

IC3 - THE INFORMATIVENESS OF THE CONFLICT - CRISIS - CATASTROPHE TRIAD

Deyan GOTCHEV

In different cultures the century-old attempt to ritualize, stylize and control a conflict is experimented with the aim to restrict and limit violence to a rather cellular pattern.¹ Is it possible to make a distinction between aberrations and trends in social evolution? **The process of globalization is not a Hero Epos but an act of aggression characterized more by the ways power is executed than by finalities.** In a situation when the terms of ethnicity and religion are regressive, when nationalism is gaining a new lease on life, *how to keep a state of equilibrium among several states of comparable power?* While European diplomacy has been forged in the school of hard knocks, the US emphasis of democracy and law was a product of a unique sense of security, based on a halfmilenium-lasting experiment in America.

The public reaction (with a peak in 1968) to the permanent social crisis, after a culture of protest—ranging from revolution to drug use (both based on the impulse to run and forget)—now is pushed in a culture of panic, which culminates in a paralyzing *fear from an Apocalypse - an end of time*. How to overcome the atavistic fear from the unknown? Is the „World Time“ concept, expressed in common start, tempo and norms, consistent with End of History, and the End of Geography - with the „World New Order“? Could order be kept without constraint? Could the delicacy of balance of interests be ruled by custom?

A future epoch seems to be incalculable, insecure, with unpleasant surprises due to the growing inconsistency of means to aims. The study of history offers no manual of instructions. History teaches by analogy, shedding light on the likely consequences of comparable situations. But each generation must determine for itself which circumstances are in fact comparable.

The analyst could choose which problem to study, whereas the statesman's problems are imposed on him. Under the pressure of time acting as an overwhel-

ming challenge, the latter must find a decision based on assessments that can not be proven at the time they are made, where mistakes are irretrievable.

The aim of the presented ideas is *to examine the IC3 approach not only as an element of a competition, but to integrate it in the creation of a complete instrument for survival.*

Empires have no interest in operating in an international system

In every century there seems to emerge a country with the power, the will, the moral and the intellectual impetus to shape the entire international system in accordance with its own values. Basically, an empire is an agglomeration of nations over which usually one nation has acquired control.² The dominant nations have sought to retain their empires through different means. *The Enlightenment gave birth to the balance of rational principles reflected in the separation of powers.* After Austria had reconstructed the Concert of Europe in the 19th century, Germany dismantled it, reshaping diplomacy in a cold-blooded game of power politics. For a rather stormy period *employment and peace remained fundamental security categories.* During the rise and fall of an empire the issue of being a part of an empire is actively contested. *Regional instability, conflicts and disorder are likely to have a permanent wave-like activity stimulated by an imperial rivalry of superpowers.*

Now society could be characterized by :

- increasing complexity and interdependence due to work division;
- high tempo of structural changes and the consequent loss of trust;
- increased decision risk because of possible negative outcomes;
- loss of legitimacy and internal norms leading to incalculable behavior;
- danger from a total destruction—ecological, cosmic, or war—is beyond the bearable psychological barrier.

The distinction and symmetry in the order of powers, as a result of the factors listed above, have disappeared in a structural vacuum. In it, the non-acceptance of a taboo suggests unclear functioning of regulations - a prerequisite for the C3 triad.

Is conflict a formal rivalry or mere aggression?

In the foreseeable future, the problems of international and domestic order are likely to remain enmeshed in the new-old Third World (maybe the „Other World“?). In the explanation of causes, Post-Cold-War metavacuum is replaced by high premium put on drama, crisis, unfilled humanitarian needs. This is

hardly a real shift from political to humanitarian decisions. There is a limit to which gruesome, tragic images and shock could be absorbed.

*A lack of central control helps the dispersion of conflict metastases and leads to a **crisis - the first bifurcation point** in conflict development.*

The crisis information pattern is „forewarning - peak - ripples - catastrophe.“ Being a problem of community, the crisis could be considered as a result of the break of links, the distortion of bonds, the neglecting-the-rules behavior. A crisis is characterized by instability in the situation's core, a change in the relationships with unpredictable outcome, a danger for the future existence of at least a part of the social structure. **The crisis is not only a constellation of previous stable factors which have turned to act in a negative mode, but a multitude of unsuspected new-born phenomena.** A driving force for a crisis is the contradiction between the persisting desire to remain at a premier position and the ever deepening aversion to bear the costs of this position.

The **next bifurcation region** in the evolution path conflict-crisis is where it could transform in a **catastrophe**. A catastrophe could be characterized by a *termination* and *paradigm destruction*. It is an abrupt change after which no causality could be traced back, it is a *zone of choice*, a *cleaning-up for a new start*. *A catastrophe is irreversible*. Treated as an **end**, a catastrophe is a philosophical problem for the individual.

Accumulation of power is crucial in the state making enterprise

The removal of the Cold War overlay exposes the **close linkage between conflict dynamics and state making in the global periphery**.³ The lower the initial level of power, the stronger is the relationship between the rate of state expansion and the collective violence. In order to replicate the process by which relatively centralized modern states were created, 3rd World leaders need lots of time and a relatively freehand to persuade-cajole-coerce. Neither of these commodities is available in adequate measure to the elites, which are not free from systematic pressure and demonstration effects. *The crystallization of certain international norms*, e.g. sanctity of the borders, the issue of civil and political rights in the 3rd World *have mixed effects on security and stability*. The contradiction is rooted in the evolutionary stages' uncomparativity between the norms' place of origin and that of implementation. When some of the sequential phases of the state-making enterprise collapsed, or simultaneously erupted, a culmination of a crisis erodes the fragile legitimacy of the new state structure. Another problem originates from the fact that *scarcity drags into an ethno-national self-determination* neglecting the fact that hardly any pure ethnic homelands still exist. So, being

the product of political imagination, *the dream of an ethnic nation is a permanent provocation to C3*.⁴ A part of the problem is that the areas with agricultural and less diversified economies are most exposed to degradation and have *the least financial and technological capacity to cope with change*.⁵ *A process of mass migration is provoked*. Tens of millions of people are forced to run away, to migrate. This leads to cultural exchange and to the *revival of a culture, naked from the tradition of a peacetime settlement*. A basic prerequisite for security, the static one, fails. A security paradigm with an emphasis on „threat-enemy“ is inadequate and misleading when applied to an emerging conflict in a migration context.

The next problem in stability maintenance stems from *the global circulation of non-material resources*, which increases the social „viscosity“ and turbulence, *modifies security norms*. New „soft“ forms, e.g. „interest rates,“ *postpone the destructive potential of a classical military approach*. **Security standards are redefined from a „life-death“ frame in a „quality of life“ terms.**

Embedded enemy images are a serious obstacle to conflict management - routinization, reduction, resolution⁶

Enemy images are resistant to change, a fact that could perpetuate and intensify a conflict. *An image includes experience-based knowledge and values, beliefs, hypotheses, theories about a desirable behavior*. Enemy images are created by:

1. persistently aggressive actions of a group;
2. not hostile but ambiguous action in an unstructured environment;
3. loss of accuracy in the reflection of the parties' intentions.

Images subjected to loss aversion and/or shared in a group become stereotyped. Membership in a group leads to a systematic comparison, differentiation, derogation of other groups. Such behavior occurs even in the absence of a material basis for conflict. The relative position of the object is reflected in schemes based on at least three established elements: imperials, barbarians, degenerates. In a group, personal and social identities are often in tension with one another. *A conflict develops when the identities are incompatible*. Threatened identities are conducive to hostile imagery, incompatible definition of interest. A conflict can trigger violence among groups under conditions of deficit. A violent conflict could often escalate to a painful level of destruction before serious attempts for its resolution begin.

Reshaping and reconfiguring identities in images could be achieved by restructuring subelements and links between subelements, changing the emphasis given

to different norms in the variables' simulation set. The process tends to culminate in tolerance and recognition of other identities. *The challenge is to engage the parties earlier at a deeper level so that the identities of some can be stretched to tolerate the identities of others.*

Change in images is partly a function of the rate at which discrepant information occurs - large batches of information cause greater change. Cognitive consistency shows that *people tend to modify at the margin and to change peripheral beliefs first.* In information processing, the common heuristics use old interpretation terms and exaggeration of similarities as shortcuts (availability and representativeness). *Ambiguity is treated as hostility.* The lower the intensity of emotional commitment to an identity, the less resistant the corresponding images are to change in the face of contradictory information.

Without some evaluative criteria any cognitive change can be considered as learning (which is not the point). *Not all change is learning, but all learning is change.*

Learning is an explicitly normative concept. Learning is simple when means are better adjusted to ends. Unanticipated failures that challenge old ways of representing problems are more likely to stimulate new formulations. Complex learning, at its highest level, may lead to reordering or redefinition of goals. **The quest for perfection almost always fails.** Learning is a „messy” interactive process.

Security exists against an enemy

Now Reason is questioned- enemies are the UFO, the ecology misbalance, a psychologically based internal infinity. **Mankind exists in a multidimensional (space, air, ocean, earth) sandwich-like structure with open ends with unknown reactivity and nature.** Against them the ordinary defense based upon contradiction proves to be with a short-term and partial efficiency. *The security industry—army, law, enforcement agencies, special operation forces, object and person security, bank security—is built on the principles of data and structure integrity and preservation.* The increase of security tightens the burden of dependence. A paradox „**The more the risks are minimized, the more new risks emerge**“ is observed. Is the danger of destruction a constant value due to: The 2nd principle of Thermodynamics in action? A manifestation of Newton's 3rd Principle? The preservation of the yin-yang harmony?

Security is kept by power based on reason, not to be mixed with information which is an operative tool. The mirage of universal, eternal, absolute security leads to the absurd idea of the omnipotent role of information. The passion for information is based on *data, which are always post factum.* An important

conceptual problem is that the evolution of validity of a particular theory of the C3 triad is hampered by the incorporation of variables from levels of analysis not congruent with the level at which the importance is focused. We often wish to deal with a *model* of abstract, generalized variables *defined in a subjective, personal, cultural, singular fashion*.⁷ The result is a limited and hampered precognition: a) an information flood creates new internal conflicts, increases the sense of drowning, of disorientation; **In a semantical cemetery a surplus of data is a burden**; b) the lack of information increases the risk of decision (e.g. the interest rates game in financial investment policy); c) data could imitate a crisis, or emulate one; d) an instability, which is caused by an explosive increase in the dimensions of the decisions' frame could evolve in a crisis.

Sometimes, due to the absence of clear prescriptions for a measure, the operating-in-secrecy-generated information transparency deficit could devastatingly boomerang into the functions' essence of security. Then even a catastrophe could be viewed as a result of long-term speculations and improvisations. *Is information the magic tool* to revive the balance of interests and power order, which neither purport to avoid crisis, nor limit the scope of conflicts? *The attitude and expectations concerning information are ironic* - one cannot see the difference between earnest and joke. **The problem is in the brain's specific data processing capability and/or the need for a new paradigm set.** Is there a need for replacement of the quazy-absolute space-time frame, for redefinition of the *concepts of adequacy, exchange and the counting measure of quantity*? A new magic of forms in technology and art is created by the binary coded world. In the asynchronous data transfer mode time is switched off. Is it time for intuition and imagination? *To live in dusk and dawn?* There are millenia-old different forms of non-binary world dissection by which ugliness and devil are not to be neglected. *The urge for neutralization could be neither black, nor white.* Both colors are manifestation of two opposite processes—radiation and absorption—in which the flow direction is not the only difference in the exchange of energy, switched off only by the death of an object. Is the frenzy for an *egalitarian full access to information* a butterfly-light-suicide syndrome? Or is it *an alternative* to the ancient old *authorized sharing and use of information*, which has kept the world in coherency? *The momentum function of policy is futile in an environment where time-scale is compressed to singularity.* Due to the deficit of time, the aim to overpower turns into a non-sense and policy forms are transformed from a prepared-in-secrecy treaty into propaganda flashing signs.

In an economically rational society political behavior is reasonable

In the last two centuries it was law that provided the source for authority. In the information society ethics, based on the „Time is Money - Credit is Money - The

Good Payer“ principles, is replaced by the „Commutation - Communication - Information“ principles. *Today law seems to be replaced by opinion as the source of authority*, the media serving as an arbiter of public opinion. Due to the global information network two opportunities appear: 1) Sometimes a side, opposite to the officially favored one, explains its heretical point of view; 2) A ping-pong effect of comic propaganda maneuvers.

The irresponsibility of the media is an example how „pure information“ reduces security. The excess of false or irrelevant data modulates the opinion environment. As was already mentioned, human perceptions and data processing abilities differ from the digital information flood. Gaps, leaks, mix of information could mask or even transform human activity. A mantra-like repetitive declamation of a slogan-prophecy mess zombifies the public. The slight incoherence between picture and verbal presentation, the speed at which topics are changed and repeated, could distort the process of memorizing, could create patterns of analysis competing with the subconscious, born from a skeptical questioning, „but“ and „or“ alternatives. The information-game-gambling mode of behavior narrows the emotion to the only „win-loose.“ The distance in TV-news helps the building of an alien „nothing-to-do-with-me“ feeling. The distant control of its activity leads to: programming reality in a show; change in the feeling of security; neglecting the „veto“ right of the „off“ button. The British Bloomberg window-type-screen simultaneously presenting data, facts, comments and pictures is maybe more honest than the CNN persuasive, but staged type of presenting news. The market makes the usual forms of information censorship extremely transparent. *In normal trade each good has a double implementation* (the „poison-medicine“ analogy). Information is an object of trade and fashion where novelty, regardless of quality, is a supreme value - „**Shock him, but don't make him think!**“. In society the Agora dream is replaced by the absurdity of the „full-tempered“ informativeness, the „jack-pot“ target governs the attitude towards information, the limits of control are lagging behind, security is collapsing. An information network society is endangered to reach the implosion of underground circles. The will for security is a shield against the anarcho-romantical out-of-time-and-context entrepreneurial plunges to-and-fro.

How to keep the world away from becoming schizophrenic, paranoid, autistic? The goal is stability, moderation and from-time-to-time peace. *Information security is inconsistent with market schizophrenia.* What is security in an exchange of a kaleidoscope-type information activity due to the different time-scales of processes? How to define convincing security norms in a for-the-moment-life „I

want-need-take-make“ fashion where long-term perspectives are an illusion and patience is needless?

Power without force is the true measure of the political capacity of states. *A government should export stability and not import security.*⁸ Leadership demands the courage to resist popular opinion, to set the agenda when necessary, to be responsible for the consequences, fairness and accuracy, not to be tempted to deter criticism in an administration controlled debate. A change from use-of-peace dividends to peace-management should be pursued.

**A great inherent power may cause destruction if used in ignorance
or at the wrong time**

For centuries the conduct of war and peace has been directly influenced by dramatic technological changes, which at the time of their introduction could not be fully understood. An asymmetry is manifested between *the ancient-old social and political decision-responsibility frame* and the burst-up *widening of the human tools' treaty-play space*, caused by the self-accelerating module-structured scientific and technological progress.

Throughout history the possession and production of arms has largely been a monopoly of the dominant political authority in a particular region.⁹ In military technology, the aim for perfection is focused on an universal and absolute reliable formalized system of activities operating in a lightning-fast mode. War has always been a balance between information warfare (IW) and physical destruction. Now electronics (high processing speed, miniaturization) has shifted the pole to information fashion and IW.

Information technology lies at the heart of the current change in military affairs. Its activities range from the speed of high-precision weapons to the acquisition and processing capabilities about the details in the opponent's situation. The military hierarchy has been changed, even in some cases drastically simplified, as a result of the mass and rapid dissemination of information to end-users, and the increased use and control of unmanned military platforms from distances far away from the zone of conflict.

As usual there are a couple of "but":

A. The architecture of the C³I network could be nearly **on the edge of** self-organizing and creativity, i.e., in an **„out of control“ state**. The limits in the hardware net architecture result in an inertia in optimization which ends in the information „road-map“ concept. In electronics Heisenberg principle can not be

tricked out. The unpredictability in the „more than 2-body problem“ is an example of „The more I know - The more I forget“.

B. The wall of ambiguity is only modified, not pierced, by smart attempts which still lack a new paradigm set. In a struggle of interests a tactical maneuver's fog combines with the instinct to play—change, move, surprise—and create a state of alert where the freedom of adventure challenges conservatism and cynicism in the face of novelty.

C. In the military innovation could information-driven changes transform warfare to the point of absence of an opponent? Is a war directed at political objectives replaced by senseless eruptions of violence for its own sake?

D. Information as a non-lethal weapon offers peculiar advantages in cover, precision, bypassing the conventional guard by space and power, **blurs the distinctions** between civil and military organizations and the politically motivated use of power.

E. There are signs that instead of information-gain a process of **information sabotage is in action**, maybe a guerrilla IW against which the possible countermeasures are a problem.

F. In military affairs **multilateralism can be** an useful and necessary precondition, but in the same time it may prove to be cumbersome or **an obstacle**. In history some facts could be treated as examples how the blocking of the ability to cooperate leads to a catharsis.

IW is a product of the communication-control-command triad. Small mobile self-supported units could be kept by adequate intelligence and independent targets at least partially immune against IW. *The difference between information („soft“) and classic warfare is in the maturity stage.* Could IW have the fate of WMD (thermonuclear, genetic, ecological, biological)? Is it possible by technological tricks, logistics and aims' pursuit „soft“ techniques to be kept reversible? What are the changes in the social infrastructure and mode of application that would cause a change?

The preliminary phases of C3 cannot be fully discovered by extraction of trends. Now, dealing with C3, the *boundaries between information gathering-analysis-use are blurred*, which is different from the classical multi-level approach. The ability to obtain information without the opponent being aware of that, provides an advantage over an adversary. Due to the credible access to open sources, which act accurately and in real time, *information and intelligence are interchangeable*. Both technical intelligence and HUMINT serve to fill each others gap.¹⁰

Is information the only foundation of a logic that admits no boundaries?

What is the role of information in the process of monopolizing and concentrating the means of coercing a territory and of control of population? Is information the tool to help in the search for integration, or in the struggle for dominance? *The information paradigm is rooted in the idea of an equidistant and equipotent set of events. Acting as a counter-stochasticity tool this paradigm closes its eyes to the need for infinity and asymptotic concepts, which in the C3 case are not valid.* **Maybe the most serious crisis is in the self-organization of the information environment.** Data have a period of neutral activity during which a picture is built up by facts and connections without gaps. The real world has a “Swiss-cheese”-like structure where the holes are from lack of data, filters, neglect by cultural frames, goals, brain physiology. Information is not to camouflage the large and drafty place we live in into a reassuring and comfortable cocoon. *Living with information is an art rather than a craft.* **Information, viewed as a „hologram“ of fuzziness, uncertainly, multiperspectives,** constructs the basis of what type of trade?

**Information could be defined as a tool to see and
act appropriately, not to reason**

An open world is to be faced both psychically and physically. For a country trying to attain and maintain dominance in the information world, the uncertainties and unpredictability constitute a rough reality. The weakness is in the incidental or deliberate nature of an infrastructure disruption. The complexity of social infrastructure is the target in IW. Traditions to preserve knowledge from surprises in time have created memory banks with dispersed structure. “Super” data base can not overpower threats and disasters. Information freedom contradicts with the password-rule obligations. Perfect security is an attribute of a society where absolute order is kept by rules and firewalls. According to the statistics, even in a much more simple organization like a company 80 percent of the information threats have internal origin - someone is corrupted, or insulted, or motivated by revenge, or crazy, or ... The constant hacker breakthroughs are just an example how tiny specks could spoil harmony.

The transfer of data and information processing facilities is a test of friendship. The inertia in the application of the classic principles of management could never end when information-monopoly has focused the will-decision-think-control process in the point of conflict. The moment the environment is changed, the rules are no longer valid, i.e., an information deficit appears.

Sometimes a whimsical play of a high-profile participant could neutralize an information-possession monopoly.¹¹ In a conglomerate of individuals information is predominantly personal and its treatment could easily slide towards mocking or fantasy. Sometimes such a fantasy could turn into a nucleus condensing an unstructured world (with a maximum entropy), even turn into crisis-solving by imagination.

**Security is focused to the core of understanding and acceptance
of a crisis warning**

A C3 could be exaggerated by internal flaws in its own information system. Till the world has entered the information age, the biological and social ability to acquire information acted as a filter and information processing was implicitly considered to be an element of the information package. *Crisis' characteristic time-scale were coherent to the speed of human adaptation, to the space (area) scale and to the speed at which the crisis' core processes propagate.* The self-organizing nature of an information space creates new problems when a global information society is concerned. In an open system external influence could change the balance and lead a conflict to a new dimension.

Conflict reduction strategy is to design reassuring commitments to an adversary. The gradual reduction of tension consists of announcements in advance of unilateral beginning of a series of conciliatory actions and their implementation, whether or not the other side reciprocates to an invitation for unspecified response. Information is vital only if used in an appropriate context, characterized by a game according to rules and a behavior targeted out of a law field to goals foreign to the others. When a scenario is in action, „internal“ information is crucial. But usually there is a planned mosaic of rarely overlapping scenarios, whose combination in action has its own unpredictable life. Information has its own scale of efficiency for which a function of distribution could hardly be prophesied. Information helps to accept the coexistence with insoluble questions without tumbling over the ridge of a catastrophe. Information often creates myths - an attempt to explain in rational terms facts not yet rationally understood. It serves as a bridge connecting two extremes, the dysfunction of each makes reality dead.

There are cases when an alternative way to survive a crisis is to face the shadows of the situation, to turn to the dark, unknown side. The other way could lead to the boring and devastating simplicity of an agony. Sometimes perception and hope through imagination deal with a crisis better than cold and pure calculation does with a catastrophe. *Solving a crisis is discovering, i.e., the mental considerations of actions or events not yet in existence.*

To assess and solve a multilateral problem an integrated brain-storming activity is in use, rather than a portfolio of preprogrammed prescriptions

The result of the role-reconsideration of: the economic, social and moral logic of the market; the increased power of urgency; the delegitimization of words as a traditional basis for trade is that **the new rules of the trade keep constant low intensity conflicts, but not less lethal and destructive, locally encapsulated in death zones across the globe.** New social identities are created by civil war, soldiers and diplomats are replaced by mercenaries. Because of this fragmentation we speak about Operation Task and Situation Logic and not about System's Logic or Actor's Logic. Intervention in the affairs of others should be attempted with the best, most committed and perseverant people and pursued with a relentless intensity.¹² The C3-management triad „discover-avoid-override“ could be made effective by a UN Security Council governed complex of:

1. An early-warning system for WMD, famine, epidemics, ecological catastrophes;
2. Preventive diplomacy with a „cause-channel-result“ concept of action in which the channel is not only a mediator but an element with its own fuzzy nature;
3. An intelligence gathering and assessment center.

The *Integrated Crisis Management Instrument (ICI)* operating in Europe since the early 90's is designed to have a decision support capability with real-time information.¹³ The tasks are: discovery and assessment of crisis and conflict potentials; a deep, thorough analysis of the basis structures, players and pictures' dynamics; the development, evaluation and optimization of needed possible crisis-handling strategies. The ICI structure consists of sections for:

1. Early warning: hot-spot scanning; hot-spot description, sequence, assessment, background information;
2. In-depth analysis: qualitative analysis, actors' assessment, dynamic analysis, evolutionary analysis;
3. Strategic development: international global problems' definition, strategy design, strategy evaluation;
4. General Support Tools: crisis protocol, cooperation manager, communication manager, output manager, procedural check, news update.

The ICI should not be the burden of a bureaucratic, technical monster-center, but a team of interdisciplinary team creating innovative strategies and offering polyvariant decisions to the state leadership. The most usable end product of ICI is not a paper, but a person thoroughly immersed in the problem. **To deal**

successfully with the peculiar rhythm of a crisis one must be too quick for the nets of an ideology, too fantastic for its rationality, too real for its generalization.

Acknowledgment. This paper describes ideas resulting from work on a research project, supported by the Bulgarian Science Foundation under grant I621/96.

-
- ¹ Main part of the concepts presented on this page are due to Henry Kissinger, “The New World Order”, in *Managing Global Chaos*, Chester A. Crocker & Osler Hampson with Pamela Aall, editors (Washington, D.C.: United States Institute of Peace Press, 1996), 173-183.
 - ² Mark N. Katz, “Collapsed Empires,” in *Managing Global Chaos*, 25-37.
 - ³ Mohamed Ayoob, “State Making, State Breaking and State Failure,” in *Managing Global Chaos*, 37-53.
 - ⁴ William Pffaf, “Invitation to War,” *Foreign Affairs* 72,3 (Summer 1991), 99.
 - ⁵ Astri Suhrke, “Environmental Change, Migration and Conflict,” in *Managing Global Chaos*, 113-129.
 - ⁶ The ideas in this section are credited to Janice Gross Stein, “Image, Identity and Conflict Resolution,” in *Managing Global Chaos*, 93-113.
 - ⁷ Jack S. Levy, “Contending Theories of International Conflict,” in *Managing Global Chaos*, 3-25.
 - ⁸ Michael S. Lund, “Early Warning and Preventive Diplomacy,” in *Managing Global Chaos*, 379-402.
 - ⁹ Geoffrey Kemp, “Military Technology and Conflict”, in *Managing Global Chaos*, 129-141.
 - ¹⁰ Norman Wood, “President’s Commentary,” *Signal* 53, 2 (October 1998), 14.
 - ¹¹ Ursula Le Guin, *The Language of the Night* (New York: G.P. Putnam’s Sons, 1979), 214.
 - ¹² Chester A. Crocker, “The Varieties of Intervention,” in *Managing Global Chaos*, 183-196.
 - ¹³ Albrecht von Mueller and David Lee, “Crisis Management and Conflict Prevention in a Historic Transition Period,” *UNIDIR Newsletter* 30 (1995), 27-38.

DEYAN GOTCHEV: Born 1955. M.Sc. (1980, Physics of the Earth, Atmosphere, Space) from the Sofia University “St. Kliment Ohridski”. Research Fellow (1989, Active Experiments) in the Space Research Institute of the Bulgarian Academy of Science. Author of over forty publications in solar-terrestrial physics, synergetics, conflict detection and monitoring. Address for correspondence: “Nezabravka” str. No.33-a, bl. 315, Sofia 1113, Bulgaria. *E-mail:* dejan@space.acad.bg .