SIMON BOLIVAR AWARD LECTURE

"TWENTY-YEARS AND TWENTY POST-TRAUMA CLINICAL LESSONS: FROM MACRO TO MICRO APPLICATION"

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SUMMARY OF LECTURE

A review of 20 years experience in post-disaster professional activities in the American continent will be presented. Three examples will highlight the developmental professional conceptualization in this field as it has evolved between 1970 and 1990. The examples will be 1) The earthquake of Managua, Nicaragua-1970 (slides) 2) The blizzard of Boston-1978 (verbal description and 3) The volcano disaster in Armero, Colombia-1985 (video).

Based on these experiences a list of 20 clinical concepts will be presented which were learned in the catastrophic aftermath of these episodes plus published material from other professionals working in the post-trauma field (Terr, Pynoos, Raphael,) in the last 20 years. These clinical findings are now accepted in the areas of: mourning, stressor-stress reactions, coping, adaptation, survival-defenses, critical-episode debriefing, crisis-intervention, post-traumatic syndrome, psychic trauma. The field now is looking at 1) A new set of research questions and 2) Developing organizational models (private and public) to outreach the public after a disaster (experience in San Francisco, Costa Rica).

INTRODUCTORY CONTENT

Acknowledge honor for receiving award.

This morning I would like to talk about the work that I have done for the past twenty years in the field of trauma and natural disasters - an event driven field. I chose this theme because it exemplifies the experiences that I obtained from participating in both the U.S. and Latin America and thus learned the lessons that I will present to you later. The opportunity to have such a complex, vast scenario of human behavior enriched my knowledge and afforded me the possibility of conceptualizing trauma reactions across cultures.

My presentation will cover the following subjects:

1) **How I first became interested in this field in 1965?**

2) **A description of three major disasters where I participated and continued to learn. - Sets the interactive experience - U.S. and Latin America.**

3) **Development of the field in the U.S. regarding disaster policy and training during these 20 years.**

4) **Advances in the Behavioral Sciences that have contributed to our knowledge of "trauma" reactions.**

5) **Contributions made by military experiences.**

6) **Lessons that we have learned in the trauma area-from disasters and civilian/clinical trauma incidents.**

I would like to start off by explaining to you how I became interested in this field in 1965?

a) My orientation towards the needs of my community in Peru and experiences while growing up during several earthquakes gave me a receptivity to empathize with the fear and anxiety produced by this natural phenomena.

b) Student of Caplan and Lindemann.

c) Dramatic description of the Aberfan, Wales disaster in 1966 killing 116 children trapped in a school building. This was caused by a slag-heap descending down a mountainside and landing on the roof of a mining town's elementary school. The description of the behavior and play of the surviving children showed signs of what several years later we would identify as "psychic trauma" reactions.

d) The Yungay, Peru cataclysm of 1970 that was the most destructive earthquake in the history of the western hemisphere. It registered 7.7 in the Richter scale. 70,000 lives were lost, 50,000 people were injured and 80% of all structures in the zone were destroyed. The earthquake shook loose a large mass of ice and rocks which descended 6,500 meters at a velocity of 435 kilom./hour, devastating the entire town of Yungay.

I was in Lima for professional activities a month after and was asked to provide consultation to the government in dealing with hundreds of children who were orphaned by the disaster. At that point, it became clear to me that I had no knowledge of the psychological assistance necessary to help these children. But, I also realized their critical need for mental health assistance, so I phoned Bert Brown, Director of N.I.M.H. to see if he could send experts in this field. Due to several factors, this first effort to

collaborate with a Latin American government in post-disaster assistance did not succeed, however, the experience set the stage for a second effort, which came after the Managua, Nicaragua earthquake - Dec. 1972.

I would like to give you three case examples of disasters and the mental health activities which serve as a model of how my thinking and theory evolved. What became significant for me in these situations, which took place both in North and South America, was observing the different cultural expression of behavior after trauma. The interaction with victims became a cornerstone for my thinking and conceptualizing crossculturally in this field. I will touch on this crossover experiences intermittently throughout my presentation.

Managua Earthquake

Boston Blizzard

Amero Volcano Eruption

WHAT WAS HAPPENING IN THE FIELD NATIONALLY?

In order to provide a context for international disaster work, I'd like to describe what was happening in the U.S. in relation to disaster policy and training during the years between 1970-1990.

I remember in 1973 meeting with the team of experts gathered to analyze the mental health issues presented by the Buffalo Creek Dam disaster victims (involving the Piston Coal Mining Co.) and listening with great interest to their observations and new concepts. Another meeting was set up in 1974 to hear the reports of the Tornado that hit Xenia, Ohio. During another gathering of professionals, I was asked to present my experiences in Managua and exchange ideas with other workers in the field. At that time all of us were still groping to organize a systematic approach to develop mental

health guidelines for disaster assistance. The initial knowledge exchanged between professionals participating in this area in the U.S. initiated some of the early thinking about disaster behavior. After several years the lessons I learned from my work in the disasters I've described, assisted me to develop guidelines using clinical knowledge to work with victims. Over time, I added the lessons learned in Latin American settings to apply to United States based disasters.

Legislative Authority for Disaster Mental Health Assistance

In 1974 the historic enactment of Public Law 93-288, Section 413 set the foundations for systematic, organized development of this field. The Act reads as follows:

"Crisis Counseling Assistance and Training. The President is authorized (through the National Institute of Mental Health) to provide such services or training of disaster workers, to victims of major disasters in order to relieve mental health problems caused or aggravated by such major disaster or its aftermath."

Purpose and Objectives

The program of crisis counseling for victims of major disasters provides grant support for direct services to disaster victims. Training in disaster crisis counseling for workers who will be delivering services may also be included in the grant. This program was developed in cooperation with the Federal Emergency Management Agency (F.E.M.A), which provides funds for its support.

The law was enacted and the program developed in response to the recognition that disasters produce a variety of emotional and mental health disturbances which, if untreated, may become long-term and debilitating. Crisis counseling

programs funded under Section 413 are designed to provide immediate relief and to prevent longer-term problems from developing.

Assistance under this program is limited to Presidentially-declared major disasters. Moreover, the program is designed to supplement the available resources and services of States and local Governments. Thus, grants could be obtained for crisis counseling health services on a short-term basis to disaster victims, if these services cannot be provided by existing agency programs.

The passage of this legislation became a catalytic blue print for the field of mental health needs of disaster victims. It became a means to channel many of the resources and structures dealing with disasters affecting community populations and helped to coalesce efforts of mental health professionals, N.I.M.H, F.E.M.A and Red Cross, at every level of government. Although the legislation impacted mainly on major presidentially declared disasters, its influence permeated down to local levels. Massive training efforts were undertaken by N.I.M.H. through their "Staff College" training programs, aiming at educating all mental health disciplines. NIMH also collaborated with F.E.M.A. developing training activities in their Emitsburg Training Center. There State Mental Health staff participated in week long educational experiences.

Grants providing funds for mental health were developed to assist communities ravaged by floods, tornadoes, hurricanes and storms. The US experience is most often based on this type of natural disaster. However in Latin America, our participation in relief efforts for earthquakes and volcano eruptions taught us other facets of trauma effects. It also, gave bicultural bilingual professionals the opportunity to study the cross cultural

phenomenology of stress reactions and its multiple variations.

The disaster Relief Act solidified the position taken by many psychiatrists and mental health professionals interested in participating in catastrophic events. Dr. Calvin Frederick, gave leadership to these efforts and assisted many of us in the development of grants and establishment of relations with FEMA.

As some of the money became available to NIMH, the Staff College continued to develop week long workshops for multidisciplinary professionals interested in this area. The opportunity to network with other Disaster Assistance Government Agencies was strengthened by using their members as teachers and panelists. This activity linked us with the Red Cross and then evolved into national and local relations between mental health workers and Red Cross. They began to invite us to train their volunteers and after several years this culminated into the Red Cross request that we assist them in writing part of their Disaster Manual section on mental health guidelines to assist victims.

Another event that gave us further opportunity to strengthen our activities was the legislation that mandated states to have preparatory plans for disasters. I participated in the activities to train state mental health managers and planners, assisted by NIMH and FEMA, multiplying the number of professionals interested in this field. I still remember the experience of sitting in the FEMA cafeteria - a football length room- with firemen and police officers who were also receiving their own professional one week training at the Emitsburg Training Center and trying to describe to them what our contribution, as mental health workers in disasters consisted of. They seemed to pay attention but their reactions were somewhat skeptical.

However, as the years, have passed, this attitude has changed. In spite of the initial scepticism from all the "old timers" in the Disaster System Agencies, the cross fertilization of knowledge and ideas kept giving substance, content and opportunity for mental health professionals to rethink, refine and innovate their approaches. New light on the work with victims providing understanding and novel techniques emerged during these meetings.

Over the years the number of grant applications increased, as more professionals became interested in obtaining training and enhancing their skills. They in turn, began to publish their experiences and the overlapping themes of stress-response, psychic trauma and P.T.S.D. sequelae, became part of our accepted "jargon." Based on some of these experiences I started writing articles and together with Dr. Fred Ahearn wrote a book titled, "Handbook for Mental Health Care of Disaster Victims", (1980.)

Some of these trends began to influence the planning and programs of Central and South American professionals. Assisting in bringing resources and knowledge to the countries south of the border, the Pan American Health Organization has played a major role. I have worked closely with their administrators and have seen the benefits they provided to the stricken areas following a disaster. As more knowledge of the mental health needs of victims emerged, they incorporated this area into their emergency programs. In the recent catastrophes suffered by Mexico, Colombia, El Salvador, Guatemala, Costa Rica and Peru, we consistently read and hear that the aspects of mental health assistance were considered and applied.

Many of the resources originating from the new awareness of disaster impact and the economic assistance available, allowed several disaster events to be studies and the results were published. They were as follows:

a) The Beverly Hills Supper Club Fire of 1977. This was a Man-made disaster in which 165 individuals died of burns or smoke inhalation and hundreds were injured. A research project was conducted by the Fire Aftermath Center, set up in the
Department of Psychiatry, University of Cincinnati Medical Center and funded by the state of Ohio.

b) Three Mile Island nuclear reactor malfunction of 1979. This incident was seen as a potentially life-threatening event for many thousands of people. A large percentage of residents living near the plant underwent a temporary evacuation. The President of the United States formed a commission to investigate the after effects and the report included information describing acute psychological reactions of individuals living in that area. Several studies and research efforts originating in these studies, signaled the initial development of scientific interest and research in catastrophic events producing traumatic outcomes.

c) Mount Saint Helens' Ashfall - Washington State-1980 Studies of psychological reactions have been published in which the data obtained, suggest that a post-disaster stress reaction, which is relatively non-transient can occur in major disasters. We have a replay of this type of disaster in April, 1992 in Leon, Nicaragua where the eruption of the Negro Volcano threatened the living environment with poisonous gases and intense fall of ashes on the communities near the volcano.

d) Collapse of the Hyatt Regency Hotel Skywalks-Kansas City, MO, 1981- This incident resulted in 114 deaths and more than 200 persons injured. This event received a great deal of publicity and an award for the Kansas professionals working with community agencies, that demonstrated a coordinated efforts of mental health assistance.

ADVANCES IN THE BEHAVIORAL SCIENCES THAT CONTRIBUTED TO OUR KNOWLEDGE OF TRAUMA REACTIONS

Advances in the Behavioral Sciences that Contributed to our Knowledge of Trauma Reactions

The behavioral sciences have contributed to our knowledge of post-disaster reactions and enriched the understanding of behavior phenomenology across time, following a catastrophic event.

The fulcrum concept in "psychic trauma" effect is centered on the various expression of stress response. Publications detailing this psychophysiologic response ranges from lay magazines to the journals of the level of "The New England Journal of Medicine" August, 1991 article on the research entitled "Psychological Stress and Susceptibility to the Common Cold" by Sheldon Cohen et al. where they concluded "Psychological stress was associated in a dose-response manner with an increased risk of acute infections respiratory illness." This research begins to point out the need to look at levels of response associated with psychosocial and physiological changes that affect behavior and vice versa. This same approach to stress response is being carried currently in the research of AIDS and cancer.

How did the evolving knowledge of variation in stress multifactorial response, influence the understanding of reactions following disaster events?

It guided professionals to shift their focus of conceptualization and assistance intervention methodologies. It is well established now that victim populations undergo substantial stress and acute psychophysiologic reactions, following a severe trauma but with differing types of long term outcome.

What concepts are involved in post-disaster stress reactions? These concepts come out of a different theoretical base than psychoanalytic, dynamic or behavioral psychiatry. It borrows its basic language from the bio-psycho-social sciences that offer a theoretical foundation to crises theory,

coping mechanisms, support-networks, loss and bereavement processes, adaptation behavior. In each of these components of new knowledge we have researchers like Lazarus, Horowitz, Caplan, Dohrenwend. Cassel, Eisdorfer, Canon, Selye, Hamburg, have published also in the psycho-physiologic spheres of stress reactions.

STRESSOR - STRESS RESPONSE CONCEPT

The study of the influences of stress on the biologic sphere, as for example on immunity and on disease susceptibility is complicated by a number of factors. One such factor is the difficulty in defining "stress". This has produced a plethora of divergent, often vague definitions as to what constitutes "stress." The term has been used to refer to the impact of an external event, how the event is perceived, the subjective experience of distress resulting from such impact, the ability to cope with the event, the biological response, or the interaction or combination of these effects. The appearance of these multiple definitions of "stress" in the literature complicates a review of the effects of "stressful" stimuli originating not only from the disaster event but in addition to the emergence of a post-disaster world with its beneficial and traumatizing efforts, trying to re-integrate the multiple broken pieces of life and territory. Stress-response patterns-whether it is expressed in physiological, psychological or behavior changes are difficult to analyze and sort out at this historical stage of research in disaster studies.

SOCIAL SUPPORTS CONCEPTS

In his article "Psychosocial modifiers of Response to Stress- C. David Jenkins: - 1979- offers models to relate stress response outcome, in relation to quality of support systems so as to measure adaptive capacity of the individual. All these processes are examined at the biological, psychological, interpersonal and sociocultural levels simultaneously and successively. Persons with a strong array of social resources are hypothesized to have less likelihood of having a given noxious circumstance override their defenses. The typical scenario of the stressful experience involves the participation of several levels of the total human system at each stage of stress input and the organism's reaction. Also Gerald Caplan has published a series of articles and books elucidating the characteristics of the "useful" variables in support - networks. Trying to combine the right "fit" between victims and helpful groups is difficult in the chaotic setting following a disaster..

CONCEPT OF COPING

Success or failure to cope with a situation has been shown to depend among other factors on a person's ability to appraise the situation (Lazarus 1966). Shalit (1977) Defense Research Establishment-Stockholm in an attempt to assess the difficulties involved in appraisal, analyzed the structural complexity of a variety of situations involving different conditions. -

a) Differentiation - the number of possible interpretations that can be given to a situation.

b) Articulation - the clarity with which these possibilities are ranked.

c) Loading - the emotional loading, positive or negative associated with each possibility.

All of these had influences on the process of coping thus successful appraisal of a situation depends not only on its objective complexity but on the subjective perceived complexity and the potential ambiguity this creates.

APPRAISAL SHAPES THE COPING PROCESS

What is it about the person and the situational context that produces appraisals of harm/threat or appraisals that some benefit is possible or probable-what are the antecedent of the appraisal?

Dr. Morton Reiser, Professor of Psychiatry Emeritus at Yale University - Presented these ideas during a conference, Miami, February, 1992.

The stressor-response system is a fundamental genetic system serving the survival needs of the individual. It activates arousal and response to outside physical and psychosocial and to internalized signs of danger. Memory systems are intricately involved in assisting this process. The cognitive and affective system respond and the functions of identification/evaluation to danger is mediated by complicated systems which eventually converge into the locus ceruleun, a major modulator of anxiety which in turn has links to the stress response components: emotions, motor activity and psysiologic responses. A key component of this system is memory which serves the purpose of identifying and measuring danger signals to <u>past experiences,belief,learning and knowledge.</u> These sources of information give <u>meaning</u> to the effects of stressors, and in so doing formulate the individualistic characteristics of the victims behavior post-trauma.

Research should benefit from a revision of stress concepts. It has become increasingly apparent that stress is not a specific unitary entity. It is a convenient code word which subsumes a large variety of internal and external forces acting on the organism. Early stress researchers looked

primarily at stress of any type from a biological perspective although it was noted repeatedly that stress responses were influenced by psychosocial as well as biological factors. Even when it was finally accepted or, at least, considered possible that life stress, psychological reactions, emotions, thoughts and behavior might be legitimate factors influencing or influenced by body functions, it did not lead to relinquishing the mind-body dichotomy or biomedical casualty model; i.e., a stress caused a specific effect. The inclusion of psychosocial factors as potential influences on the body seems to have required the adoption of a multifactorial stress model in which stress achieved the status of a causative agent like bacteria, poisons, and tumors.

The notion of specific biological patterns associated with definable psychosocial stress events and specific emotional signals which mobilize a specific behavior response now seems a more useful framework for approaching stress, rather than lumping all types of stressors as one category of stimuli. The application of this model to studies of psychosocial stress-response should increase our understanding of the complex interactions between psychosocial stressors, biological functions and post-disaster behavior.

Signal Anxiety and Its Relation To Stress-Response Concept

Research findings report the concept that fear and anxiety is biologically adaptive inborn response to danger.

It is out of early traumatic experiences that we develop signal anxiety which gets reactivated by direct threats to learned or symbolic threats. This signalling system can be activated from inside by inner needs or outside by life situations. This presents to researchers the paradigm that in stressful situations the process encompasses meaning and reactive emotions that are individual and unique.

Psychophisology Stress Response Concepts

The emergence of the bio-psycho-socialcultural system perspective which attempts to identify the mechanisms through which psychosocial stress affect behavior has offered new guidelines to understand post-disaster behavior and to use many therapeutic modalities, including medication, counseling, education, group work.

Conceptualizing the brain as a mediator between outside perceived stimuli and response manifestations through affect and behavior we can apply some of the new concepts elicited by questions like:

1) How are events perceived?
2) What is the meaning of the event?
3) Does the individual have a repertoire of coping mechanisms that will ensure adequate relief of distress and adaptation?

Among the many valuable areas of research in this field there is one that applies to post disaster response which we find in many victims. This is the expression of hopelessness and helplessness. There are some findings that point to the association between these emotions and the endocrine system related to the adrenal cortex which in turn has an interactive effect in lowering of the immune system which decreases the potential to fight illness and makes victims more vulnerable to somatic ailments.

LABELING CONCEPTS

The concept of "labeling and its impact on the course and prognosis of stress response, are appearing in our publications. It has been demonstrated that a "label" that has negative social implications, can have long-term, debilitating impact on victims. This presents a challenge to workers in the post-disaster trauma work, who need to recognize, identify and

communicate dysfunction without "labels" associated with clinical psychopathology. A catch "22" is presented to our professionals, who need to categorize behavior as symptoms to validate, the expenditure of money and time. We are trained to organize our observations along clinical categories which serve as guidelines for intervention. This issue merits further work.