between the organizations seeking to protest, and the police, who were under watchful eye to respect the legitimate rights of citizens to express their opinions. Organizations seeking to demonstrate were required to obtain permits from the Los Angeles Police Department (LAPD). In filing their applications for permits, the organizations needed to state their purpose, estimated number of participants and preferred route for a march or location for demonstration. Granting permits allowed the LAPD to schedule the demonstrations by assigning dates, times and locations for the participating groups, modulating the interaction among the groups through careful scheduling and allowing the informed allocation of personnel to monitor the demonstration. The organizations largely followed their assigned schedules, and the demonstrations proceeded with relatively minor incidence of disruption.

In an extraordinary instance of collaboration between police and demonstrators, demonstrators asked police at the Ramparts station what they needed to do to be arrested. They wanted to lie down on the street, but the police advised them that action was not illegal. If they sat on the curb, however, they would be arrested for “unlawful assembly.” The crowd of demonstrators promptly sat down on the curb. The police asked them, respectfully, to move. The demonstrators did not, and thirty-seven were arrested, achieving their objective with police cooperation (*Los Angeles Times*, 8/17/2000:p.1). Clashes did occur between police and demonstrators; flash points erupted where arrests were made and tear gas was fired. Police and demonstrators grouped and regrouped. Yet, demonstrators and police were both mindful of the limits of the law, and both groups largely stayed within it.

Police Actions

Experienced leadership, training and technology were important factors in shaping the performance of the LAPD in monitoring the demonstrations and responding to potential incidents that, with little provocation on either side, could have escalated into major confrontations. The news reports show a pattern of careful monitoring of the demonstrations by the police, strategic placement of officers at locations likely to erupt into provocation, intensive intelligence gathering by plainclothes officers moving among the crowds on the movements and plans of the demonstrators, and rapid communication of potential trouble spots via officers using cell phones that allowed the agency to adapt and adjust its actions accordingly. Further, a pattern of multi-way communications among officers, police leadership, civic leadership and leaders of protest organizations marked a new approach to managing the demonstrations, indicating that each group was an important actor in a shared system of responsible action seeking an appropriate balance between free speech and civil order. As the level of communication and timely information increased between the two groups, an unmistakable degree of trust emerged between the demonstrators and police that resulted in multiple instances of collaboration and mutual respect.

Uses of Information Technology in Mass Demonstrations

Carefully designed uses of information technology provide an increased capacity to modern police forces in their task of monitoring environments of potential risk in a rapidly changing environment. Staples Center, the new, modern headquarters of the LAPD had full access to the latest technology and used it to provide rapid updates to its force as events unfolded in the streets during the Democratic National Convention. Electronic maps of the city, cameras on the streets, cell phones and radios connected the officers in the field with leadership at headquarters who were guiding the operations. The technology enabled the police force largely to achieve the elusive goal of modulating their use of force to the actual potential for threat in a timely manner, interrupting potentially illegal acts before they turned violent. With a basic strategy of anticipating potential disorder with a courteous, but watchful presence aided by timely information, the police largely avoided the extreme use of force or detention.

City's Self Assessment

For civic leaders, business leaders, the Emergency Operations Bureau and the LAPD, the closing of the convention and the exit of the delegates from their city brought a huge sigh of relief. Cautiously, they reviewed the record of events and, while there were instances when actions turned disorderly, such after the Tuesday night concert of the rock group, Rage Against the Machine, these incidents were quickly brought under control with a minimal use of force and a minimum number of arrests.

Their professional assessment concluded that civil order had largely been maintained; police had, on the whole, respected the civil rights of the demonstrators who were able to express their beliefs freely; businesses and residents in the city had not been inordinately inconvenienced. While there were surely lessons to be learned from the experience, they concluded that, after highly publicized failure in the 1992 civil riots, Los Angeles had found a working balance between citizens' rights and civil order.

A Comparison of Strategies in Dynamic Environments

To what extent were different strategies used by Seattle and Los Angeles authorities in managing the mass demonstrations in their respective cities? A preliminary content analysis of news articles reported in the *Seattle Times* and the *Los Angeles Times*,³ the major newspapers for the two cities, indicates not only different strategies used in the two cases, but also differences in reported outcomes from the strategies. The content analysis reviewed all articles published in the respective newspapers for one week, beginning two days before the event and concluding one day following the event. The articles were selected using a keyword search, "WTO and protests" for the *Seattle Times* and "Democratic National Convention and demonstrations/protests" for the *Los Angeles Times*. These searches produced 97 articles from the *Seattle Times* published during the week, November 28-December 4, 1999, and 86 articles from the *Los Angeles Times* published during the week, August 12-18, 2000. The two sets of articles were searched a second time, using keywords as indicators for five of the six categories of analysis: 1) awareness/risk/organizers/leadership; 2) preparedness/training; 3) demonstrations/riots/violence/nonviolence; 4) police(authorities) action/brutal/moderate; 5) information technology/Internet/e-mail/GIS/cell phones. The second level search produced 36 out of 97 articles from the *Seattle Times*, and 36 out of 86 articles from the *Los Angeles Times*. The

selected sets of articles, 36 for each newspaper, were then analyzed qualitatively for reference to the stated categories of analysis. The sixth category, city's self assessment, was a qualitative assessment based upon references to self assessment/after action review/inquiry for each city. The findings from this content analysis are presented in Tables 1 - 5 below.

Table 1						
<i>Awareness of Risk</i>						
<i>Seattle WTO Demonstrations</i>			<i>Los Angeles Democratic National Convention</i>			
<u>Date</u>	<u>Authorities</u>	<u>Demonstrators</u>	<u>Date</u>	<u>Authorities</u>	<u>Demonstrators</u>	
11/28/99	2	2	08/12/00	0	0	
11/29/99	0	0	08/13/00	1	3	
11/30/99	0	0	08/14/00	3	2	
12/01/99	0	0	08/15/00	2	0	
12/02/99	0	0	08/16/00	1	1	
12/03/99	0	1	08/17/00	0	1	
12/04/99	0	0	08/18/00	0	0	
Total	2	3	Total	7	7	
Table 2						
<i>Preparedness for Civil Disorder</i>						
<i>Seattle WTO Demonstrations</i>			<i>Los Angeles Democratic National Convention</i>			
<u>Date</u>	<u>Authorities</u>	<u>Demonstrators</u>	<u>Date</u>	<u>Authorities</u>	<u>Demonstrators</u>	
11/28/99	0	0	08/12/00	0	0	
11/29/99	2	0	08/13/00	1	3	
11/30/99	1	0	08/14/00	9	0	
12/01/99	1	3	08/15/00	1	0	
12/02/99	1	0	08/16/00	11	2	
12/03/99	0	1	08/17/00	2	2	
12/04/99	0	1	08/18/00	1	0	
Total	5	5	Total	25	7	
Table 3						
<i>Mass Demonstrations</i>						
<i>Seattle WTO Demonstrations</i>			<i>Los Angeles Democratic National Convention</i>			
<u>Date</u>	<u>Violence</u>	<u>Nonviolence</u>	<u>Date</u>	<u>Violence</u>	<u>Nonviolence</u>	
11/28/99	0	7	08/12/00	0	1	
11/29/99	2	4	08/13/00	0	3	
11/30/99	3	5	08/14/00	0	13	
12/01/99	9	7	08/15/00	1	6	
12/02/99	2	1	08/16/00	0	9	
12/03/99	2	3	08/17/00	1	9	

12/04/99	1	4	08/18/00	0	1		
Total	19	31	Total	2	42		
		Table 4					
		Police Actions					
Seattle WTO Demonstrations			Los Angeles Democratic National Convention				
<u>Date</u>	<u>Brutal/hars h</u>	<u>Moderate</u>	<u>Date</u>	<u>Brutal/hars h</u>	<u>Moderate</u>		
11/28/99	0	0	08/12/00	3	5		
11/29/99	0	3	08/13/00	0	2		
11/30/99	3	2	08/14/00	0	4		
12/01/99	7	3	08/15/00	2	3		
12/02/99	6	2	08/16/00	6	3		
12/03/99	3	3	08/17/00	2	1		
12/04/99	0	1	08/18/00	2	1		
Total	19	14	Total	15	19		
		Table 5					
		Uses of Information Technology in Mass Demonstrations					
Seattle WTO Demonstrations			Los Angeles Democratic National Convention				
<u>Date</u>	<u>Authorities</u>	<u>Demonstrators</u>	<u>Date</u>	<u>Authorities</u>	<u>Demonstrators</u>		
11/28/99	0	0	08/12/00	1	0		
11/29/99	0	0	08/13/00	3	1		
11/30/99	0	0	08/14/00	0	0		
12/01/99	0	0	08/15/00	0	0		
12/02/99	0	0	08/16/00	0	1		
12/03/99	0	0	08/17/00	0	0		
12/04/99	1	0	08/18/00	0	1		
Total	1	0	Total	4	3		

In this preliminary phase of the analysis, the findings are reported only by frequency counts. A more detailed analysis is underway, using nonlinear logistic regression to estimate the rate of change from day to day, based upon daily reports of events over a three week period for each case. Nonetheless, the frequency distributions of news reports on key issues during the week of each event show some very interesting differences which likely reflect the different strategies followed by authorities and demonstrators in each city. These reports also show an evolving pattern in each event that leads to different outcomes.

Table 1 reports the findings on awareness of risk by both authorities and demonstrators for the two events. While the number of reports is small in each case, 5 in Seattle and 14 in Los Angeles, comparatively there are nearly triple the number of reports on awareness of risk of civil disorder prior to the Democratic National Convention than for the Seattle WTO meeting. The

number of reports of awareness of risk by the authorities, 2 in Seattle vs. 7 in Los Angeles, indicates a stronger awareness of risk by authorities in Los Angeles, perhaps based on their observations of the Seattle experience.

Table 2 presents the comparative number of reports of preparedness and training for potential civil disorder by both demonstrators and police/authorities for the two events. Even with frequency counts, the difference is striking. For the Seattle WTO meetings, there were 5 reports of preparedness and training efforts by police/authorities in contrast to 25 reports for the Los Angeles Democratic National Convention, 5 times the number. These reports included references to training exercises for emergency personnel and preparedness measures taken by the Los Angeles authorities. Among demonstrators, the number of reports of preparedness differed only slightly, 5 for Seattle and 7 for Los Angeles. These findings indicate that the authorities in Los Angeles were not only more aware of the risk of potential disorder in managing the events surrounding the convention, but they acted upon that awareness to develop a preventive strategy.

Table 3 shows the striking difference between the two sets of events in terms of reports of violence versus nonviolence observed during the demonstrations. In Seattle, 38%, or 19 out of 50 reports on the demonstrations referred to violent behavior, in contrast to 31 reports, or 62%, that referred to nonviolent behavior. In Los Angeles, the pattern differed sharply. Only 2 reports out of 43, or 4.7% referred to violent behavior, while 41, or 95.3%, referred to nonviolent behavior. The greater degree of awareness and preparedness by the authorities in Los Angeles likely resulted in a marked reduction in the threshold of tension between demonstrators and police that leads to violence.

Table 4 presents findings on the reports of police actions in reference to their interactions with demonstrators and maintaining civil order. The number of articles reporting police actions were roughly the same for each event, 33 for the Seattle WTO meeting and 34 for the Democratic National Convention. Over half of the reports for Seattle, 19 out of 33, or 57.6%, referred to brutal or harsh actions taken by the police in reference to the demonstrators, while 14, or 42.4% referred to moderate actions. In Los Angeles, the balance tipped slightly in the other direction, with 15 out of 34, or 44.1%, of the reports referring to brutal or harsh actions taken by police, with 19, or 55.9% of the actions referring to moderate behavior. The timing of these reports is interesting, as 3 of the 34 reports of harsh action by police in Los Angeles were prior to the event, and the others were distributed throughout the week, while in Seattle, there were no reports of brutal action by the police prior to the opening of the event, and they peaked at 7, or 36.8% out of the total of 19 such reports on the day after the most disruptive demonstration on Tuesday, November 30, 1999.

Table 5 presents an interesting indication of differences in strategies used by authorities in the two cities in managing these major events. Although the numbers are small, there was only 1 report, late in the week, of use of information technology by the Seattle authorities, in contrast to 4 reports before the Democratic National Convention opened regarding the use of information technology by the Los Angeles authorities. During the week of the actual events, there were no reports of use of information technology by the demonstrators in Seattle, although reports prior to the convention indicated substantial

use of the Internet, e-mail, and GIS by the demonstrators in planning their protests. Three reports included reference to the use of information technology by demonstrators during the week of protests in Los Angeles. These reports indicate that the Los Angeles authorities were changing their basic strategy of coping with mass demonstrations to one of anticipation, monitoring for timely information and preventive mobilization for potential flashpoints or disruption of civil order. The Seattle authorities, less aware of the potential risk in managing protest demonstrations and apparently without adequate access to timely information as the events were evolving on Tuesday, November 30, were hindered in their ability to allocate limited resources strategically and appeared to react with force when violations occurred as the only means left to regain control.

In summary, findings from this preliminary content analysis indicate that the Los Angeles authorities had adopted a feed forward model of decision making for managing the potential risk of mass demonstrations, while the Seattle police were following a more traditional model of maintaining civil order. A decision model based upon evolving and updated information allowed the Los Angeles police to use their resources more strategically and to intercept potential threats before the situation got out of control. The Seattle police instead were caught off guard and their interaction with the demonstrators resulted in detention of a large number of demonstrators, at least \$12 million in property damage and more in lost revenues, and unwanted negative publicity.

The feed forward model decision model led, interestingly, to the evolution of basic respect between police and demonstrators in Los Angeles, while the more traditional approach to managing mass demonstrations led, regrettably, to loss of respect between the two groups in Seattle. Yet, the issue of mutual respect between demonstrators and police revealed a major difference between the two sets of events. In Seattle, a small but determined group of demonstrators were committed to disrupting the WTO meetings and blocking the work of the WTO, by any means, legal or illegal. The police were equally committed to maintaining civil order. In Los Angeles, the demonstrators were largely seeking to exercise their right of free speech, which in turn, was recognized as legitimate and respected by the police. In this environment, a consensus emerged between police and demonstrators that any activities carried out within the limits of the law would not be curtailed. In Seattle, such a consensus was much more difficult to achieve.

Conclusions

A feed forward model of decision making represents a small, but significant shift from the traditional feedback model that fits the dynamic environment of crises more appropriately. In its reliance on current, incoming information as the basis for determining the next set of actions, the feed forward model integrates new information into its already existing operational knowledge base. Access to timely, accurate information enables multiple actors engaged in response to a dynamic event to function in relation to one another as a more efficient system. The flow of information throughout the system enables a continuing process of monitoring performance, identifying potential weaknesses, reallocating existing resources to meet identified needs, and adjusting the legitimate exercise of control appropriately as demands escalate and de-escalate.

More research is needed to specify and simulate a feed forward model for collective decision making. Yet, six premises serve as an initial point for such research. They include:

1. Human capacity to make timely, informed decisions in dynamic situations requires a sociotechnical system for managing the flow of information among multiple actors in a changing environment.
2. Lack of access to timely information or means of communication inhibits the range of actions available to policy makers in a dynamic environment and leads to declining performance.
3. Effective performance in dynamic environments requires the clear articulation of a common goal that can span different interests, objectives, and approaches to action.
4. Dynamic environments involve intensive patterns of communication within and between actors at multiple scales of operation. The ability to move between operational levels in practice requires information that is scalable to specific roles, but that can also be aggregated through several levels of coordination to form comprehensive profiles of the evolving events.
5. Rapidly evolving response systems in crisis environments require technical means of integrating real-time information into the operational knowledge bases of key decision makers for the major groups of participants involved in the interactions.
6. Organizational memory serves the vital function of maintaining continuity in rapidly evolving environments, but a continuous process of updating and integrating new information facilitates the creative response to immediate demands.

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Seattle WTO demonstration

date	Demonstrations		Police action		Awareness		Preparedness		Information Technology		Other cases
	non-violence	violence	brutal/harsh	moderate	demonstrators	authorities	demonstrators	authorities	demonstrators	authorities	
11/28/99		7			2	2					1
11/29/99	2	4		3				2			
11/30/99	3	5	3	2				1			2
12/01/99	9	7	7	3			3	1			
12/02/99	2	1	6	2				1			
12/03/99	2	3	3	3		1	1				
12/04/99	1	4		1			1		1		

Awareness		Preparedness		Information Technology		Other cases
demonstrators	authorities	demonstrators	authorities	demonstrators	authorities	
				1		
3	1	3	1	3	1	4
2	3		9			
	2		1			
1	1	2	11		1	1
1		2	2			4
			1		1	1

Awareness of Risk

<i>Seattle WTO Demonstrations</i>			<i>Los Angeles Democratic National Convention</i>		
<u>Date</u>	<u>Authorities</u>	<u>Demonstrators</u>	<u>Date</u>	<u>Authorities</u>	<u>Demonstrators</u>
11/28/99	2	2	08/12/00	0	0
11/29/99	0	0	08/13/00	1	3
11/30/99	0	0	08/14/00	3	2
12/01/99	0	0	08/15/00	2	0
12/02/99	0	0	08/16/00	1	1
12/03/99	0	1	08/17/00	0	1
12/04/99	0	0	08/18/00	0	0
Total	2	3	Total	7	7

Preparedness for Civil Disorder

<i>Seattle WTO Demonstrations</i>			<i>Los Angeles Democratic National Convention</i>		
<u>Date</u>	<u>Authorities</u>	<u>Demonstrators</u>	<u>Date</u>	<u>Authorities</u>	<u>Demonstrators</u>
11/28/99	0	0	08/12/00	0	0
11/29/99	2	0	08/13/00	1	3
11/30/99	1	0	08/14/00	9	0
12/01/99	1	3	08/15/00	1	0
12/02/99	1	0	08/16/00	11	2
12/03/99	0	1	08/17/00	2	2
12/04/99	0	1	08/18/00	1	0
Total	5	5	Total	25	7

Mass Demonstrations

<i>Seattle WTO Demonstrations</i>			<i>Los Angeles Democratic National Convention</i>		
<u>Date</u>	<u>Violence</u>	<u>Nonviolence</u>	<u>Date</u>	<u>Violence</u>	<u>Nonviolence</u>
11/28/99	0	7	08/12/00	0	1
11/29/99	2	4	08/13/00	0	3
11/30/99	3	5	08/14/00	0	13
12/01/99	9	7	08/15/00	1	6
12/02/99	2	1	08/16/00	0	9
12/03/99	2	3	08/17/00	1	9
12/04/99	1	4	08/18/00	0	1
Total	19	31	Total	2	42

Police Actions

<i>Seattle WTO Demonstrations</i>			<i>Los Angeles Democratic National Convention</i>		
<u>Date</u>	<u>Brutal/harsh</u>	<u>Moderate</u>	<u>Date</u>	<u>Brutal/harsh</u>	<u>Moderate</u>
11/28/99	0	0	08/12/00	3	5
11/29/99	0	3	08/13/00	0	2
11/30/99	3	2	08/14/00	0	4
12/01/99	7	3	08/15/00	2	3
12/02/99	6	2	08/16/00	6	3
12/03/99	3	3	08/17/00	2	1
12/04/99	0	1	08/18/00	2	1
Total	19	14	Total	15	19

Uses of Information Technology in Mass Demonstrations

<i>Seattle WTO Demonstrations</i>			<i>Los Angeles Democratic National Convention</i>		
<u>Date</u>	<u>Authorities</u>	<u>Demonstrators</u>	<u>Date</u>	<u>Authorities</u>	<u>Demonstrators</u>
11/28/99	0	0	08/12/00	1	0
11/29/99	0	0	08/13/00	3	1
11/30/99	0	0	08/14/00	0	0
12/01/99	0	0	08/15/00	0	0
12/02/99	0	0	08/16/00	0	1
12/03/99	0	0	08/17/00	0	0
12/04/99	1	0	08/18/00	0	1
Total	1	0	Total	4	3

END NOTES

¹1. A list of 25 organizations that expressed views in opposition to World Trade Organization activities was identified in the *Seattle Times*, November 28-December 4, 1999. The list includes:

- | | |
|--|--|
| 1. Direct Action Network Unions | 13. International Confederation of Free Trade Unions |
| 2. People's Global Action | 14. Rainforest Action Network |
| 3. Global Trade Watch | 15. Ruckus Society |
| 4. Sea Turtle Restoration Project | 16. Falun Gong |
| 5. Progress Project | 17. Carpenter's Union Local 247, Portland, OR |
| 6. anarchists: Eugene, OR | 18. Cab Drivers' Alliance of King County |
| 7. AFL-CIO: labor unions | 19. Doctors without Borders |
| 8. Public Citizen | 20. American Civil Liberties Union of Washington |
| 9. Citizens Trade Campaign | 21. Art and Revolution |
| 10. Sierra Club | 22. United Steelworkers Union |
| 11. Steelworkers | 23. King County Labor Temple |
| 12. Washington Association of Churches | 24. New Hope Missionary Baptist Church |
| | 25. Working Families for Free Trade |

The mix of organizations was difficult to identify as they included environmentalists, labor unions, foundations, international organizations, consumer groups and others that were grouped simply as nongovernmental organizations (NGOs). *Seattle Times*, Nov. 28-Dec. 4, 1999.

2. Personal communication, Ellis Stanley, October 11, 2000.

3. The findings from this content analysis are preliminary, and cover only the week of the actual events. The results will be validated by a second coder to confirm reliability in application of the categories. The period of time under review will also be extended to three weeks to include articles from a week prior to each event as well as one week after each event.