

Architecture for a Territorial Dispute Resolution System:

A Systems Approach

by

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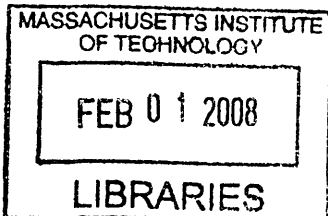
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TABLE OF CONTENTS

ACKNOWLEDGEMENTS	4
CHAPTER I	6
ARCHITECTURE FOR A TERRITORIAL DISPUTE RESOLUTION SYSTEM: A SYSTEMS APPROACH	6
INTRODUCTION.....	6
SYSTEMS ARCHITECTURE AND THE CONCEPT OF A SYSTEM	10
MOTIVATION.....	16
OBJECTIVE	18
CHAPTER II	19
EPISTEMOLOGY OF A TERRITORIAL DISPUTE SYSTEM	19
SYSTEM OF SYSTEMS	19
INTERNATIONAL RELATIONS AND ANARCHY	21
THE WORLD AS A SUPER SYSTEM.....	23
ASYMMETRIES IN TERRITORIAL DISPUTES: THE CAUSALITY POLYGON	27
ARE NATION STATES HARDWIRED FOR A DISPUTE SITUATION?	30
STRUCTURAL DECOMPOSITION OF A DISPUTE SYSTEM & THE CONFLICT TRIANGLE	31
THE CONCEPT OF OBJECT PROCESS MODELING (OPM).....	34
OBJECT PROCESS MODEL (OPM) OF A DISPUTE SYSTEM.....	37
OVERALL CONCEPT MODEL.....	44
PROCESS TO FORM MAPPING.....	46
STAKE-HOLDER’S INTEREST MAPPING	47
TABLE VII: STAKE-HOLDER’S INTEREST MAPPING.....	49
THE REASONS FOR INTRACTABILITY: IDEATIONAL FACTORS	50
A BRIEF REVIEW OF THE TYPICAL DISPUTE RESOLUTION PROCESS	55
WHAT POPS OUT OF THE DISPUTE SYSTEM STUDY?.....	60
CHAPTER III	63
RESOLUTION SYSTEM ARCHITECTURE	63
INTRODUCTION.....	63
GUIDELINES FOR ARCHITECTING A RESOLUTION SYSTEM	66
MAPPING OF DISPUTE SYSTEM PROCESSES TO THE RESOLUTION SYSTEM	71
DEVELOPMENT OF THE CONCEPT FOR EACH SUB-PROCESS	73
THE OVERARCHING CONCEPT FOR “RESOLUTION” AND MAPPING TO GENERIC & SPECIFIC CONCEPT FORM, OPERANDS AND TOOLS	74
MARGINALIZATION OF TERRITORIAL CONFLICT THROUGH EXTENSION OF THE GOALS AND THE OPM.....	78
THE OVERALL OPM OF ENLARGED GOALS	82
SCOPE, AGGREGATION AND PARTITIONING.....	83
CONCEPT OF ADAPTIVE FUNNEL & LOOP BACK	85
DEALING WITH AN “ISSUE”.....	86
ROBUSTNESS OF ARCHITECTURE & STABLE INTERMEDIATE FORMS (SIF).....	89
A PROPOSED METHODOLOGY: SIX TIER PROCESS MAP	91
INSTITUTIONALIZATION OF THE NEGOTIATING/ MEDIATING PROCESS: SEED	92
CHAPTER IV	97
KASHMIR DISPUTE: A CASE STUDY	97
INTRODUCTION.....	97
THE KASHMIR DISPUTE SYSTEM.....	101
CAUSALITY POLYGON: KASHMIR.....	102
CONFLICT TRIANGLE AND STAKE –HOLDERS	103

HOW KASHMIR MAPS TO THE SUB-PROCESSES IN THE DISPUTE SYSTEM?	107
KASHMIR: IS IT HARDWIRED?	110
STAKE-HOLDER INTEREST MAPPING.....	110
THE TRIGGER FOR RESOLUTION IN KASHMIR.....	111
THE NEUTRALIZATION OF THE DISPUTE SYSTEM PROCESSES	112
DOMINANT SOLUTION SPACE AND RECOMMENDATIONS FOR KASHMIR	113
PARTING COMMENTS.....	120
CHAPTER V	122
RECOMMENDATIONS & CONCLUSION	122
RECOMMENDATIONS	122
CONCLUSION	124
APPENDICES	126
APPENDIX A: GLOSSARY OF TERMS	127
APPENDIX B: TRUST BASED PROCESS	131
APPENDIX C: COERCION BASED PROCESS.....	132
APPENDIX D: SCOPE BASED PROCESS	133
APPENDIX E: INFORMATION BASED PROCESS	134
APPENDIX F: TIME BASED PROCESS.....	135
APPENDIX G: DEVELOPMENT BASED PROCESS	136
BIBLIOGRAPHY	137

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CHAPTER I

Architecture for a Territorial Dispute Resolution System: A Systems Approach

Introduction

A great part of the world today is engaged in excruciating conflicts that threaten the afflicted regions locally besides holding global peace to ransom. Most of these conflicts take the form of territorial disputes that are often protracted and sap the energies out of the nation states. Kashmir, Sudan, Israel–Palestine and Sri-Lanka today are embroiled in a bitter dispute embittered by relentless bloodshed and deep-rooted animosity carried forward through generations. The disputed regions in themselves are a mute testimony of the abject neglect of its subjects by the central ruling body (could be a democratic government/ a dictator or a monarch) and failure to provide some of the important political goods across the board for a long period of time. When weighed against some of the accepted norms of development indices like the GINI index, GDP, GDP per capita, infant mortality rates, HDI index, TI index, etc one would see that the disputed regions perform quite pathetically across most of the metrics and not without a reason. Nation states exist to provide political goods to people (Ref 1). However, quite unabashedly nation-states continue its tirade against each other over a piece of land pumping huge sums of public assets that could otherwise be diverted towards development efforts depressing benefits in both the disputed territory and on the whole.

Territoriality is dogma that invokes strong reactions. As per Zartman (Ref 2) a state's territory is a collective good that is equally shared by the citizens of the state. This means

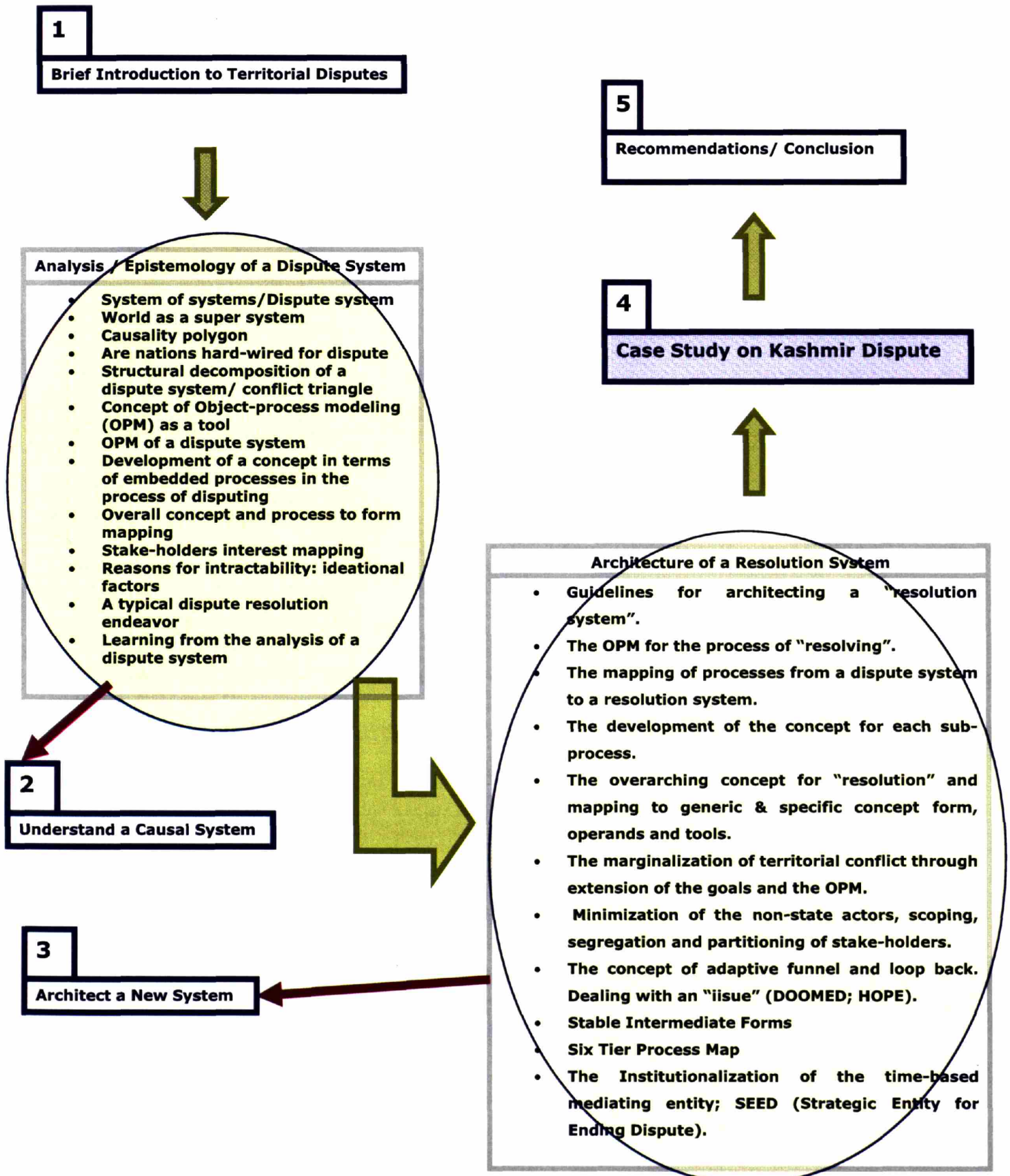
that the territory is indivisible and is available in the same proportion to all the citizens. It is considered to be one of the three basic components--together with people and a government--which endow a state with a sovereign moral personality universally recognized by the law and the community of nations. Till the time the territoriality is perceived as a collective good, there is no room for territorial claims to erupt. They however occur when the "national territory"--or, what the state's authorities suppose to be the "national territory"--is no longer perceived as a common good by a concerned group of citizens and becomes a "need" for this specific group. Territorial claims are about the desacralization of this territorial absoluteness. They represent iconoclastic uprisings from "politically active communal groups" determined to question the absolutely sacred dogma of the state's territorial integrity. Thus fundamentally a territorial dispute is a process of deconstruction and de-institutionalization of the nation state's order and boundaries.

The focus of this thesis is to understand the epistemology of a territorial dispute and develop a framework for creating a more effective conflict resolution design. This by no means is aimed at churning out a cook book kind of a recipe to solve all the territorial disputes that afflict the world. On the contrary, this work makes an attempt to trace the path as we move from a dispute system to a resolution system by understanding the underlying architecture. It is in fact akin to taking a step backwards and revisiting the delicate theme of territorial disputes by dissecting it deeper to peel off the layers that wrap the core problem. We use the principles of systems thinking and system architecture in understanding the intrinsic nature of a territorial dispute by treating it as a system operating in a given environment. The systems thinking paradigm allows us to view the problem in an unbiased and objective manner without getting fixated on a particular

solution or a problem area. It attempts to view the conflict holistically and tries to lay threadbare the embedded structural units in the system by decomposing it into its lowest entity. The objectivity that would (in all likelihood) emerge from such an exercise may provide plausible steps to architect a resolution system design template or at least strengthen the intuitive logic of the negotiators and mediators as they grapple with the specter of a territorial dispute.

In taking this view on the issue, it is indeed quite well understood that architecture of systems that are laced with social and political processes is tedious as they are highly complex and non-linear in their response. The complexity stems from the deep cross-coupling between the social, political and economic processes and the non-linearity arises out of the fact that each input in a particular realm does not necessarily elicit a proportional response. There are strong causal feedback loops that make the system response counter-intuitive too. It is beyond doubt, a sizeable challenge for a resolution system architect to pick up the gauntlet and create a simple yet creative architecture that would form the vertebral column for the design of a robust resolution system. To be able to do so one needs to clearly understand the rudiments of Systems Architecture and International Relations so as to weave a concept together. This work is covered in five chapters and Figure 1 lays out the road map.

Road Map for the Thesis (Figure 1)



Systems Architecture and the Concept of a System

The realm of System Architecture is essentially concerned with three pivotal objectives:

- a) Building creativity in seeking solutions.
- b) Driving out ambiguity in the upstream and downstream processes.
- c) Creating simple solutions that work.

A system architect handles abstractions with ease and addresses the issue of random complexity by replacing it with structured complexity. The realm of system architecture works from the premise that complexity in itself is not bad but one must necessarily have a firm handle on the evolution of complexity. The fundamental preambles of system architecture and system engineering, also propound that it is always prudent to minimize the fan-out and the cross-coupling between system elements so as to minimize interface problems. The heart of handling a complex non-linear system is to understand, map and manage its interfaces as it is through these interfaces that the system delivers its promised value. Indeed the degree of modularity and integrality is one of the moot points that system architecture and engineering practitioners grapple with all the time. The real challenge however is posed by the nature of system that is being architected as no two systems are alike though they may adhere to certain heuristics and basic engineering premises. In this context, system specific heuristics form the cornerstones using which the architecture takes form. Heuristics in themselves are simple thumb rules that have embedded in them a huge repository of experience. In the same breath one can safely say

that developing heuristics is also one of the important and solemn spin-offs of a creative architectural exercise.

The most pivotal component of the systems approach is the concept of the system itself. The appropriate definition of the system in effect draws the system boundaries and defines the interfaces with the external environment. The internal decomposition of the system into its subsystems/elements/units further firms up the inter-relationships between its constituents and the internal interfaces. The overall systems delivers value to the end user or the beneficiary through the coherent functioning of each unit through the exchanges between its interfaces that ultimately delivers the output that each component alone could not have achieved on its own. Thus we can see that the system has an inherent property of “emergence” (of the final value) that occurs due to the functioning of the interwoven components of the system as a collective whole. The notion of structure is also quite common amongst political scientists and the work of Kenneth Waltz is monumental in that direction. Since eventually we would seek refuge in political science and the views of political scientists on the issue of apparent intractability of territorial disputes, it is sanguine to review the thoughts of some about systems and structure in general. According to Waltz (Ref 3; Pg 139), a system is composed of structure and of interacting units and the structure is a system-wide component that makes it possible to think of the system as a whole. In the same breath Ref 3 quotes the French Social scientist Durkheim on his views on systems. In his words, “whenever certain elements combine and thereby produce, by the fact of their combination, new phenomena, it is plain that these new phenomena reside not in the original elements, but in the totality formed by their union”. A system, then, is this new totality formed by the union of parts,

a totality enjoying a “specific reality which has its own characteristics”. What was being referred to is the emergent behavior of the entire system through the sub-systems interactions that each individual is not capable of delivering on its own can easily see that the social science has a considerable intuitive understanding of the system and its behavior and the way it delivers its functionality.

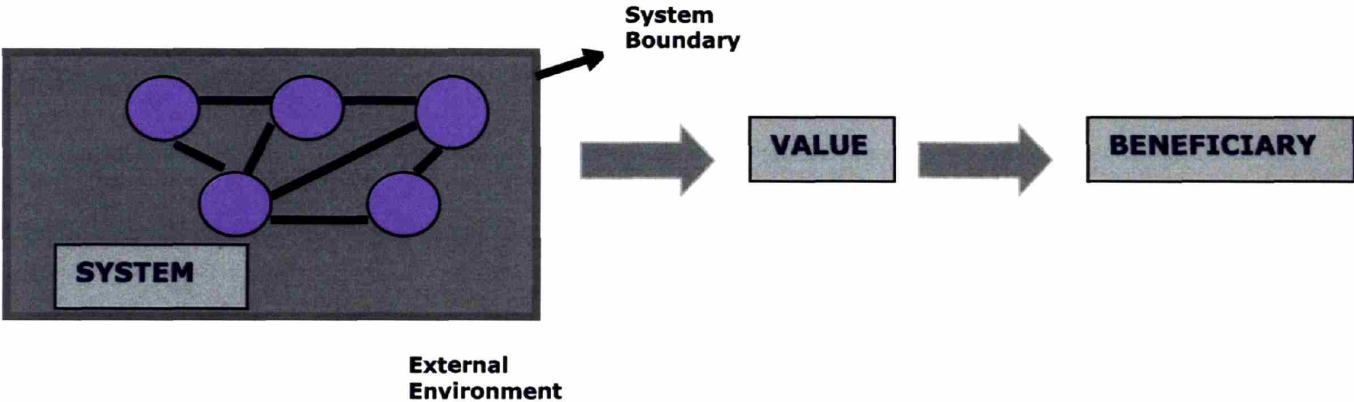


Figure 2: Concept of system, value and beneficiary

At the heart of the architecture of a system is the basic underlying concept of value identification, value capture and value delivery as shown above in Figure 2. The value is delivered by any system through its functionality and the functionality is nothing but the physical manifestation of a form and process. Thus the architecture deals upfront with the final form that the system would take along with the processes that it would go handle in order to deliver value to the end beneficiary. The ultimate deliverable of a system architect is the functional decomposition (at least two levels down), concept for the system that is being architected, a design for the final form of the system with at least two layers of decomposition, a notion of timing, costs, risks, implementation, operation and

the evolution plan (Ref 4). It is well understood that the function maps to a form through a concept. This is what exactly an architect tries to create. A concept basically is the vision or a mental image for the system that maps the function to a final form. Whereas architecture in general is all about getting into the details of how the form is mapped to function. The architect fundamentally gears his efforts towards creating an emergent capability but only at the interfaces. Architecting does not encompass controlling the constituent components of the system. It is true that architecture is created twice; once in the mind of the architect and then in the real world. It is an abstraction of the real life process much upfront before the design and is a foundation on which one develops concepts and delivers value to the end beneficiaries as shown below in Figure-3.

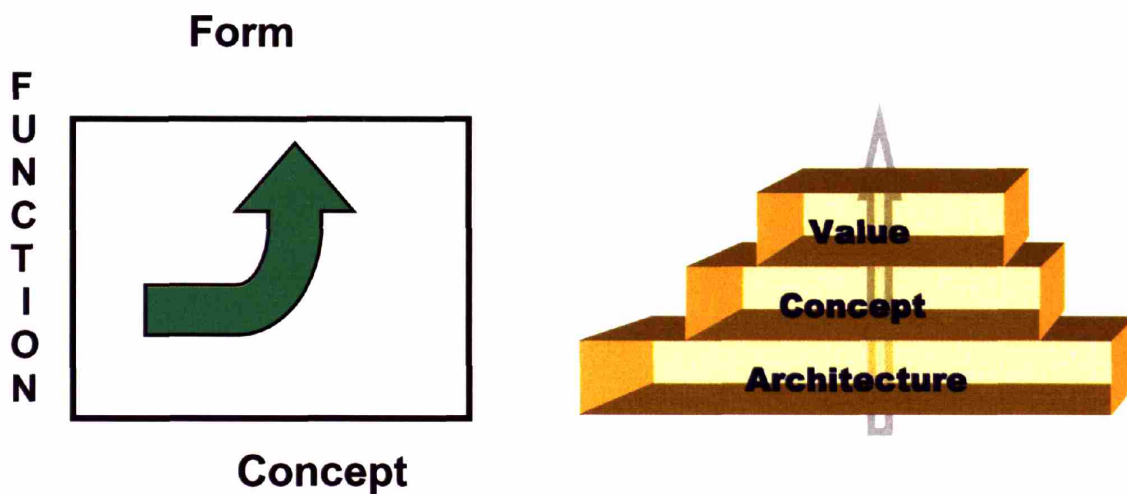


Figure 3: Form to Function Mapping

While talking of resolution of conflicts, there are primarily two major approaches that can be found in reality namely; position based resolution and interest based resolution. Hence, an important facet of the conflict is the basic fact that whether it is indeed an issue of

position rather or of interest. In the former, collaborative approaches find very difficult to take shape. Fisher and Uri in their classical work (Ref 5), highlight the glaring difference between the two approaches. According to them, positional based bargaining may not lead to a solution whereas an interest based bargaining approach may ensure the joint well-being of both the parties should an agreement be reached. The promise of mutual benefits (win-win situation) increases the urge of each party to look for a solution rather than back out of the resolution effort. In a territorial dispute system, both the parties have their own positions which are again causal in nature and not an act of a grand design. Embedded in such systems are the substantive issues and the relationship based entities. Table I below shows the constituent element of each (Ref 5).

Substantive Issues	Relationship issues
Terms	Balance of emotion & reason
Conditions	Ease of communication
Price	Attitude of acceptance or rejection
Dates	Relative emphasis on persuasion or coercion
Numbers	Degree of mutual understanding
Liabilities	

Table I: Substantive and Relationship issues

What we see is that the relationship issues are very qualitative and subjective while the substantive issues are more tangible. This makes it difficult to come up with a most desirable value for the elements under relationship issues that once again brings up the indeterminacy aspect of the problem domain. Fisher and Uri (Ref 5) highlight that good relationships lead to good substantive outcomes that further makes good relationship better. The same is shown as a figure 4 below.

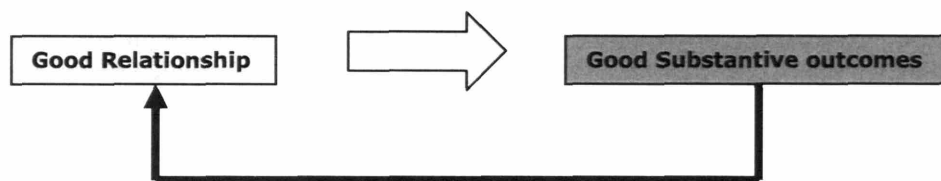


Figure 4: Relationship to outcome feedback loop

The process of negotiation is mainly between the parties and does not involve any outside agency. It is normally the first method attempted by many parties at dispute. Mediation is a process wherein a third party (that is deemed as neutral by the stake holders at dispute), mediates (facilitates) but takes no part in the actual deal that emerges. The mediator mainly acts as a common bridge to facilitate the initial communication and assists in breaking down the barriers. In contrast, arbitration relies on the third party to take a final decision after facilitation and listening to all the sides. There is no hard and fast rule of selection and what works and what doesn't. The final choice depends on many factors of which the trust levels and the relationship between the disputing parties play a pivotal role. One of the very classical concepts developed in this area is the BATNA (Best alternative to a negotiated agreement) proposed first by Fisher and Uri (Ref 5). It is the

threshold below which a stakeholder will not go. Anything below the BATNA is worth not being negotiated at all and a “No- Deal” should then be acceptable. War can also be a BATNA in many cases as an alternative to an unacceptable proposition. In fact as per Uri & Fisher (Ref 5; pg163) when war does occur it is actually a move within the ambit of negotiation. The violence is intended to change the other side’s BATNA or their perception of it, so that they will more readily agree to the terms of peace that are put forth. Thus it is quite common for the opponent’s BATNA to change during the course of negotiation and its important for the parties involved to judge the other party’s BATNA as they engage in negotiation.

Motivation

Territorial disputes have a great propensity to escalate. They are a great drain on the economies that are cursed with this scourge. Disputes over a territory have the latent ability to become flashpoints of future conflicts, seats of negative regional influences and harbingers of hostile non-state actors. The entire world today has a large number of well-meaning individuals and global institutions besides scores of NGO’s that are contributing their might towards alleviating the ill- effects of territorial disputes and to bring about a peaceful resolution. However, experience has shown that despite serious attempts by the global community, these regions continue as cauldrons of disruptive forces that continue to grow in stature and negativity. The motivation for tackling this highly complex problem stems from the basic belief that technology for technology sake is meaningless, unless it can improve the quality of life of a common man. The engineering and technology oriented community is empowered with many valuable tools and frameworks

that encourage rigor and intuitive thinking without getting fixated on the solution or the problem domain. The tools and frameworks of systemic thinking and system engineering lend objectivity to any analysis and hence can contribute immensely in understanding the epistemology and taxonomy of a dispute system. The object- process methodology and the design structure matrix are powerful representations of the ground realities in a very graphical and an effective manner that facilitate crisp understanding. The language and the syntax that system engineers use can also be a very useful communication tool to accentuate the value delivering functionalities along with the related processes not to mention the creative ability to handle abstractions and developing concepts. This will certainly bring brevity in the interactions between practitioners and further the understanding of the dispute system. Undoubtedly, the main thrust in this treatise is on deeper and holistic comprehension of the problem and its ramifications on the downstream processes namely the design and the implementation of the design.

The treatment of these regions as a dispute system (many have done so before) makes it amenable to a structural or functional decomposition followed by a study of the interactions between the units within the system which may then provide some insight into the causalities. The identification of the right stake holders itself poses a sizeable challenge and so is the study of the patterns of interactions between the stakeholders. Thus a system-oriented approach to the analysis of a dispute system would lead to a more rigorous and intuitive understanding of what makes these conflicts seem intractable and what lies at the core of this seemingly bottomless pit of disdain and despair. It is in this context that the systems thinking paradigm would hopefully bring a new perspective to the problem and help in architecting and designing a plausible dispute resolution

framework. There is a strong motivation to develop an intuitive treatment on the subject using the tools of systems thinking that would empower and sharpen the saw of the resolute individuals that are pursuing the goal of conflict resolution relentlessly.

Finally to demonstrate the efficacy of such an approach, a case study on the Kashmir dispute has been carried out. This classical territorial dispute for more than past five decades has been chosen due to the fact that the author has served in the region of dispute and thus has a first hand knowledge of the socio-economic-political scenario on the ground. The sensitivity of Asia as a continent in the current era of globalization and the threat of Islamic terrorism also makes this an interesting study given the fact that the region of Kashmir has deep rooted ethnic issues at the core besides other problems.

Objective

There are multiple objectives of this work. The core objective is to understand the epistemology of a territorial dispute system and create an architectural framework for the design of a resolution system. The other spin off of this study is to demonstrate the strength of systems thinking approach in tackling the highly non-linear and complex socio-economic-political systems. To prove the efficacy and the strength of such an approach, a case study on Kashmir territorial dispute has been carried out. The realm of dispute resolution has evolved considerably thanks to the relentless efforts of the practitioners and the members of the academia. This work intends to take a step further in that direction albeit with a different school of thought.

CHAPTER II

Epistemology of a Territorial Dispute System

System of Systems

The treatment of the territorial disputes on a systemic level allows us to look at the complete mosaic in holistic terms. The aim of this chapter is to clearly comprehend the internal workings of a dispute system as a whole and try and find the reasons behind its apparent intractability and its enduring nature. In fact, a dispute system does not stand alone in isolation but in effect is embedded in the socio-economic realities of each period. It is a bundled group of nation states in conflict encircled by a series of external systems. To refer to it as a system of systems would by no means be a fallacy. Each constituent element in a system of system is a system in itself comprising of separate internal sub-systems, units or components. The figure below highlights this aspect when a territorial conflict is treated as a dispute system. Each nation state is a complete system with its own boundaries. Taken together they constitute a system of systems operating within a much larger regional system which in turn is bounded within the world system (super system). The concept of system of systems is contextual and can be extended depending on the unit of analysis. While doing so, the system boundaries change thereby defining the exogenous and the endogenous constituents and processes.

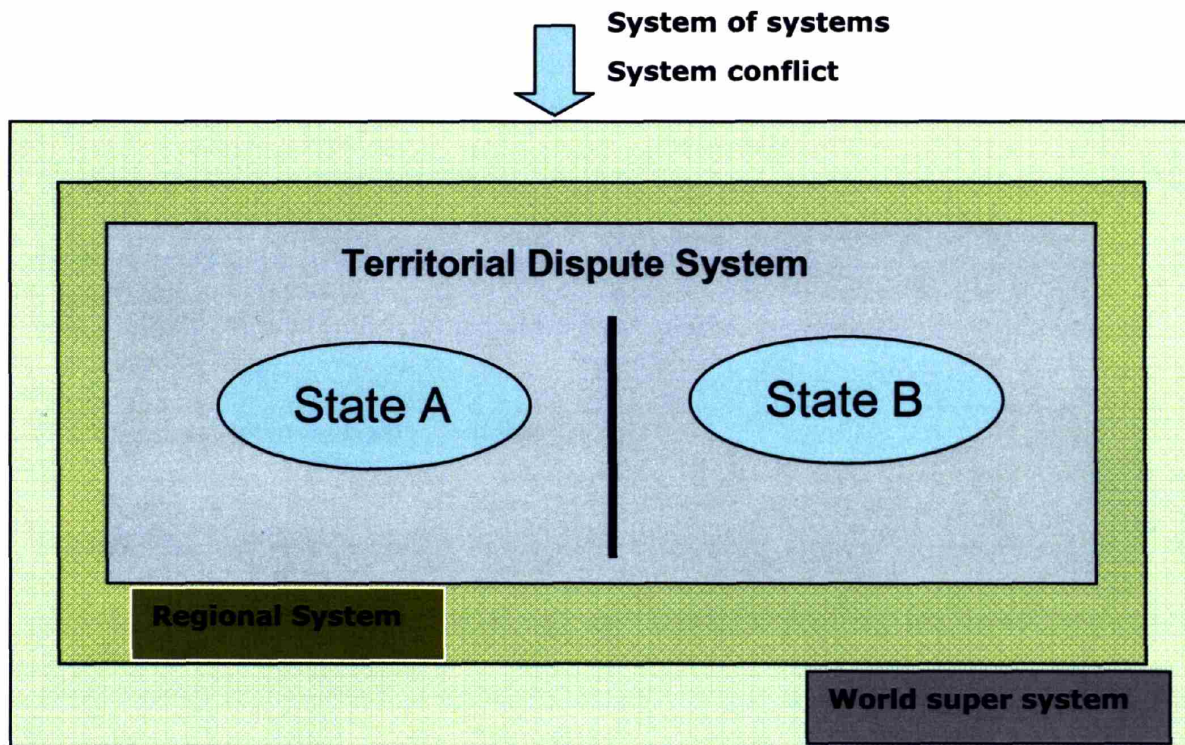


Figure 5: Territorial dispute system

In engineering parlance, when system requirements are in conflict with each other, it is termed as a system conflict. It fundamentally represents a situation when one parameter improves at the cost of another. The outcome of the territorial dispute that favors any particular nation state is perceived as a loss by the other. Thus intrinsically the issue becomes one of position (zero-sum game or a win-lose situation). Therefore, a dispute system is essentially analogous to such a system conflict situation and on its face value can be dealt with in a similar manner as one deals with technology systems having such conflicts. However, the biggest differentiator here is the fact that a dispute system is not a

technological product with clearly defined boundaries, but rather a reality that has socio-economic-political processes at its core. It is this that lends to the system a persona of indeterminacy as the inter-unit boundaries are vague and perception driven. Abstract as it may sound, the central issue remains that a territorial dispute is a systemic problem that is causal in nature. It is a product that is not architected by design and desire but chiseled by the un-heeded need of the constituent elements of the system.

International Relations and Anarchy

International relations is another domain that we shall now examine at a cursory level so as to be able to have a base solid enough to be ready to dwell on the main theme of this work. Central to the theory of International relations is the concept of anarchy implying lack of central rule or authority. In the international arena there is a state of anarchy with none having the authority of the legitimacy to enforce. In this frame of reference one may consider legitimacy as nothing but authority with power. Thus as a world we are consigned to a condition that promotes self serving actions by each state (the constituent unit of international relations). In this self help system there is a tendency to balance power (Ref 3). Nation states collaborate for a variety of reasons in the global polity and at the core of it is its own survival. Not all actions of the nation state may be in line with the global good as it furthers its own national agenda. Thus with no global governance authority in place, the stage is set for a confrontational posture when the states do not agree on a particular aspect of their relationship. This disagreement may only be the outward physical manifestation of some latent cleavage between the states and hence is causal and not the reason. As was put by Kenneth Waltz, **“International collaboration is**

shaped primarily by the availability and acceptability of the means not by the desirability of the ends”. Thus its just not the mere question of solving global disputes; the rational and the methods of doing so must also be fair and perceived as fair and legitimate by the external environment (the world in this case). A deeper understanding of the way the social process are shaped in the international arena and the norms of collective behavior would definitely provide us with a better lever on the more abstract nature of the problem that is responsible for according territorial disputes the garb of intractability and longevity. In the quest, we would essentially touch upon the premise of Institutionalism and Social Constructivism and would dwell on it as we deal with it. It would help us in architecting forms and processes that would reinforce certain social behavior and suppress some undesirable ones. In a nutshell, what we are looking at here is an amalgamation of the International Relations theory based on the political scientist’s view and the more objective and rational lens of the system architect tempered by an engineering paradigm. This hopefully will enable us to come forth with a plausible template for the design of conflict resolution framework and bring about a conversion of dispute systems into resolution systems that deliver value to all its stakeholders.

Ruggie (Ref 3) cites the work of Kenneth Waltz, while explaining the analogy between a territorial dispute and market failure. According to Waltz, a territorial dispute is in many ways a form of market failure. The physical manifestations of a typical market failure are monopoly, trade imbalances and unfair trade practices that benefit a single party. In such a case the state mechanism has an authority and legitimacy to intervene to correct the skew in the market. A long standing territorial dispute is akin to a market failure in international relations with no central authority empowered to step in and correct it. The

state of anarchy allows the dictum of self-help to attain primacy and each nation state thus acts in accordance with its own set of beliefs and values that assure it of its survival be it in literal terms or the political survival of the state authority. Thus a territorial dispute system emerges as a system conflict situation that inherently poses itself as a positional conflict and has many tacit relationships based processes at its heart. As we delve deeper into the dispute system, we shall explore in greater details the reasons behind such disputes having long lives and appearing insurmountable despite well meaning efforts of the constituent nation states that are in conflict and the international community at large. This would later allow us to examine the basis for architecting a resolution system on a more concrete footage.

The World as a Super System

In dealing with systems, be it technical, social, political, economic or a combination of these, one cannot negate the impact of the surrounding environment on the systemic behavior and outputs. In fact, the manner in which the system is defined decides the scope of the system level integration and the idea of what is intra- system and what is external to it. In the context of a dispute system, we have shown in figure- that it is embedded in an outer regional system further circumscribed by the world system or the super system. The dispute system thus resides in a super system and has exchanges with it through the system boundaries as shown in the figure- below. As has been briefly touched upon in the opening paragraphs, international relationships are based on the balance of power preamble thus making the nation states of a dispute system creating such alignments that favor its stance and internal interests. The nature of interactions of the constituents of a dispute system with the world at large essentially defines their

perceived standing in the global arena and shapes the extent of their acceptability to the world community. On this rests the trade and other aids/ grants that flow as a part of this alignment.

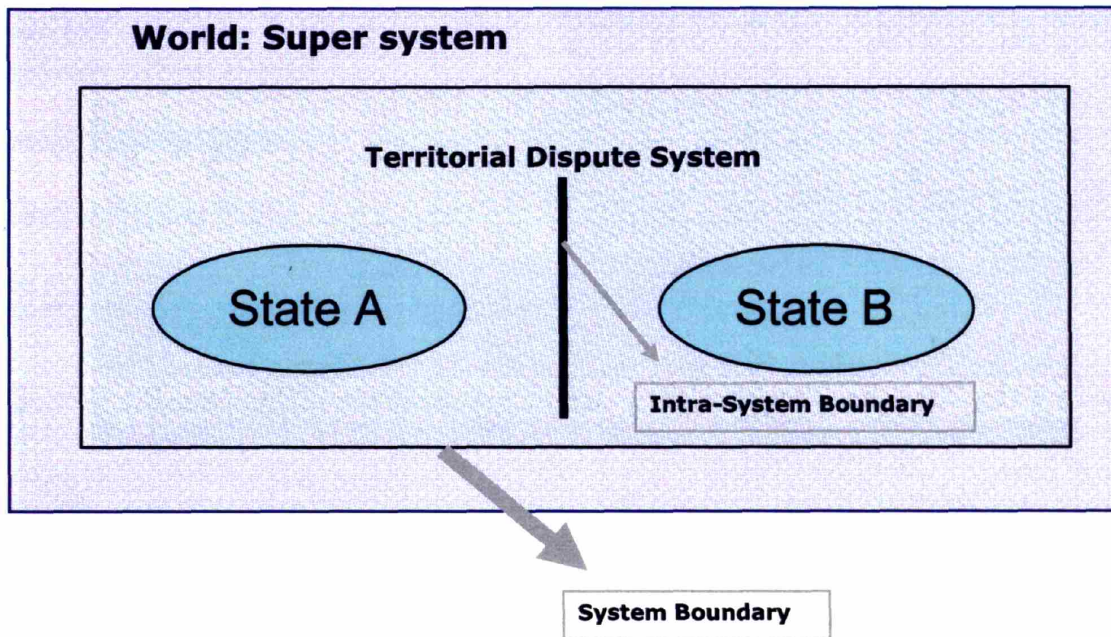


Figure 6: World super system

It would worthwhile to list out the changes that have occurred in the super system and in the light of that view its impact on some of the known dispute systems. With this we now take a look at the world as a super system and the changes that have occurred in it.

1950	2006
Bi polar world /Cold war Concept of globalization non-existent No global threat of terrorism Impact of information technology not been felt Asia not nuclear sensitive Era of trade protection Inactive GATT/ WTO	Uni-polar world / end of cold war. USA acquiring hegemonic status. Globalization era Global threat if terrorism Information technology a big enabler Asia nuclear sensitive with India, Pakistan and China as nuclear states Era of trade liberalization and market driven economy WTO regime active Iran, North Korea and Iraq new nuclear arms proliferators.

Table II: Changes in the world super system

The table II above shows that the world super system has undergone many changes structurally and ideologically over a period spanning more than five decades. In all these years the disputes in Kashmir between India and Pakistan in Asia, Israel and Palestine in the Middle East and since 1983 between Sri- Lanka and the Tamil dominated LTTE (Liberation Tigers of Tamil Elam) persists without any end in sight. The repeated appeals and efforts of the International community and institutions like the United Nations has yielded little results. To top this up we have the Sudan genocide in Darfur in sharp focus where the divide between the North (Arabs) and the South (Christians) has precipitated another dispute about legitimacy and freedom. Not to mention that the world also witnessed Chechnya and Bosnia in the time span that we are discussing here. While in the same breath the super system also saw the crash of the Berlin Wall and the fall of the Communist Russia that resulted in a uni-polar world after a long time with United States

of America emerging as a hegemon. The moot point that one needs to ask here is whether the super system and its changes had any impact on these dispute systems that we spoke of. The answer is a strong negation. It is not surprising to see this state as we have seen in our introductory treatise on International relations, that the world as a system has no central authority though today it may have a hegemon in the form of USA. Hegemonic status may accord some power in the international arena but that still is functional within some pre-defined precincts of international diplomacy and relations. Thus the anarchic structure precludes any strong action by the world body to step in to resolve the long standing territorial disputes. With great difficulty and after a painful wait (at the cost of many lives being lost to the genocide), the United Nations has now been able to garner support for sending a UN force to Sudan. This reflects the sensitivity and futility to a large extent of the super system to impact the dispute systems tangibly. If the world body at large cannot craft the architecture for resolving some of these most painful and potentially inflationary territorial disputes, who then would be able to adorn that role and under what circumstances is a very fundamental question that is reasonable to be posed. This is an issue of scoping in the lingua franca of system architects which concerns with the task of identifying the right stake holders in the game of conflict resolution. What would be the shape of a plausible resolution system architecture given the pre-disposition of the external world system to ineffectiveness (anarchy at play!) is something that this work aims at establishing in a modest way through the lens of system architecture and system thinking paradigms. It is strongly evident that there are some very strong forces and processes at work within the dispute systems that have much higher energy to sustain itself than the forces and processes at play that are trying to neutralize them. Whether

these processes and forms that execute those processes are internal to the dispute system or take shape in the external environment would also help in understanding the anatomy of such conflicts. Thus it is imperative while architecting a resolution system that one first understands the epistemology of a dispute system (in the light of architectural constructs) in order to devise ingenious ways to lay out the template of a sound conflict resolution architecture.

Asymmetries in Territorial Disputes: the causality polygon

Territorial disputes are the outcome of many underlying processes that take place within a dispute system. The reasons for these conflicts to spring up are many but the most generic ones are:

- a) Conflicts in beliefs/ regime's ideologies
- b) Ethnicity
- c) Resources
- d) Past history/Excesses/ arbitrary actions
- e) Strategic alignment

These can be symbolically be represented as the “**Causality Polygon**” as shown below in figure 7.

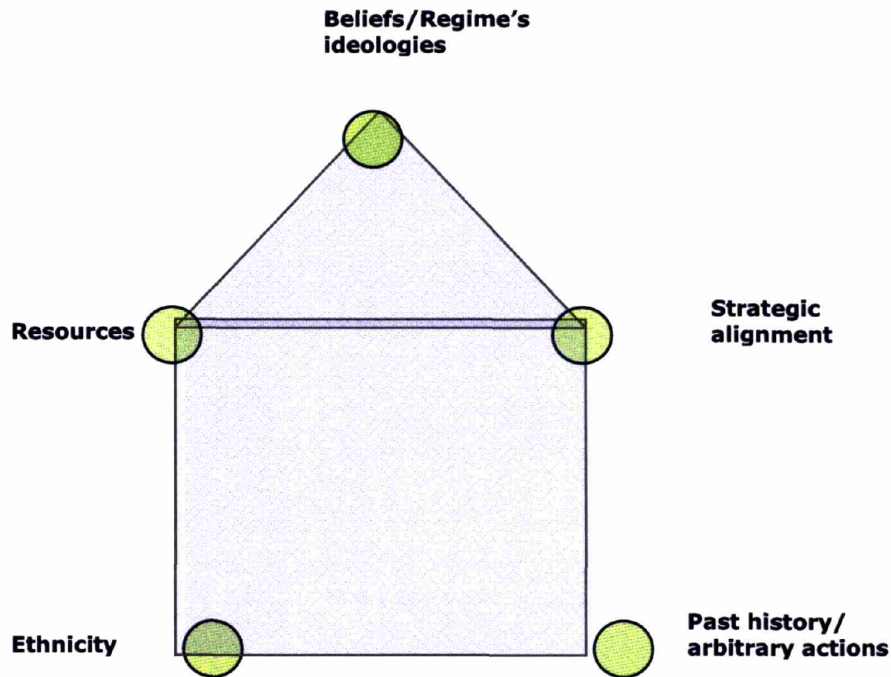


Figure 7: Causality polygon

On closer scrutiny of the above causalities, we can easily group them under social, political or economic domains. For the sake of our study, all the security related issues are lumped under the political domain. The same is shown in the table 'III'.

It is rather intuitive to comprehend that at any given moment different causalities could co-exist in any territorial dispute, while in the same breath, we may find a particular reason belonging to all the three or more than two domains. By domains we mean the social, political and economic areas.

Reason	Asymmetry/Compulsion
Conflicts in beliefs/ regime's ideologies	Ideological asymmetry (Social)
Strategic alignment	Economic & security compulsions (Political & economic)
Ethnicity	Beliefs & ideological asymmetry (Social)
Resources	Economic, social and political asymmetry
Past history/Excesses/ Arbitrary Actions	Ideological asymmetry (Social & Political)

Table III: Domains of conflict

The figure 8 below highlights the coupling aspect of the various domains. Thus it is these multi-faceted interactions having many tacit feedback loops that make the dispute system a highly complex non linear system.

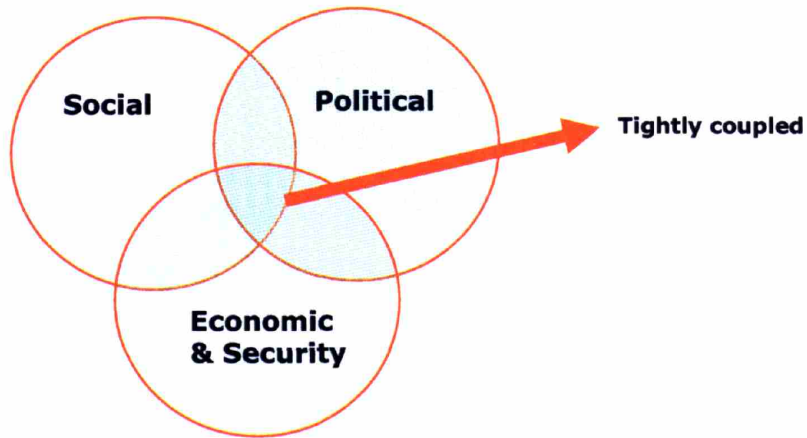


Figure 8: Coupling of political, social and economic domains in territorial conflicts

Are Nation States Hardwired for a Dispute Situation?

As we dissect the territorial dispute system with a quest to understand it better, it would be worthwhile to ponder over the fact whether as a world super system we are pre-disposed to a conflict situation. We have already seen that there is no central world body with authority and legitimacy to enforce state behavior. There is anarchy at the level of international relations and each constituent nation state takes such steps that ensure its survival and well-being. Thus as a world we are consigned to a condition that instills or promotes self serving actions by each state (constituent units). In this “self help” system there is a tendency to balance power (Ref 3) which puts nation states at loggerheads in many regions. The second pointer towards this fact is based on the reasoning that from strategy emanate the goals and strategy per se is determined by a set of core values and beliefs. The architecture which is more tangible compared to goals stems from the needs of the system that is being developed. Thus any set of goals for dispute resolution (product case) emanating from a diverse set of beliefs/ regimes would encapsulate a prejudiced strategy and would most likely lead to an ill-defined goal. Any conflict resolution framework being architected around these incongruent goal sets would undoubtedly manifest in a skewed architecture for the design of a dispute resolution framework. This is shown in figure 9.

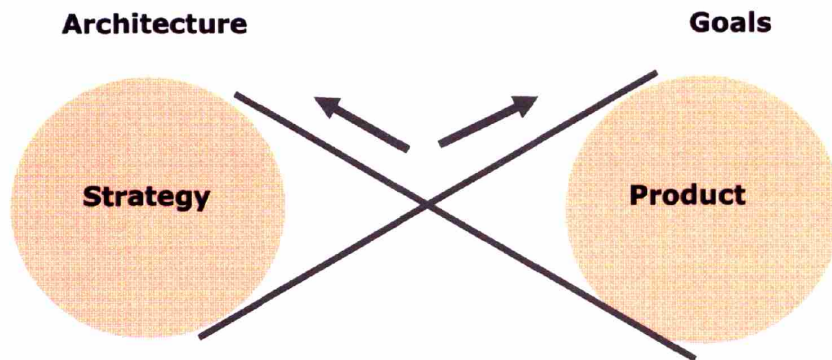


Figure 9: Relationship between goals and architecture

As per Kenneth Waltz (Ref 3), International collaboration is shaped primarily by the availability and acceptability of the means not by the desirability of the ends. What precipitates by this discussion is the subtle understanding that as a world order we are hardwired for conflict situations unless we take conscious specific actions to nullify it. The statement by Waltz is a pointer to the enduring nature of these disputes since the world appears to be more fixated in search of justified means rather than the end results. This is a dangerous pre-disposition with far reaching ramifications. It forces us to pose some hard nosed questions with regards to the sincerity, credibility and the capability of the world order in general in trying to find a way out of the quagmire and the nations states in particular that are afflicted by such conflicts.

Structural Decomposition of a Dispute System & the Conflict Triangle

Figure 10 shows the four-layered structural decomposition of a dispute system. The major stakeholders of such a system are the:

- a) The two nation states
- b) The disputed territory

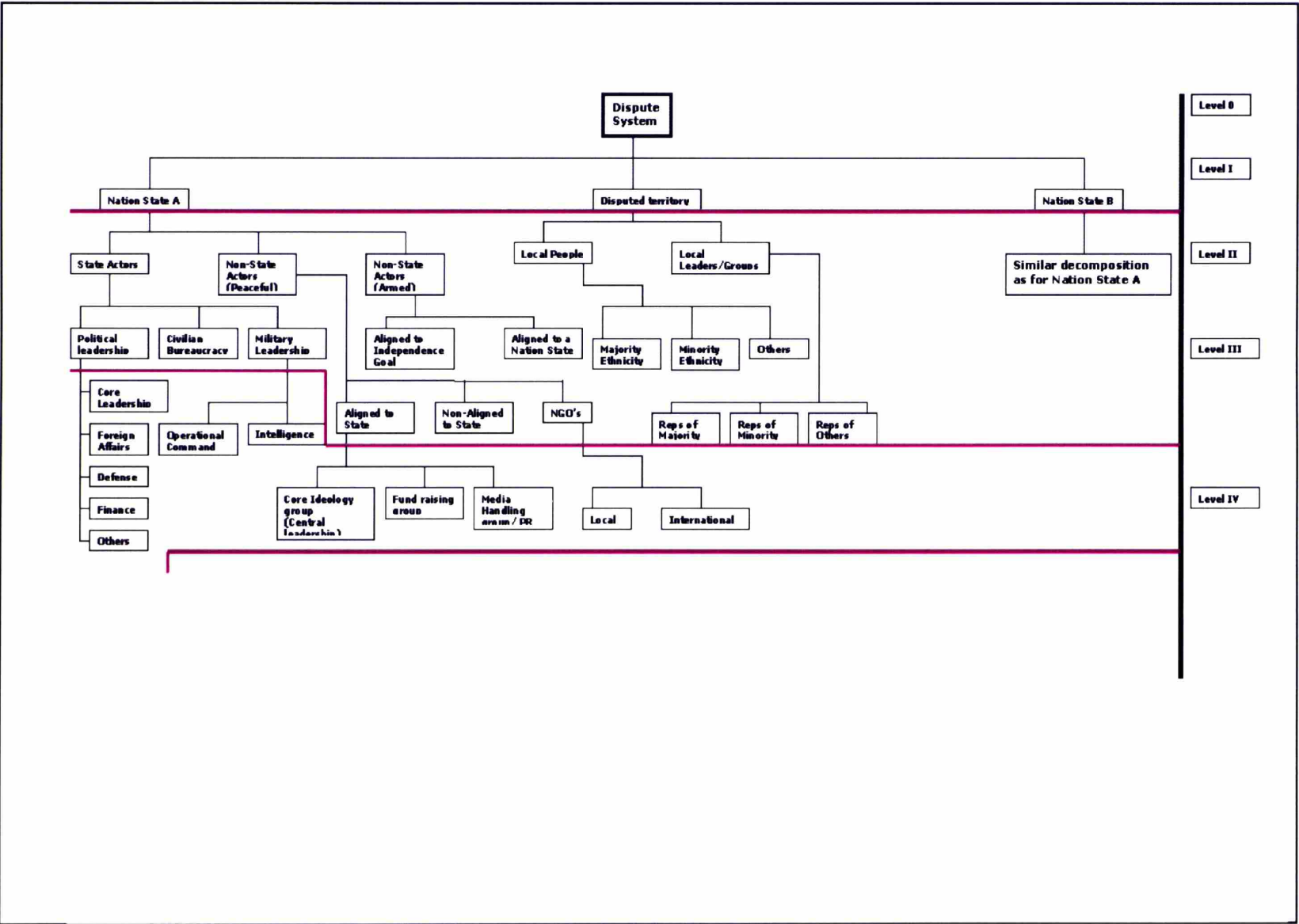


Figure 10: Four Layer Decomposition of a Dispute System

In our initial decomposition we have ignored the externalities in the form of strategic foreign alliances and its impact. From the picture that emerges on close scrutiny of the decomposition chart, we see is that as we go to the lower levels of the decomposition, we essentially are getting more into the functionality. The state actors are the elected central leadership responsible to the people for the deliverance of political goods. It is the legitimate arm of the state with authority to execute policy decisions. The non-state actors are the un-elected entities that dominate the socio-political environment and that have a say in the shaping of public perceptions and thus impact policy decisions. The other active non-state actors are the armed groups that believe in the principle of an armed struggle to bring about the change they wish to have. Over a period of time many such groups emerge some aspiring for a complete freedom and some demanding merger with one of the nation states. These armed groups are generally quite polarized in their opinion. The non-state actors that are moderate and prefer a peaceful process to further their ideology, once again are a polarized group ranging from pure freedom aspirants to the ones preferring to merge with one of the nation states. The people of the disputed territory also props up local leaders and pressure groups with some authority and legitimacy that cannot be ignored by the state and the non state actors. It is important to appreciate the fact that the goals of these stakeholders may not necessarily be aligned which in itself may be a great contributor to the intra-state systemic conflicts. Thus systemic conflicts exist within the dispute system and also within the nation state that are systems in themselves. This once again reinforces the fact that a dispute system in effect is a system of systems. In the light of this discussion on the decomposition, one can also

think in terms of the key elements in a dispute system, that forms the vertices of the “**Conflict Triangle**” (figure 11).

These are:

- a) The State actors
- b) The Non-state actors
- c) The disputed territory

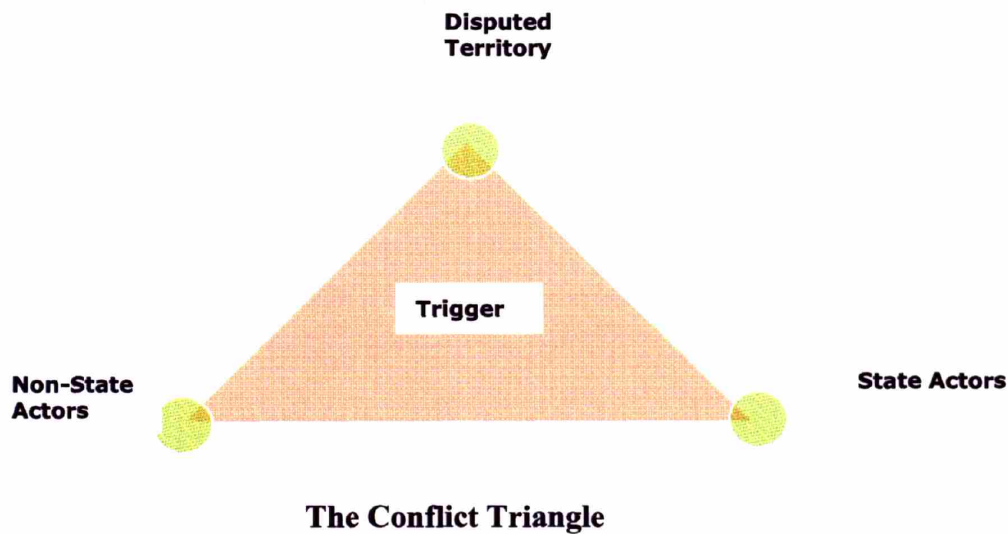
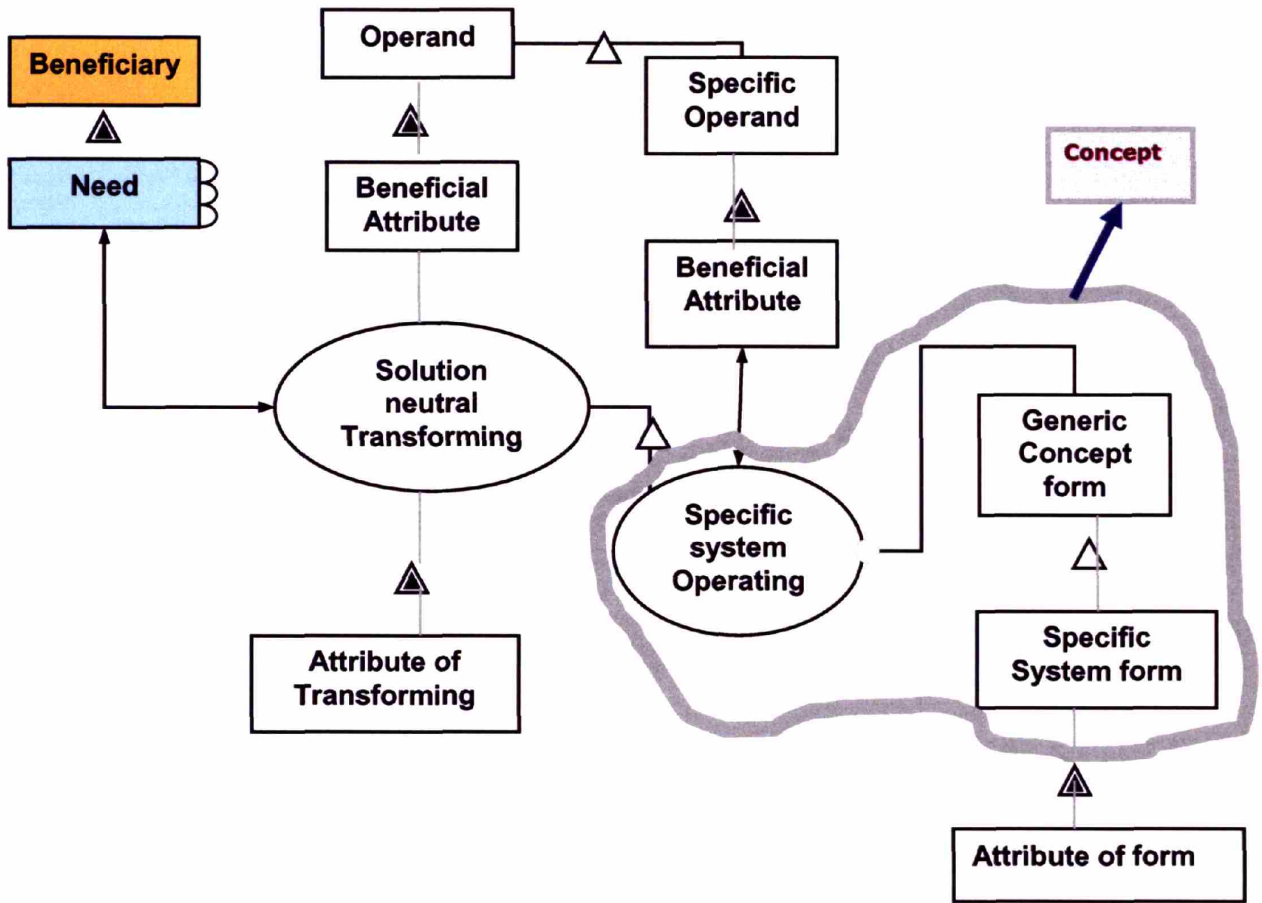


Figure 11: Conflict triangle

The Concept of Object Process Modeling (OPM)

An OPM is a primarily a tool to depict all the objects, processes and their inter-relationships in one model. It can be created for any type of systems and its use is limited only by the user’s creative ability. It is one of the many ways to communicate about the overall system attributes and brings the processes into sharp focus. This method also

sharpens the thinking process and facilitates abstraction in a very elegant way. Given below is one of the methods of representation when one looks at the entire spectrum of the system starting from the need to the final form. This representation is termed as the Need- Intent-Process-Form format and is shown below (Ref 4).



Need

Intent

Process

Form

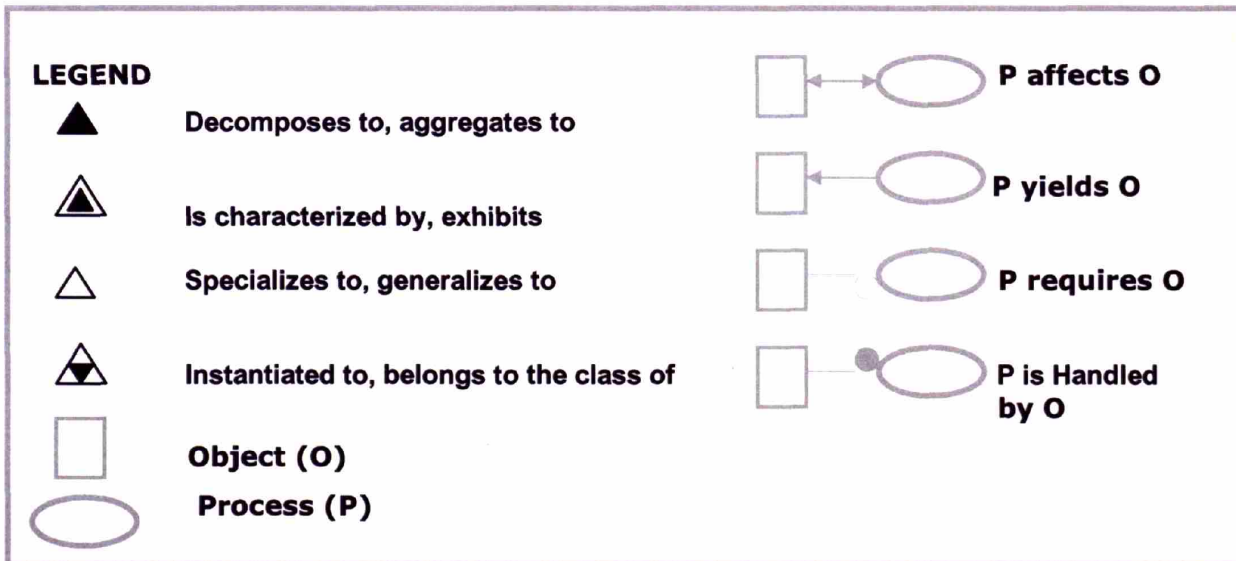


Figure 12: Object-process modeling (OPM)

The specific system operating process along with the generic and the specific concept form yields the overall concept as shown in the figure- . The system value is delivered when the external process acts on the operand in such a way as to satisfy the beneficiary's need, interpreted as intent. The combination of the intent and process delivers the final functionality. In our treatment of the dispute and the resolution system in the succeeding paragraphs and chapters, we shall employ the OPM as a tool to communicate.

Object Process Model (OPM) of a Dispute System

The figure below depicts an OPM of a dispute process in its most simplistic form. The conventions and notations used in the figure are as shown in appendix A. The process of disputing shown below is the system specific operating process. This process in a dispute system primarily requires a trigger (shown as an object). The trigger is basically an impulse that precipitates or exacerbates the existing (but latent) fault lines or cleavages. Once initiated, the energies feed into the system and the entropy builds up in terms of players each with their own agenda not necessarily in alignment with each other. The other objects are the State and the non-state actors (armed and peaceful). The process of disputing leads to an impact on the system the extent of which is exhibited by the metrics. The advantage of an OPM is that it shows all the objects and processes involved besides providing with a crisp graphical depiction of the entire system and its constituents.

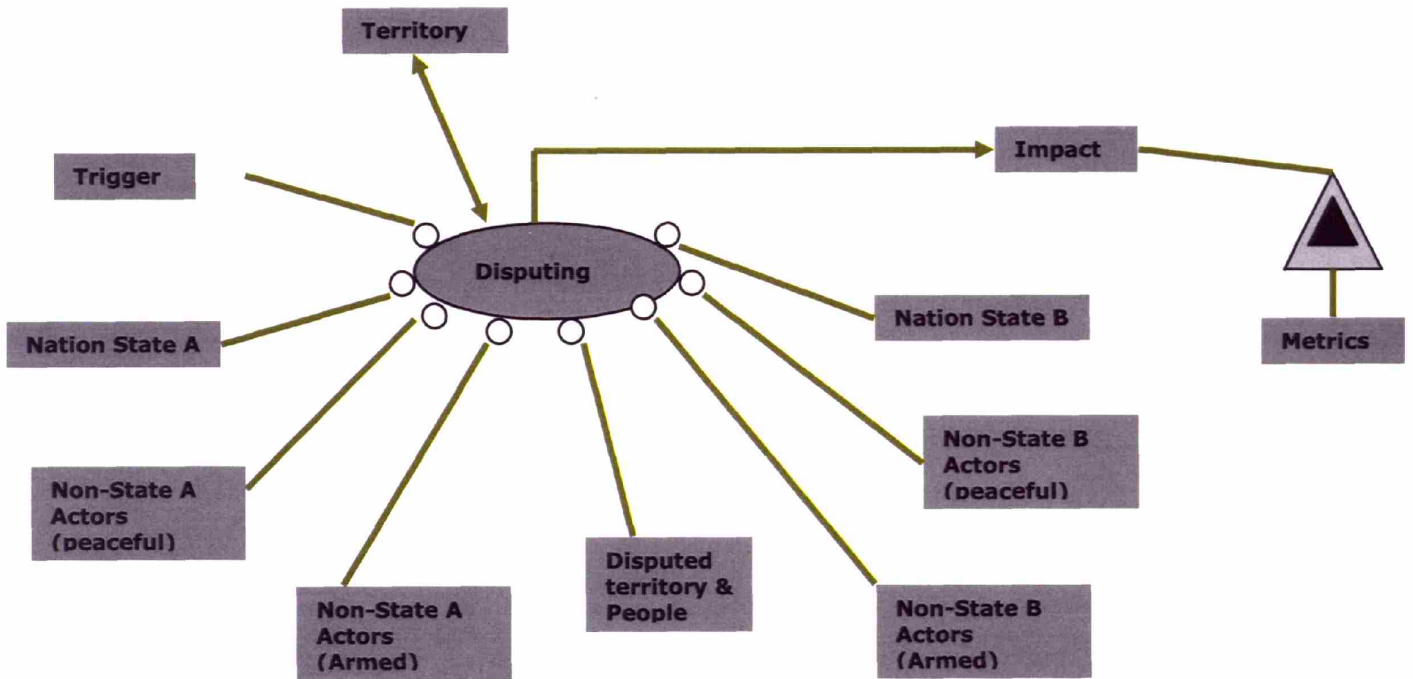


Figure 13: OPM of “disputing”.

The OPM of the process of disputing allows us to ponder over the intricate and intuitive details of a dispute system. The most objective methodology of defining the overall system attributes is by looking at the end beneficiaries and the operators in the system, the value (positive or negative) it produces and the final form it assumes while delivering its functionalities. In terms of the deliverables of the system, we can surmise it as shown in the table IV.

Operand	Beliefs, perceptions, balance of power, Territory.
Operator	State machinery, non state actors, citizens, etc.
Form	Low intensity conflict, war, continued violence & loss of lives & property, poor development on social and economic fronts.
Beneficiary (losers)	Citizens, country, maybe global community too.
Process	destroying, sabotaging, subverting, tarnishing, hindering, depriving, etc

Table IV: Outcome of system study

Any system delivers at its functionality through its form and processes. Though a dispute system is not a system that has been deliberately architected to be so, it still does deliver some output which is nothing but the continued conflict. Thus a dispute system too has many underlying processes that map onto a particular form thereby keeping the dispute on. At this juncture, it would be prudent to examine the various kinds of processes that are at work. Based on a number of iterations one can easily classify the processes in a dispute system under the following generic heads:

- a) Physical damage based process
- b) Trust based processes
- c) Coercion based processes
- d) Information based processes
- e) Scope based processes

f) Time based processes

Figure 14 below shows these multiple simultaneous processes embedded as a subset of the overall process of disputing. Thus the over-arching specific system operating process of disputing emerges out of the collective actions of the embedded processes.

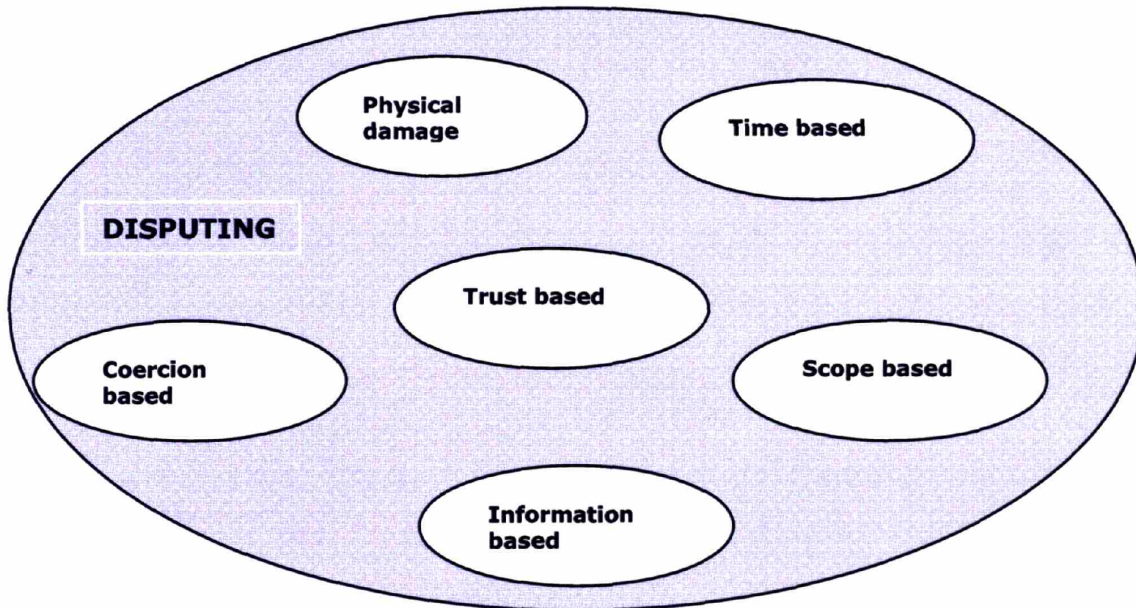


Figure 14: Zooming of solution specific process of “Disputing”.

Each of the generic domains of processes embedded in the overall process of disputing in a dispute system can be further stratified into specific processes that deliver the impact of each of the generic domain.

Physical damage based process	Trust based process	Coercion based process	Scope based Process	Information based process	Time based process
Killing	Cheating	Extorting	Exacerbating	Indoctrinating	Reneging
Destroying	Hindering	Terrorizing	Flaring/ Spreading	Tarnishing	Fouling
Sabotaging	Concealing	Subverting	Back lashing	Concealing	Lingering/Delaying
Demolishing	Tarnishing	Depriving	Shrinking/Reducing	Masking	Avoiding
Harming	Reneging/ Baulking Stalling	Stalling	By-passing	Accessing	Exacerbating
			Masking	Subverting	Stalling
			Changing	Espionage	

Table V: Embedded sub-processes within “disputing”.

NB: Masking is differentiated from concealing in the context of this work in the sense that masking here implies selective concealing; not the whole truth.

As can be observed, the exercise is a highly creative and subjective in nature and can vary depending on who is engaged in this work. This is the characteristic typical of an architect’s output. The quality and creativity of the outcome is solely dependant on the quality, ability, experience, creativity and tacit knowledge of the architect. Fred Brooks (Ref 6), in his magisterial work “**The mythical man-months**” elucidates the concept of “**Conceptual Integrity**”. This propounds that the task of creating an architecture should be limited to a few individuals who are experts in their own rights and whose knowledge bounds span the entire spectrum of the domain. The proponents of system architecture have it etched in their mind maps that the process of architecting is open ended. It is a journey with no destination for each apparent halting point (which to some might appear

as a logical stop) is merely a brief pause before the system sends signals for a change. The extent of the pause is a variant depending on the type of system one is dealing with. Having listed out the sub-processes in each generic domain, we can now try and map these individual sub-processes to the generic and specific forms that finally deliver the output. These forms then would shed some light on the tools and agents that are at work in the overall dispute system. At this juncture, one can intuitively comment that it is quite likely that the final tools or forms may be common to be many sub-processes. We are now headed in a direction that allows us to comprehend the processes, forms, tools and agents or operators (actors) in a dispute system with more rigor and intuitive depth. This excursion of imagination would then be useful when we attempt to juxtapose each and every harmful or unwanted process in a dispute in our endeavor to architect a resolution system. For the present, the attempt is primarily aimed at understanding the many known facts (rather sub-consciously) through a more intuitive lens that might sharpen the saw and provide the terra firma to the practitioners of dispute resolution on ground.

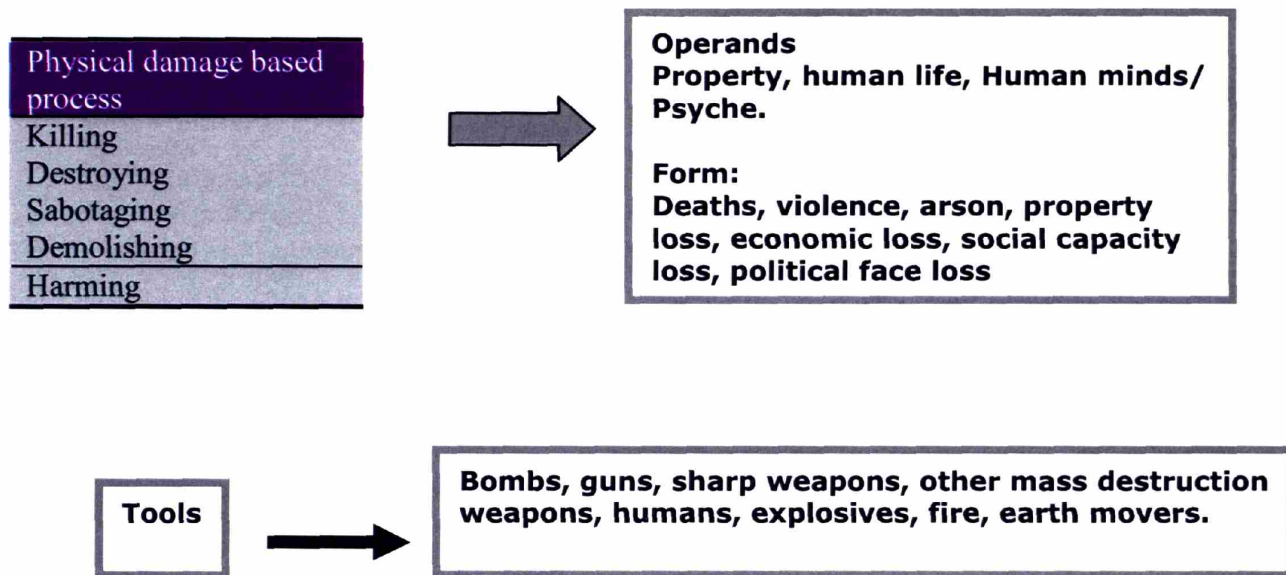


Figure 15: Physical damage based sub-process

Thus to map this discussion in what is known in systems architecture parlance as concept, we depict the same a conjunction of the specific system operating process, the generic concept form and the specific concept form. However, it must be realized that in the case of a dispute system we are merely trying to reconstruct the concept for a system that has actually sprung up not by design but by the sheer confluence of a number of causal factors. This approach will help us in effectively chalking out a concept for the resolution system and purge it with processes and objects that would negate the ill effects of the corresponding entities in the dispute system. The concept that emerges for the dispute system is as shown in the figure 16.

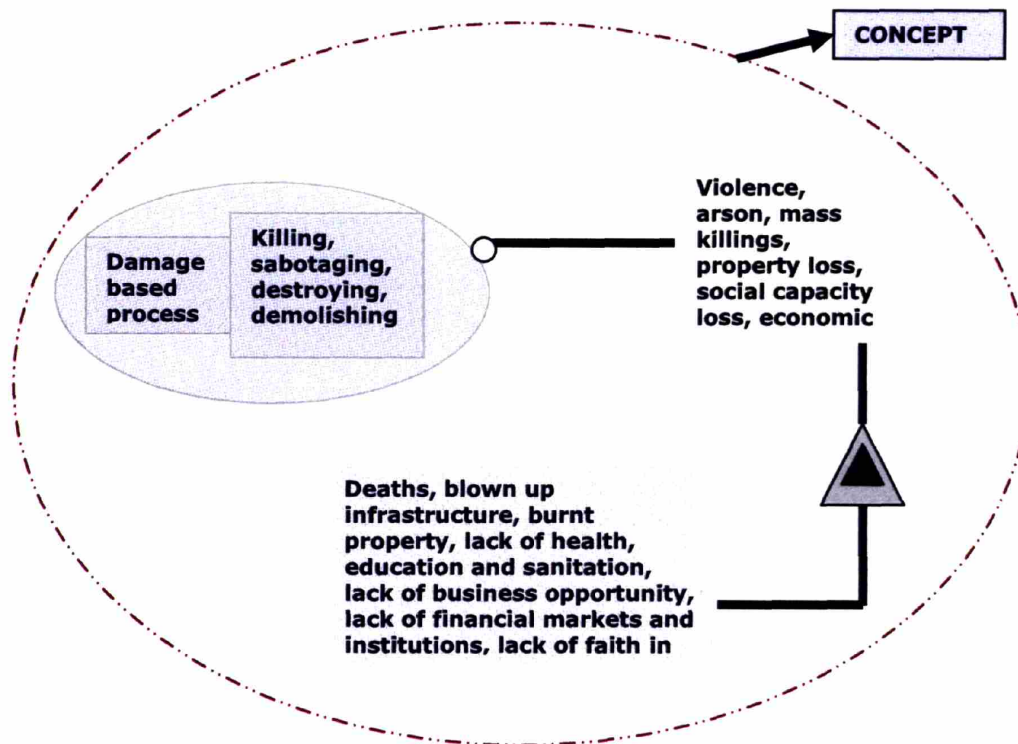


Figure 16: Concept for physical damage based sub-process

The concept allows us to look critically at the final value (even negative value in the case of a dispute system) delivered to the end beneficiary (or losers). It is here that an architect puts his expertise and creativity into practice. As mentioned earlier, for the present, we are merely trying to reconstruct and understand the epistemology of a dispute system to secure a better handle on the problem while architecting a resolution system. Similarly the concepts for each of the other five sub-processes have been developed and are as shown in Appendix B to Appendix F.

Overall Concept Model

In the concept model that was built for each of the sub-process domains in a territorial dispute system, the deeply embedded intangible entities become quite apparent.

Process to Form Mapping

Once again, these concepts were not created by design but rather are already in action in the disputed regions. The sole purpose of this exercise was to depict the entire premise in a system architect's syntax and then employ this syntax for architecting a dispute resolution system. The central idea remains that the process of disputing is not a standalone entity but conglomeration of many underlying sub-processes with social, political and economic ramifications. These processes along with their final specific form deliver the value (negative or positive depending on who is seeing) to the end beneficiaries (or losers again depending on whose standpoint it is). It is now possible to blend the generic and specific concept form and get a bigger picture. This is given in table VI below:

Generic Concept Form	Violence, arson, mass killings, property loss, social capacity loss, economic loss, loss of political credibility, sabotage, terror, espionage, subversion, indoctrination, walk-outs of peace initiatives, religious backlash, unsafe environment, drop in high school enrollment, kidnappings, protests, delayed peace process, disenchanted populace, mass arrests, increased cordon & searches by the military & police force, restless society.
Specific Concept Form	Deaths, blown up bridges, transportation system and housing property, lack of health, education & sanitation facilities, lack of business opportunity and entrepreneurial activity, lack of financial markets & institutions, lack of faith in political leadership, lack of credibility of the state leadership within the global community, terror syndrome, loss of sensitive information to unwanted elements, mislead populace, increased disenchanted populace, broken peace talks & initiatives, poor state machinery response to emergencies, large high school dropouts, large vehicle thefts, large religious protests & demands, excessive high-handedness by police & military, large print media reports, high number of detentions, social unrest, political uncertainty, extended/delayed decision on development projects or total lack of them development projects.

Operands	Human life, property, human minds/ psyche, information, religious beliefs, social values, political leanings & affiliations, economic activities, money.
Tools	Bombs, guns, sharp weapons, other means of mass destructions weapons, fire, earthmovers, humans, paints, covering & camouflaging materials, print media, postal system, telephone and cellular network, internet, compact discs floppy discs, paper documents, vehicles & other forms of transportation systems, money, power, religious beliefs, past events & excesses, political connections.

Table VI: Generic and specific concept form, operands & tools for a dispute system

Stake-holder's Interest Mapping

We now know that there are mainly three main players in a typical dispute system namely; the state actors, the non-state actors (peaceful) and the non-state actors (armed). Each of these stake-holders have a specific stake in the game with their own set of expectations. Resolution to the dispute would greatly hinge on the expectations management of these three key constituents. In the light of this, it would be prudent to examine the interest vectors of these three participants that are generic in nature regardless of the region of dispute. This would also highlight the impact on the legitimacy and the perceived authority of these players should there be a case of “no deal” implying a stalemate situation.

Stake-Holder	Characteristics	In Case of a "No Deal"
State Actors	<ol style="list-style-type: none"> 1. Inability to act contrary to the past political / party ideology / stand. 2. Need for political survival/personal ambitions & aspirations. 3. No desire to share power with non state actors whether armed or peaceful. 4. Distrust of the non-state actors. 	<ol style="list-style-type: none"> 1. Blame the other players for failure of talks. 2. Keeping the cauldron boiling helps create political agenda and survival. 3. Walk away with nothing to lose. Tout the notion that they did not barge an inch for the sake of ideology and derive political mileage through public sentiments.
Non-State Actors (peaceful)	<ol style="list-style-type: none"> 1. Desire for role in political leadership in the future. 2. Fear of being sidelined by the state actors. 3. Fear of the bargaining power of the armed non-state actors. 4. Distrust of the armed non state actors and the state actors. 5. Need to look good constantly in the eyes of the local people. 6. Distrust of the other credible non state actors (peaceful). 	<ol style="list-style-type: none"> 1. No change in the public perception as they would tout that they stood their firm ground and play to the public sentiments. 2. Power continues to be held by them as generally the leadership remains. 3. The continued struggle keeps the supply of money and manpower on. 4. Some may enjoy the patronage of the state actors and hence may not be affected by the stalemate. It continues their sway on the political vote banks.
	<ol style="list-style-type: none"> 1. Role in Political leadership of the future. 2. Fear of prosecution/ law hence the desire for political power to mute the demand for prosecution if it so arises. 3. No way out (stuck in the ideology). 4. Some factions want complete freedom and some are willing to consider siding one of 	<ol style="list-style-type: none"> 1. No change in public perception as they would tout that they stood their firm ground and play to the public sentiments. 2. Power continues to be held by them as the leadership generally remains.

Non-State Actors (armed)	<p>the key state actors.</p> <p>5. Fear and distrust of other leading factions/ leaders.</p> <p>6. Distrust with state and non-state (peaceful) actors.</p>	<p>3. The continued struggle keeps the supply of money and manpower on.</p> <p>4. Some may enjoy the patronage of state-actors and hence may not be affected by the stalemate. It continues their sway on the political vote banks.</p>
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Table VII: stake-holder’s interest mapping

There are many interesting observations that pop out of the characteristic map of the stake-holders. The most striking one is the fact that none of them have anything to lose in the event of a “no deal’ but the chances of loss exist in the event of an unfavorable outcome. This is a huge barrier to any likely resolution and needs adept handling. There is mismatch in the characteristics which is a strong reason for their continued patronage of the dispute. Each stake holder has his/her political survival for a role in the future leadership at its heart. The armed actors have a lot to fear especially the law should they lose out on power. Being in the corridors of power may help them manipulate the system and give them a succor. The presence of factions among the non-state actors be it the ones that are the proponents of peaceful approaches or the armed ones, creates more complexities in terms of convergence of aims and goals. Thus there are many pushes and pulls due to incoherent goals in the overall conflict, rendering an easy resolution a tough proposition. For each actor it appears as a zero sum game (win-lose) and what ensues is a typical position based tussle that is based on utmost distrust. As described by Fisher and Uri, (Ref 5) such a situation is undesirable and needs a mediation or a third party help to lower the barriers in communication. For the state actors the very thought of daring to

take a different stance that has been traditionally adopted and which is deeply ingrained in the social and political fiber of the country, is frightful and may sound their death knell politically. The continuation of the dispute at least gives them the room to maneuver thus pushing the onus on the other stake holders and appearing good to the electorate. For many state actors out of the main stream, such disputes may also offer a chance for political visibility and bargaining power. Thus in the scenario the “status –quo” situation is a BATNA to all the stake-holders which makes the probability of a solution a far-fetched dream.

Most of the involved parties (state actors in particular) find it far more easier to avoid taking a stand that runs against their traditional stance and take refuge in their BATNA of a “no deal”. It is also observed from our analysis that the sum total of all the vectors of stake-holder’s goals does not correlate well with individual expectations which throw up a tough gauntlet to those who are trying to resolve the conflict.

The Reasons for Intractability: Ideational Factors

We have elaborately discussed a dispute system and mapped the processes to the form that delivers the final output which is nothing but the lasting dispute. While working on this premise, we are now clear that a dispute system is an outcome of many underlying causalities and not one created by deliberate thought and diligence. The concepts that we developed helped our understanding of this fact in more unambiguous terms. Once, precipitated, the on-going actions of the embedded processes and forms deliver the functionality; the on going dispute. Before we plunge into the onerous task of attempting

to architect a resolution system, we can now surmise and recapitulate on the reasons behind the apparent intractability of these long standing territorial disputes. On closer scrutiny of the table above, one finds that most of the operands that are at play are intangibles driven largely by the what the political scientist term as socialization and collective consciousness (Ref 3). These processes have characteristics of woolliness (Ref 3) that lends to them their indeterminacy. When one is confronted with such woolly and socialization centered processes riding on the strength of collective consciousness, it becomes difficult to deal with this continuum of intangible social thoughts in piece wise discrete forms (that engineers and technologists are so enchanted with and are adept at doing). In doing so, somewhere down the line there are gaps that appear in the form of missed stake holders and ignored social facts that eventually make the task of finding a way out of the dispute quite arduous. Certainly in this case the whole truth is greater than the sum of the parts.

To put it in simplistic form as explained by Ruggie (Ref 3) while quoting Durkhiem, the belief systems spring from individual facts that combine and grow into social facts through social interactions, get cemented and become ideational factors. These later become social realities and form the collective mentality that exudes collective intentionality and further influences social behavior. In the same light, territorial disputes are an expression of ideational factors with deeply entrenched collective mentality that is being harbored by the society at large. It is by all means a pure ideological reality or a social reality that drives or applies enormous pressure on all political actions and policy outcomes. The fact that the political leadership is a part of the same social norm or

ideational fabric does not empower it to think or act differently from the way it has been nurtured. Thus the root premise of most of the disputes is ideational in nature and hence needs to be dealt in terms of social constructs spanned over a characteristic time. The resolution system that is to be architected must address this intrinsic ideational causality and must attack that core of the social reality (social facts) of all the stake holders. This is no mean task. There can be no way that the main protagonists would pay attention to each other owing to an inherent lack of mutual trust (ideational factor) that has taken the form of collective mentality. This implies that the mutual distrust is primarily a collective intention (a social or ideational construct) which is what makes the territorial disputes position based deeply rooted in distrust and other ideational factors like religious beliefs, moral norms, etc.

The same is depicted with a help of a figure 18.

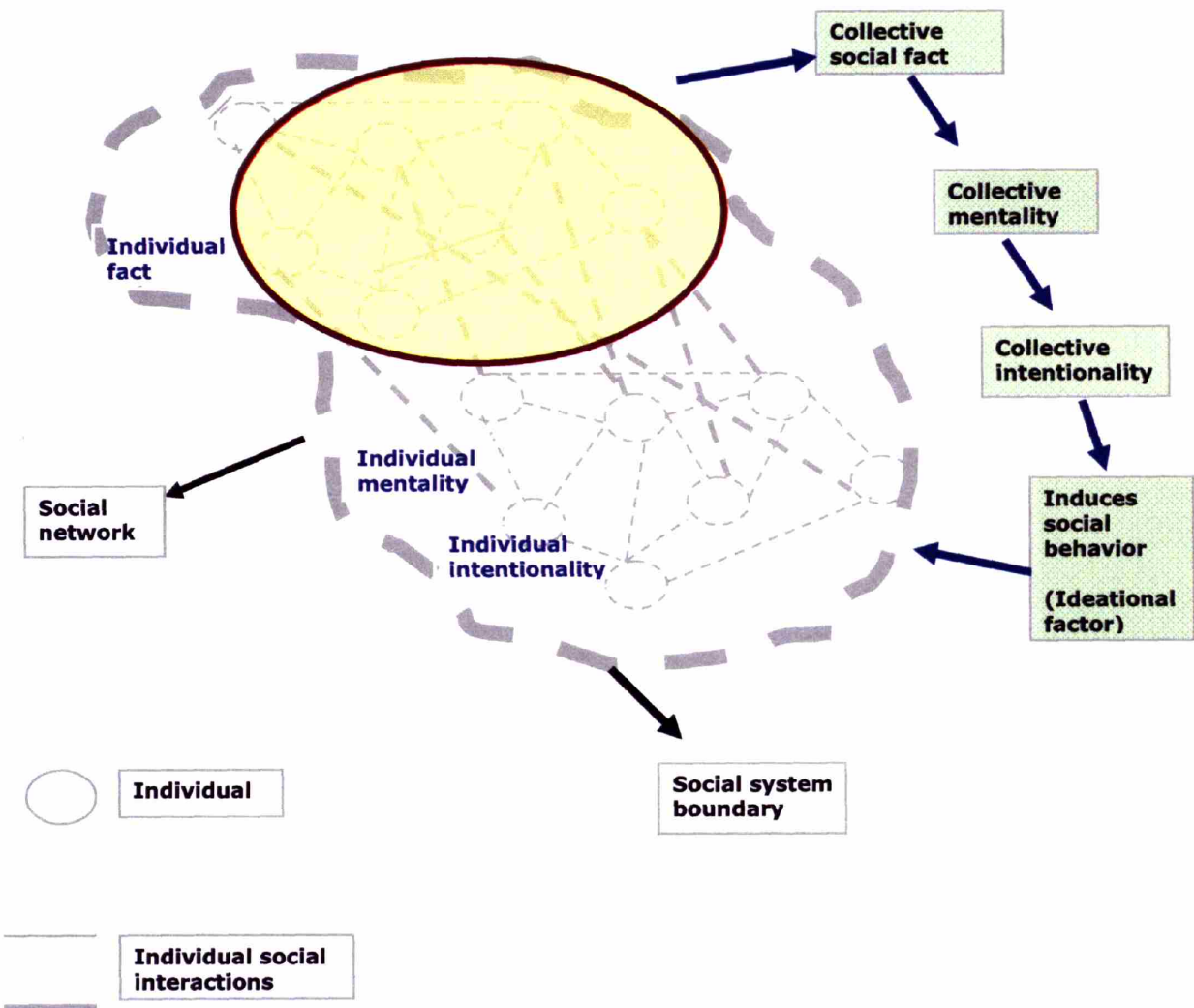


Figure: 18 Social networks and evolution of collective Intentionality

Taking solace in the findings of social scientists we see that besides the ideational causation at play, the problems also gets accentuated by the very fabric of international management and the way the nation states attempt to further their self help tendency and take care of themselves. As per Ref 3, the nation states do so in two ways namely;

internal and external efforts. The internal efforts mainly comprise of steps taken to improve the economic and relative military might whereas the external efforts consists of actions taken to improve one's own alliance or to weaken an opposing one. When one state acts thus, in reciprocity, other states follow and a power balancing ensues. Such actions, as per Ruggie (Ref 3) may easily lead to a war as it can lower its incidence. Hence, inherently self- help or balance of power politics leads to a position based conflict making collaboration difficult. Acting in mutual interest is even more difficult especially if there is a conflict in regime's belief system that arises from the collective consciousness of the society in which the regime exists. In this context, by regime's we mean governing arrangements constructed by states to co-ordinate their expectations and organize aspects of their behavior in various issue areas (quoting Krasner from Ref 3). We have also explored this fact in the earlier parts of this work stating that a difference in a regime's belief system and social values in which it is embedded, would always give rise to conflicting goals between two nation states that are engaged in a territorial dispute, leading to a faulty architecture of any resolution system (since from goals emanates the architecture). Any attempt to resolve the dispute should be aimed at bringing about a metamorphosis in the collective consciousness of the protagonists. This takes sizeable time span, utmost patience and deliberate action from all the solicited parties. This perhaps has not been happening and most of the attempts to resolve territorial disputes have been aimed at extracting quick results that seems unlikely given the strength of the ideational forces at play. This once again paints a grim picture of intractability and makes these conflicts long lasting.

A brief review of the typical Dispute Resolution Process

Before we embark on creating an architecture for a resolution system, it would be worthwhile to examine the typical events that wrap around a territorial dispute resolution process. There are events that occur when an ongoing territorial dispute comes under scrutiny by the involved nation states and the clamor for seeking a resolution heightens due to various compulsions (internal or external). These events have varying timelines and the emphasis here is more on the events that lead on to one another and repetitive nature of the entire chain of happenings. Ruggie quotes in his work (Ref 3), that nation states try to replicate each other in terms of their deliverables (political goods) but however are all not evenly endowed with the means of achieving the same. This unleashes a set of actions by the nation states to ensure their survival which takes the form of trade treaties, external security alliances, etc. Such actions by a particular nation state trigger similar responses from the nation state that views it as its adversary and so the race for parity and one-upmanship commences. These patterns in international arena are highly repetitive and understandably so given the lack of any global governing authority or institution. The manner in which the dispute resolution process takes shape or the pattern of events that occur are no exception to the paradigm of repetitive behavior. Figure 19 below shows the chain of events that typically occur before and after during a dispute resolution attempt by nation states.

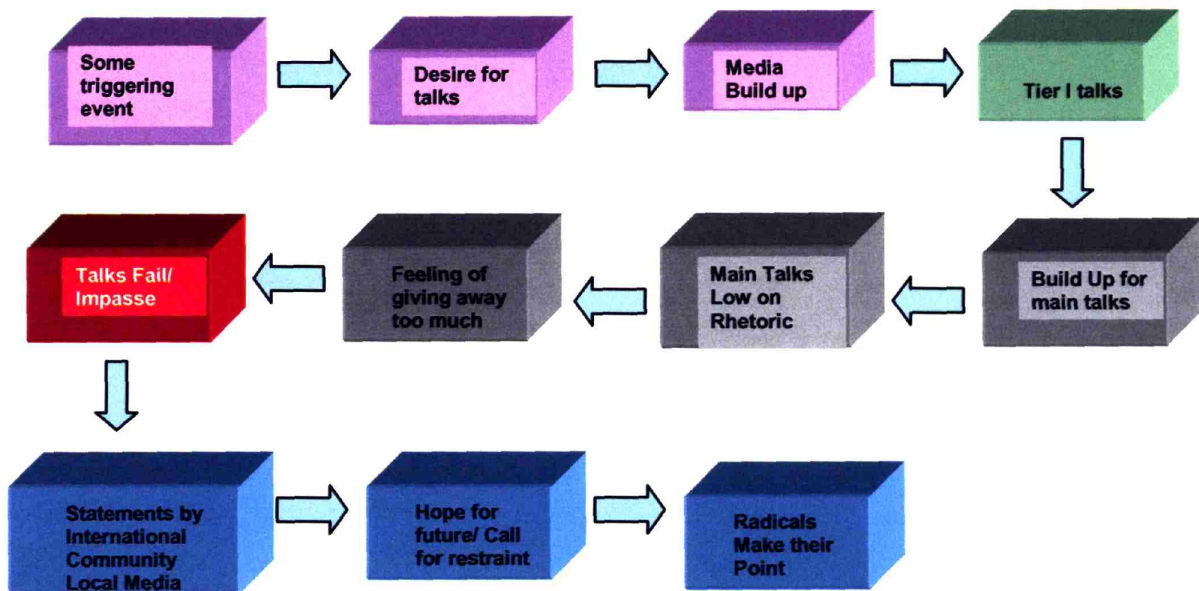


Figure 19: typical events in a dispute resolution endeavor

The events shown in the figure can be explicitly broken down into a series of sub- events each embedded within political, social or economic domains. This is shown in table VIII below:

1. State leadership feels the need	Political
2. Agenda for lower level talks drawn	Political
3. Venue selected	Political/Social
4. Lower level talks prepare baseline for the main talks	Political
5. Media creates additional hype / builds expectations around it	Social/Political
6. Many developed nations hail talks Relations	International
7. Tier I talks happen.	Political
8. No clarity for the outside world. There are a few privy to the information	Political
9. Preparations for the core meeting/ talks	Social/ Political
10. Security forces cut down cross border (if there is one) operations	Political
11. Non- State actors call for a boycott of these talks and call it a sham	Social/Political
12. Security around the venue tightened	Political
13. Both sides cut down the rhetoric/ Histrionics	Political/Social
14. Both sides draw up their own internal plan for the main talks	Political
15. Media hype picks up/ Too many expert interviews/ Panel discussions	Social/ Political
16. A stray border incident / killings that threatens to ruin the talks	Political/ Social
17. A statement by both the parties that talks wont be hurt	Political/ Social
18. Huge fanfare / State reception/ Media glare	Social/ Political
19. Expectations build up and talk on the body language of the leaders	Social
20. Talks begin and proceed along known lines	Political
21. Few trade agreements signed Political/Economic	
22. Main issues skirted as long as possible	Political
23. Speeches / talks by both at various planned forums for dealing with the impasse	Political/ Social
24. Main talks leads to a stalemate situation with none giving up their posture	Political/ Social
25. More defiant statements follow as the feeling of giving away too much creeps in	Political
26. Statements for playing to the home gallery	Political/ Social
27. Failure of talks	Political /Social
28. Press / Media downplays the hope/ salvaging action/ hopes for a better future	Social/ Political
29. Leader returns with a promise that talks must go on	Political/ Social
30. International leaders stress on the need for restraint and patience Relations	International
31. Tough talks about sovereignty and people's aspirations follow	Political/ Social
32. Radicals say that they knew it all the way and gain mileage	Political/ Social

Table VIII: break down of events in a typical dispute resolution endeavor

As can be seen, the entire set of events mainly revolves around political and social realms that are heavily correlated to ideational factors. One can safely infer that it is highly unlikely that such events could have the intensity to beat the deeply embedded ideational dogma. If we map these events on a Design Structure Matrix (DSM), (a routinely used pictorial tool in managing technology-based product development) one can easily see the iterative loops that exist in this exercise. The DSM in figure 19 reveals certain interesting aspects that go to the very core of the problem of intractability.

	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z	aa	ab	ac
a	Agenda Level/ Talks																												
b	Venue selected level 1																												
c	Level 1 talks happen																												
d	Media creates hype/ builds expectations																												
e	Developed nations hail talks																												
f	Preparation for the main talks																												
g	Mixed feeling around talks																												
h	Security forces cut down cross border operations/lower engagements																												
i	Non-state actors/ militant organizations call for a boycott of talks																												
j	Security tightened around the venue and the venue spruced up for talks																												
k	Both sides cut down on rhetorics																												
l	Both sides draw up plan / strategy behind closed doors																												
m	Media interviews on news channels / panel discussions and ante builds up																												
n	A stray border killing/ border skirmish looms large over talks																												
o	Declaration by the two states that the talks will continue																												
p	D-day/ State reception at the venue/ media glare																												
q	Expectations build up																												
r	Talks begin along cordial lines																												
s	Few trade treaties signed																												
t	Main issues skirted as long as possible																												
u	Talks by both the sides urging to take steps forward despite hurdles/imasse																												
v	Talks on the territorial dispute start																												
w	Stalemate as no side budges from the position																												
x	Defiant statements / playing to the home gallery																												
y	Talks fail																												
z	Media downplays the failure with media bashing the opposing side for failure																												
aa	Developed nations express dismay but convey that talks must go on/ hope for future																												
ab	Tough talks back home / playing to the vote bank/ gallery																												
ac	Non-state actors jubilant/ make statements that this was expected																												

Figure 20: Design structure matrix (DSM) of a dispute resolution endeavor

What Pops out of the Dispute System Study?

The epistemology of a dispute system has shed some light on its characteristics and the essence of its intractable appearance. Some of the salient features are surmised below:

1. It is a complex non-linear system of systems that is causal in nature and not architected to deliver value. It still delivers value to multiple stake-holders (positive for some and negative for some). It delivers negative value to the people of the disputed territory.
2. It is a situation of positional bargain (competitive) which makes bilateral solution an impossible proposition.
3. Territorial dispute is the layer of the conflict that is visible and tangible below which are hidden fault lines that are not apparent.
4. It is precipitated by a trigger or a shock that is exogenous. This works through existing unseen fault lines.
5. In the state of anarchy in the international relations, the world as a super system is hardwired for a conflict situation.
6. Changes in the structure of the super system effects little or no change in the dispute system because of the balance of power politics that nation states play for their own survival.
7. It is highly driven by ideational factors with coupled social- political-economic processes at play. The energy that stems from these ideational processes is far greater than the energy of the processes that go in to solve the problem.

8. The stake-holders have characteristics that pitch them at cross-purpose. They have nothing to lose in a “No Deal” situation but have a lot to lose in case of a failure. This increases the incentives to walk away with a “no deal” situation (thus status quo is a BATNA for all stake holders).
9. It is a high entropy system with rising number of stake-holders with the duration of the conflict. This increases interfaces and interaction networks that further increase complexity.
10. Any delay in a final solution firms up ideational factors and makes a break through more difficult.
11. It is a seat of turmoil with latent potential to flare up thus escalating the conflict.
12. The dispute system suffers from a loss in social surplus, economic indicators and political stability.
13. It is a dynamic system with changing interactions amongst the stake holders. These interfaces increase with time as new stake-holders emerge due to high entropy of the system.
14. The alignment of a nation state with a hegemon or an external power is solely for its security and survival or acceptability in the international forum for extracting beneficial trade deals or its domestic economic activities.

15. Each nation state has two galleries to play to; the domestic home front with its own internal actors and the international arena comprising of the international institutions and countries.
16. The domestic factors that threaten the security or political survival or of a nation state or are likely to weaken the strength of the central leadership in the eyes of its domestic electorate would take precedence over all other factors. This is because the ideational causation factors are at work here and are thus likely to impact the central leadership more profoundly.
17. As the timeline of the conflict gets stretched, the number of stake holders with political ambitions increase and so does the scope of the conflict. This phenomenon has the potential to sow seeds for future conflicts with a new set of stake-holders altogether.

With this treatise, we are now fairly well equipped with the thorough understanding of the epistemology of a dispute system backed by the theories of political science and international relations explaining reasons for the status quo. It is now time to take a plunge into the realm of architecting a plausible resolution system.

CHAPTER III

Resolution System Architecture

Introduction

In the previous chapter we developed the processes that typically occur in a dispute system and mapped those onto a form. The resolution system architecture would evolve from the way a dispute system sustains itself and delivers its output in the form of “sustained territorial dispute”. The idea behind this conceptual framework is to superimpose the processes that sustain dispute with those that neutralize it and to a large extent reduce its impact. Essentially a resolution system is a system that would comprise of all the entities (the old ones from the dispute system and maybe some new ones too) as shown in figure- that co-exist in peace (there could still be an acceptable level of conflict between the old constituents and possibly some new entrants). Thus a resolution system would exist in the same regional system and the world super system sans the conflict. While creating the architecture for a resolution system, the use of “**why-what-how-where-when-who-how much**” framework is a plausible one to look at. Our main focus while developing an architecture would be mapping the function to form through a concept and the enumeration of the “**who**” aspect of the task. Figure 21 shows the same (Ref 4).

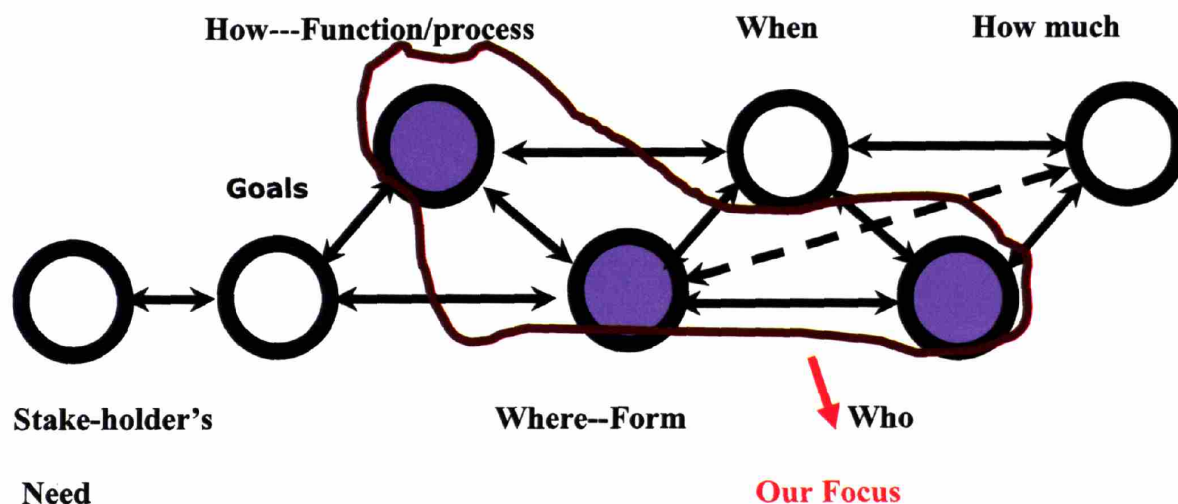


Figure 21: Architecture framework

We have seen that the stake-holders have their conflicting needs that have to be met by a resolution system. The desire for seeking a resolution needs a strong trigger mechanism similar to the one that precipitated the dispute in the first place. Zartman (Ref 2) calls this as the ripening of conflict and highlights that it indeed a tough call to determine when a conflict is ripe for resolution. To initiate a resolution process, the trigger could be nuclear parity (that renders war an unacceptable BATNA), arm twisting by a hegemon, the economic and trade considerations, appeasement of hostile forces on the domestic front so as to drag the attention away from the domestic strife, etc. The goals that arise (requirements) from deeply diverse set of beliefs and ideologies are bound to be at cross purpose as far as the nation states are concerned. This puts conditionality on the goals for a resolution system thus compelling them to look beyond the mere territoriality angle of the conflict and address more tacit issues that go to the core of the collective

consciousness, collective mentality and collective intentionality. These ideational processes that have sedimented over time need to be reversed through careful manipulation that would alter the fundamental norms and beliefs attached to the dispute in order to bring about a conflict transformation and a peaceful resolution. This necessitates the need to enlarge the goal set and the beneficiary matrix. The resolution system must seek to marginalize the conflict, and endeavor to guide the negotiators to design a resolution system that delivers greater political goods to all the stake-holders. The flow of this chapter that covers the architecture of a resolution system is planned as shown below:

- a) Guidelines for architecting a “resolution system”.
- b) OPM for the process of “resolving”.
- c) The mapping of processes from a dispute system to a resolution system.
- d) The development of the concept for each sub-process.
- e) The overarching concept for “resolution” and mapping to generic & specific concept form, operands and tools.
- f) The marginalization of territorial conflict through extension of the goals and the OPM.
- g) Minimization of the non-state actors, scoping, segregation and partitioning of stake-holders.
- h) The concept of adaptive funnel and loop back.
- i) The architecture of the time-based mediating entity; SEED (Strategic entity for ending dispute).

- j) A rudimentary methodology of the mediating mechanism (DOOMED; HOPE).
- k) Design structure matrix for the process of mediation.
- l) Take away from the resolution system architecture.

Guidelines for Architecting a Resolution System

The problem of transformation of a dispute system into a resolution system is not one of one-to-one mapping but nevertheless such a step provides us with a reasonable starting point. The architecture of a resolution system would then dwell on separating the substantive aspect of the dispute from the ideational part that provides us with a hint to examine a layered architecture for the time-based entity which would ultimately be responsible for the design and implementation of the resolution system template guided by the architecture developed in this work. In the course of architecting a resolution system, we shall also employ the stable intermediate forms that we discussed in the prologue in order to make the architecture stable and robust. More on this would follow in the subsequent paragraphs in this chapter. The endeavor to create a sound and a robust architecture that delivers value to the multiple end beneficiaries would comprise of the following:

- a) Use of the OPM route to bring out the objects and the processes involved and highlight the solution space and the matrix of available methods.
- b) Zooming of the solution specific operating process of “resolving” and identifying the corresponding sub-processes embedded within it that would neutralize the sub-processes at work in the process of “disputing”.

- c) Creating the concept by mapping form to function which entails identification of generic concept and the specific concept form.
- d) Institutionalizing the resolution process by architecting a time-based entity that would create a basis for sustained focus on resolution regardless of local imperatives and push the agenda / goals forward. This necessitates the creation of a distinct entity (can be termed as an enterprise or a project or a mission) with a third party (perceived as neutral) or a hegemon for its support in terms of venue and administrative cover. This entity would house the relevant stakeholders' representatives regardless of all biases and work under the ambit of a governing mechanism.
- d) Creating a layered architecture to separately deal with the substantive and the ideational issues. The architecture shall give due credence to scoping, partitioning and segregation aspects and building stable intermediate forms.
- e) Creating an architecture that would facilitate and encourage joint problem solving in place of an adversarial stance as we now know that due to the ideational forces these conflicts cannot be solved bilaterally based on the traditional beliefs and position based approach. To this end it would also force the negotiators to address the issues of judicious scoping before they embark on their task.
- f) Building in a governance structure by providing legitimacy, authority, credibility in the governing body. The structure shall have feedback mechanism embedded in it and shall be coherent with the organization

layout and the information flow. It shall also have an inherent schema for the generation of the requisite documentation in the appropriate format.

- g) Focus on the impact-capture and the metrics for the purpose of reporting and decision-making.
- h) Creating an architecture and processes that are conducive to replication in every geographical location with minimum customization specific to the problem at hand. This implies that it shall be flexible and facilitate customization if needed.

We now move on to creating an OPM for a resolution system that has “Resolving” as a specific system operating process at its core. This would enable us to once again view the entire process of resolving in an integrated fashion with all the objects and processes embedded in it.

Object Process Model (OPM) of a Resolution System

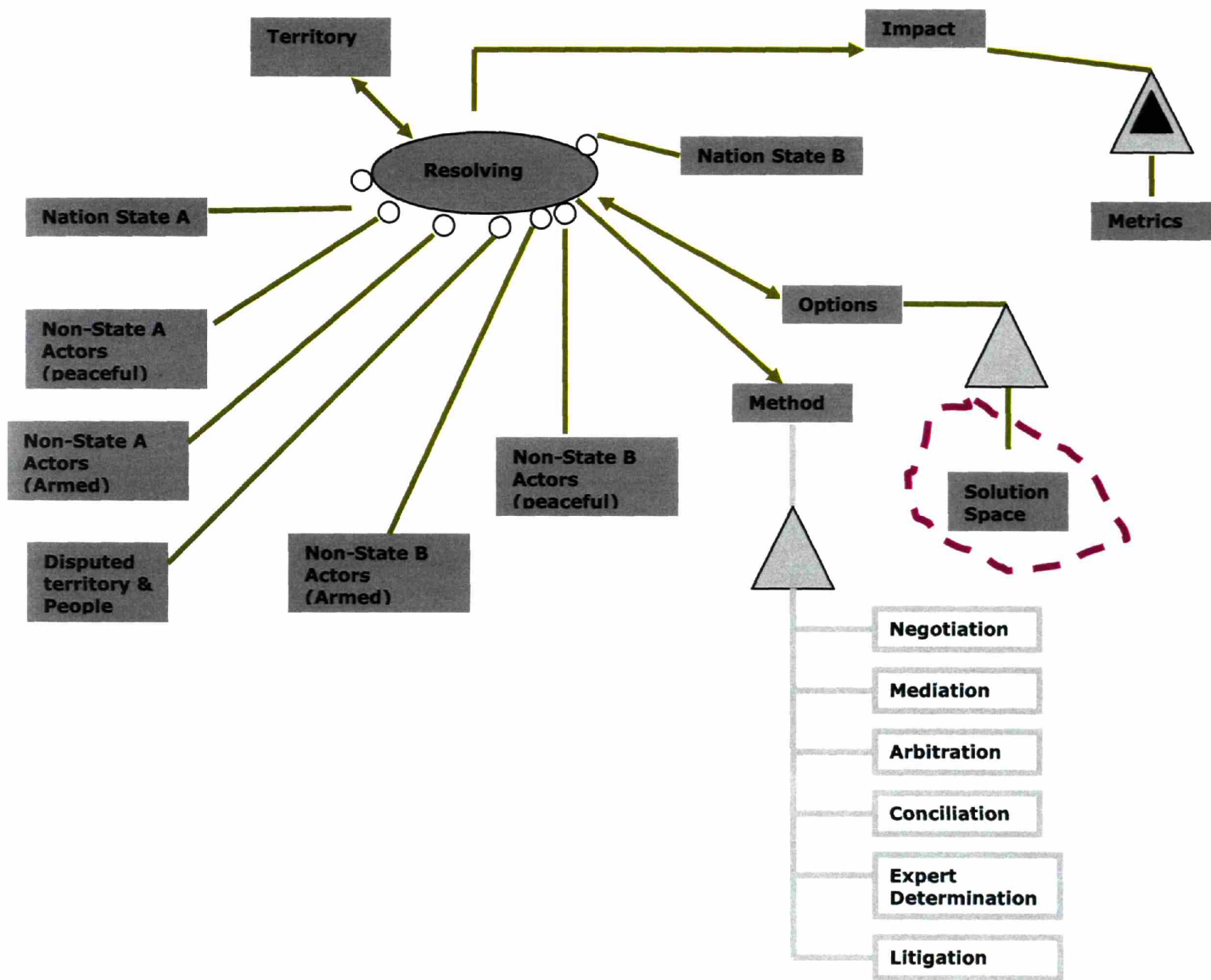


Figure 22: OPM of solution specific process of “resolving”.

The solution space is nothing but the domain of all the possible options that are possible in a very objective and dispassionate manner. Of these, some solution points may be

unrealistic but still find their way into the list as part of a creative process of exploring every possible solution set. Table IX shows the solution space.

- 1** **Accept one stand / one gives up (win-lose)**
- 2** **Accept a mutual compromise--- both give up something and gain something.**
- 3** **Go to war and annihilate (extreme bound).**
- 4** **Heighten barriers to dispute by increasing stakes & reducing negative elements:**
 - a) Increase trade/ accord the “most favored nation (MFN) status.**
 - b) Increase the freedom to tour / lift the need for visa or grant visa on arrival.**
 - c) Increase cultural interaction/ cinema/ theatre /art.**
 - d) Cross cultural marriages.**
 - e) Joint military exercises/ joint patrolling of the borders and the Line of Control.**
 - f) Launch massive public propaganda about the importance of peace and the need for a solution. Build consensus!**
 - g) Carry out sustained bureaucratic talks and reinforce by timely actions.**
 - h) Increase the frequency of visits by the PM /President.**
 - i) Eliminate key leaders who stall government peace process plan by detention or physical elimination.**
 - j) Increase joint peace initiatives and engage in vigorous propaganda.**
 - k) Create a vacuum of separatist leaders and buy-in their younger leaders through relentless dialogues and carrot and stick policy.**
- 5** **Accept mediation/ arbitration.**
- 6** **Accept plebiscite (change in traditional stand) and implement the outcome.**
- 7** **Go to international court and seek refuge in legal framework.**
- 8** **UN intervention.**

Table IX: Solution space

The solution space allows us to examine every possible outcome without getting bogged down with any one solution point. The final chosen solution point in the solution domain would depend on the trade-offs between the benefits and the associated costs. The methods highlight the various means using which one can resolve conflicts. This once again opens the mindset of the stake-holders to the array of options at hand to resolve the issues. The resolution processes can be specifically tailored to suit one of the methods.

Mapping of Dispute System Processes to the Resolution System

The six sub-processes that we developed as a part of the overall process of “disputing” can be used as the basis to evolve sub-processes in the process of “resolving”. This is a kind of a reverse engineering approach that may be one of the many ways to evolve a concept for a resolution system. Figure 23 below shows the six corresponding sub-processes that are capable of mitigating the ill-effects of the dispute system processes.

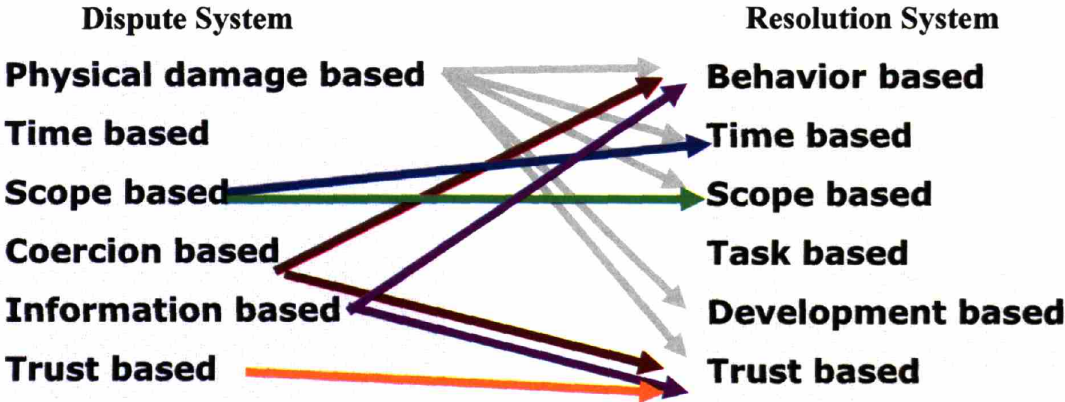


Figure 23: Sub-process mapping from dispute system to resolution system

The figure illustrates that the physical damage based processes can be neutralized by behavior based, time based, task based, development based and trust based processes. The damage based process has the most riveting and long lasting impact on the dispute system and hence needs many parallel processes that reinforce each other to come into play. The coercion based process is best tackled by a combination of behavior based and trust based processes. A one to one mapping is envisaged between time based, scope based and trusts based processes in the two systems. This mapping framework is a mental construct and by no means all encompassing. It is quite possible that the time based process in a dispute system can be tackled by a blend of time, behavior and task based processes in a resolution system. The aim here is to come up with a framework that allows us to build a concept for architecting a resolution system. One can also sense that mapping allows us to think of the policy issues involved once we map form to the processes.

The final forms that deliver value through their functionality would need policy support for their creation. This therefore preempts us to think far ahead into the policy domains while still in the realm of mapping form to function. The other angle to this is that it makes us see the stake-holders that are likely to come into play in bringing the forms into physical existence and sustaining them. By behavior based process we mean the process that involve active role of the agents (whoever they may be) in bringing about a change in the behavior. This process tries to touch the core of the ideational factors that have taken firm grip over time. The development and trust based processes too are active processes that aim to create tangible forms that would possibly transform the collective mentality

and soften social norms and pave way for change in the stern adversarial stance. These processes create new socially visible facts that travel through social interaction networks and get implanted in the collective consciousness of the social system thereby becoming collective reality with new (or changed or softened) norms. It can be seen that the resolution system has sub-processes that address both the ideational and the substantive side of the problem. The scope and information based processes are mainly targeted towards the substantive or very tangible issues. Thus the entire gamut of sub-processes essentially produces a set of visible and experiential outcomes that has the strength to neutralize the effects of the sub-processes in a dispute system.

Development of the concept for each sub-process

The zoomed process of resolving is shown below in Figure 24 with the embedded sub-processes.

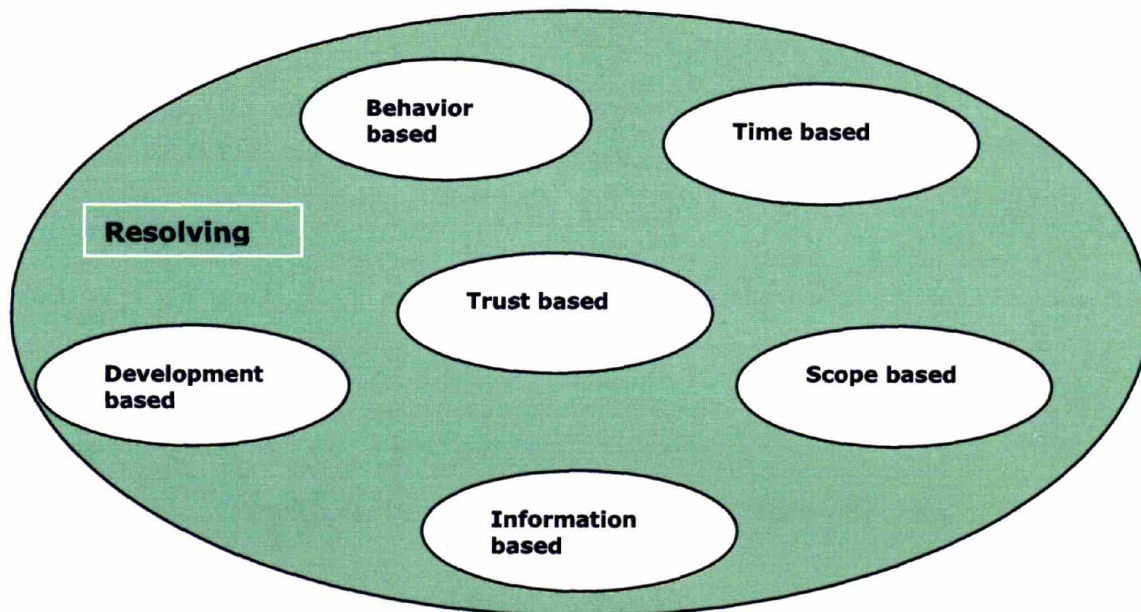


Figure 24: Embedded sub-processes in the process of “resolving”

Table X lists out some of the processes that are covered under each of the six sub domains. There could be more of these processes in each sub domains and the ones listed are just to drive home the point and to generate the conceptual construct in terms of generic and specific concept form.

Development based process	Trust based process	Behavior based process	Scope based Process	Information based process	Time based process
Building/creating	Helping	Mentoring	Enhancing/enlarging	Opening	Hastening
Sustaining	Sustaining	Listening	Changing	Advertising	Simplifying
Facilitating	Delivering	Assuaging	By-passing	Appealing	Making transparent
Stabilizing	Assisting	Healing	Marginalizing	Accessing	
Funding/Providing	Upholding	Mediating			
Leading	Facilitating	Negotiating			
Regulating		Reconciling			

Table X: Embedded sub-processes within “resolving”.

The overarching concept for “resolution” and mapping to generic & specific concept form, operands and tools

Akin to the specific solution operating process of disputing, we now develop the concept for each of the sub-process embedded in the process of “resolving”. As before, by this we mean the linking of process to form which would then provide us with the overarching generic and specific system form. As before, the aggregate of all sub-process level concepts is the overarching concept for the specific system operating process of “resolving” as shown in figure 25. Appendix G shows the concept for the development based process. The other processes are created in a similar fashion (not shown).

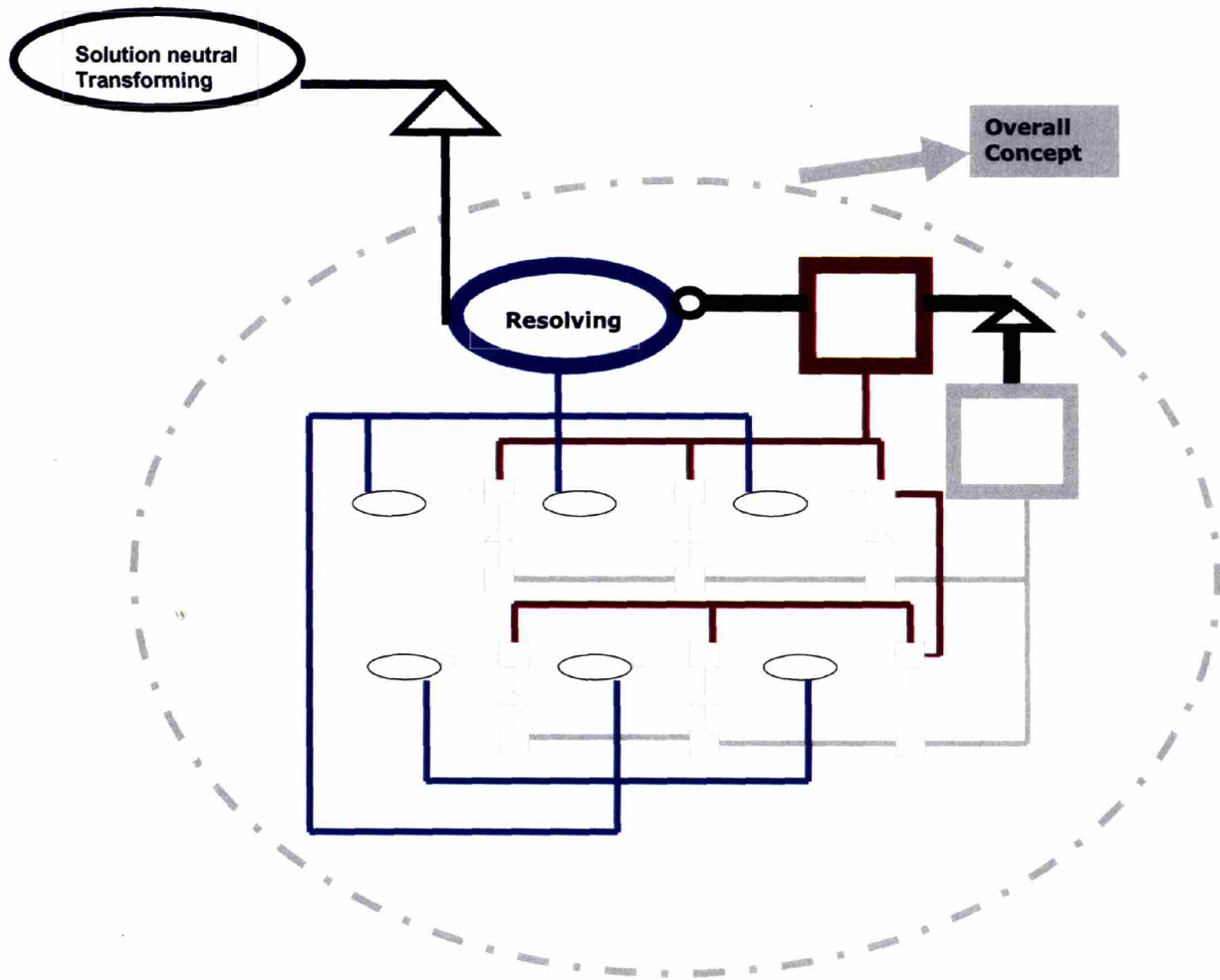


Figure 25: Overall concept for process of “resolving”.

After aggregating all the generic and specific concept forms we get the following mapping as shown in table XI.

Generic Concept Form	Reduced violence & property loss, increase in social capacity, rise in economic growth, increase of political credibility, reduction in sabotage, terror acts, espionage & subversion, increase in peace initiatives, safe environment & security to life and property, rise in high school enrollment, reduction in mass protests, optimism in the society , reduction in military & police force, etc.
Specific Concept Form	Reduced deaths & collateral damage, improved health, education & sanitation facilities, rise in business opportunities and entrepreneurial activities, presence of matured financial markets & institutions, rise in faith in political leadership, increased credibility of the state leadership within the global community, absence of terror syndrome, high barriers to operations of unwanted elements, well-informed and upbeat populace, optimism in peace talks & initiatives, rapid response by state machinery to emergencies, reduced high school dropouts, increased tolerance to all religions, No excesses by police & military, no yellow journalism, better civic life and political stability, quick decisions on development projects, growth in female literacy, deep penetration of information technology, access to internet, etc
Operands	Human minds/ psyche, information, religious beliefs, social values, political leanings & affiliations, economic activities, money, etc
Tools	humans, media, postal system, telephone and cellular network, internet & information technology, transportation system, money, power, religious beliefs, state machinery, non-state actors, NGO's, economic activities & initiatives, social networks, religious institutions, etc

Table XI: Generic and specific concept form, operands & tools for a resolution system.

The generic and specific concept form shown in the table above highlights the change that is possible to bring about in the system given the fact that the processes are

implemented by the concerned agents. The main takeaway from the process to form mapping exercise is the emergence of the operands, tools and thus the agents that would shape the future. However, what is unclear is the timeline for these to take shape. The timeline is something that is indeterminate in many ways and relates strongly to the strength of the ideational factors at work and the manner in which the resolution system design template is executed by the agencies that are responsible for doing so. We may see that at times there is no distinction between the tools and the agents and the two terms can safely be used interchangeably. It is evident from above table that the state machinery is a dominant player in the scheme of things as it has the wherewithal in terms of resources to implement the sub-processes. This is a difficult proposition unless the time-based entity created to bring about a resolution carries out the scoping task judiciously in consultation with the other parties involved. As mentioned before, it definitely needs to take the form of joint problem solving starting from the basic premise that it is indeed a position based bargain and it's the position itself that necessitates a change. This can happen by enlarging the scope of the goals and looking beyond the territoriality issue and through relentless mentoring, training, coaching and if need be coaxing by the agents tasked with the job of dispute resolution. Once again, we can rely on the OPM to highlight the manner in which one can look at multiplicity of beneficiaries and their needs in an enlarged framework. It also accentuates the way in which the territorial dispute is marginalized in the face of the bigger picture of deliverance of political goods across the entire spectrum.

Marginalization of Territorial Conflict through extension of the Goals and the OPM

The generic and specific concept form table is an explicit pointer that the conversion of a dispute system into a resolution system calls for efforts across the entire spectrum of political goods. The nation-states need to touch upon the social, political and economic issues of the conflict by working on the operands using the tools or agents described in Table XI. This converges to the involvement of all the stake holders more so the Non-state actors (both peaceful and armed) in a joint problem solving approach to marginalize the conflict to a smaller part of a bigger problem.

This once again can be best depicted using the OPM as a tool with all the objects and processes. The OPM also forces us to open to myriad of possibilities that look at some hidden issues too. Figure 26 shows the OPM with multiple needs and goals of multiple end beneficiaries involved that encompasses the immediate nation states, the surrounding region and the global community at large. The needs are essentially the fundamental expectations of the populace in terms of security (both personal and property), right to good quality life as ensured by the availability of good hygiene and sanitation, water, education, infrastructure, transparent governance and economic opportunities for prosperity and overall well-being.

In this OPM as shown in Figure 26 we have multiple beneficiaries with multiple needs. The hidden needs of some of the stake-holders also show up. This provides a good framework for breaking the ice while engaged in a joint problem-solving exercise when all those involved see quite unambiguously their unspoken needs being reflected upfront.

This breaks barriers and builds mutual confidence. We have seen in the opening treatise of this work that the issue of territoriality gains importance when it gets transformed into a need from a collective good. Zartman (Ref 2) also refers to the three fundamental needs of the entity demanding territorial rights namely; security, identity and prosperity. Fisher and Uri (Ref 5) also have put forth similar view that include Security, economic well-being, sense of belonging, recognition and control over ones life. We see that these are not very different from each other and from the five points listed in our analysis as part of the causality polygon that we came up with in this work. The same is tabulated in table XII

Zartman	Fisher & Uri	This work
Security	Security	Religious beliefs/ Ideologies
Identity	Economic well-being	Ethnicity
Prosperity	Sense of belonging	Past actions /arbitrary actions/ Excesses
	Recognition	Resources
	Control over ones life	External alignment

Table XII: A comparison of “needs” for territorial claims

Past actions/ excesses and external alignment are pointers to the security aspect of the need. The ethnicity and religious beliefs/ ideologies ties up with the identity and sense of belonging aspects of the need. Finally, resources and external alignment (once again)

points to prosperity and economic well-being. Thus we see that the causality polygon developed based on systems approach agrees well with the works of other experts in this area. This once again amply demonstrates the strength of the systems thinking methodology.

The solution neutral transforming process of “providing” could also be facilitating, increasing, etc. The operands that emerged from our concept development exercise has been expanded beyond local realms by including global institutions in the fray. The non state actors also appear in the list of operands which again creates a scenario for brainstorming their needs well upfront. The same logic then gets reflected in the specific operands and one is forced to evolve relevant metrics for the system. The choice of correct metrics is very important as they set the physical limit for many goals that may be open ended. In many cases this helps in clearly listing out or re-visiting in tangible terms the goal statements. Some of the metrics could be number of political detentions, number of complaints of corruption, number of leaders in the machinery that have criminal charges against them, etc the list can include many more.

The other dimension that emerges from the OPM and its contents is the aspect of timeline. The fact that the specific and the generic concept forms contain parameters and metrics that are not changeable in short run makes all the parties conscious of the subtle assumption that the problem at hand needs time and relentless efforts from each and every stake-holder. It is not something that can be resolved through a few cosmetic endeavors which then points to creating an institutional set-up around a few experts that

will stand through a sizeable time frame, strengthened by the need to resolve the dispute and /or a hegemonic power. This template of the enlarged goal OPM allows the resolution system designers/ negotiators, to think in a structured way yet retaining their creativity so as to tailor it for replication in different scenarios. In fact it allows just about enough structure so as to restrain from stifling the creative excursions of the mind.

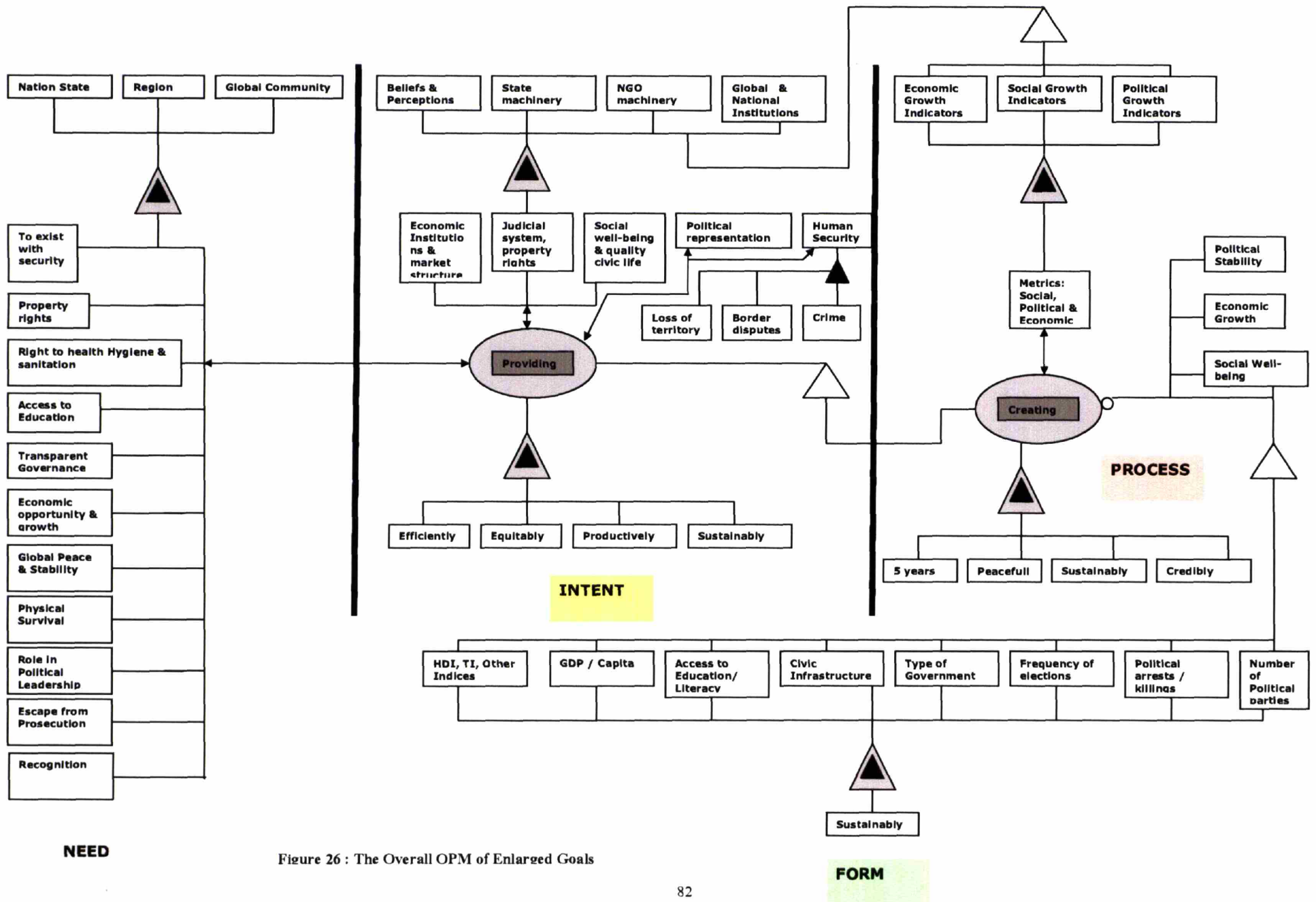


Figure 26 : The Overall OPM of Enlarged Goals

Scope, Aggregation and Partitioning

The OPM besides pointing to the wide array of needs both explicit and hidden also highlights the issue of interfaces that need to be addressed in a high entropy system. The number of non-state actors has a tendency to scale up over time (increase of scope) as local realities keep propping up leaders with a cause to fight for fuelled by their own inner aspirations for power and recognition. The inter-action networks of all such emerging interfaces get more complex and difficult to manage or sometimes even comprehend. The resolution system architecture would be more robust if one can limit the emergence of such forces. The 2 x 2 matrix in figure 27 below elucidates the same.

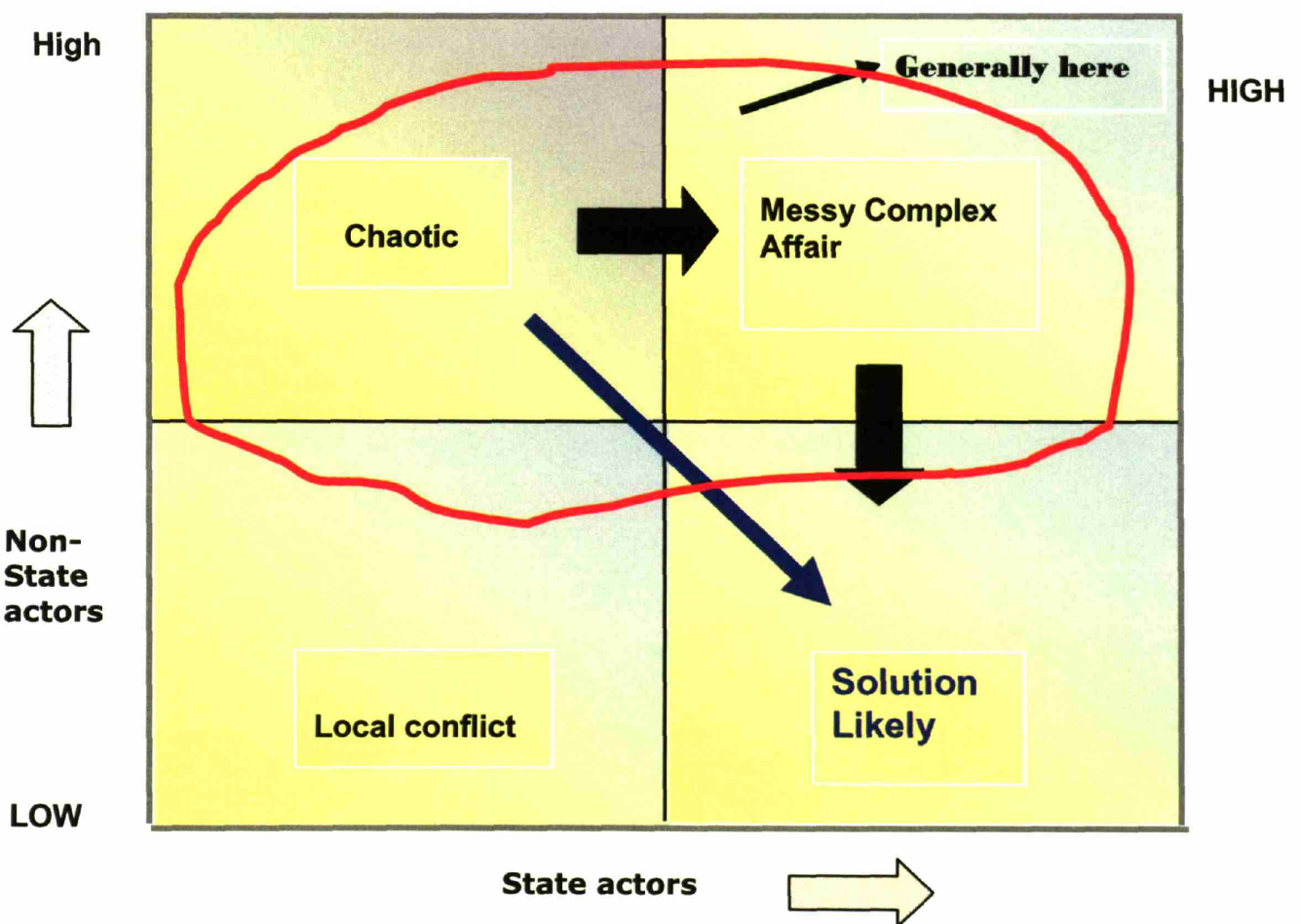


Figure 27: 2x2 Matrix

The architecture now evolves in the direction of one of the most important realms namely scoping, aggregating and partitioning. The scoping part of the architecture deals with the methods for selecting and rejecting the problem statements, defining constraints and deciding who is in the system and who is out of the system (Ref 7). The aggregation deals with the grouping the right kinds of stakeholders, problems, solutions, etc. whereas partitioning is concerned with the separation of dissimilar stake-holders, problems and solutions. The visible manifestation of aggregation and partitioning is the reduction in interfaces, coupling and maximization of internal cohesion (Ref 8).

The architecture of a resolution system is aimed to channel the scoping, aggregation and partitioning aspects of the task. Thus all the stake-holders with alignment in their goals/ideologies or behavior could be aggregated together. There are many other ways to aggregate or partition (Ref 9) but in this case splitting on the basis of behavior and goals may be the preferred way. Similar aggregation or partitioning could be done to the issues that fall under substantial or ideational areas. This would greatly reduce the number of interfaces that need to be managed thereby reducing the co-ordination and collaboration issues. The lesser the interfaces; the lower would be the resulting complexity, which is what a sound architecture is all about. Thus thinking in terms of a 2 x 2 matrix (as in Figure 27) allows one to understand where they are in terms of the severity of the conflict (in terms of entropy) and focus on scoping, aggregating and partitioning of the entities.

Concept of Adaptive Funnel & Loop Back

The architecture must facilitate multiple options and the ability to get back at the resolution game should there be a break for any reason. This can best be eulogized by an “adaptive funnel” as shown in figure 26. The concept of a “funnel” is quite common in the management circles. However, here the idea has been marginally modified to accommodate the nature of the resolution process. The way it functions is by having a broad opening at its mouth signifying, the broad based stake- holders, agenda, venue and the right atmosphere. This is followed by a mixer stage (also can be called as the burn-in period where all the stake-holders are brought together). This is followed by the opening up of the resolution process with a run-down on each stake-holder’s stand/fears that lead to narrowing down of choices and options. What then emerges is a list of items agreed upon and disagreed upon namely the realm of agreements (RoA) and the realm of disagreements (RoD) (as the author has chosen to name them).

At any stage given the positional character of the issues at hand, there is all likelihood of emotions running high with each side refusing to budge on a traditional belief or stand causing a break in efforts (some of the members may even threaten to opt out). At this point the funnel needs to adapt to the new situation and open out creating new options and scenarios that would again bring the aggrieved parties back to the process. This is termed as a loop back. The adaptive nature of the funnel stems from the perceived legitimacy and effectiveness of the mediators/ negotiators or a hegemon that is making the resolution happen. Thus the adaptive funnel model facilitates loop back at any point

in the process of resolution. The process of adaptation can have as many steps as needed.

The figure below only shows two steps to illustrate the point.

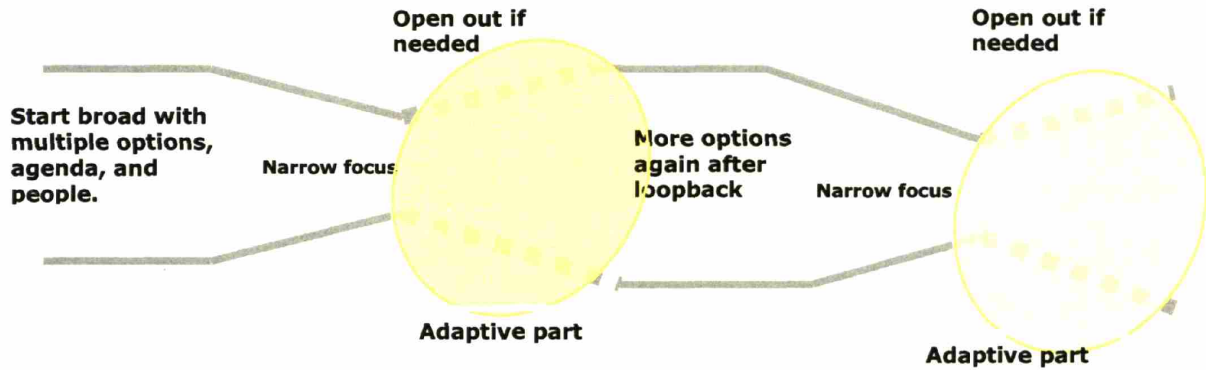


Figure 28: Adaptive Funnel

Dealing with an “issue”

The adaptive funnel thinking paradigm helps us start on a wide scope. Once the issues come up for deliberation the architecture must enable smooth transition from contention to resolution. Figure 29 shows how this is achieved by partitioning the issues into two realms as mentioned earlier namely; realm of agreements (RoA) and realm of disagreements (RoD). The RoD contains both substantive and ideational issues and so does the RoA. What we have now is a structural decomposition of “issues” based on their attributes.

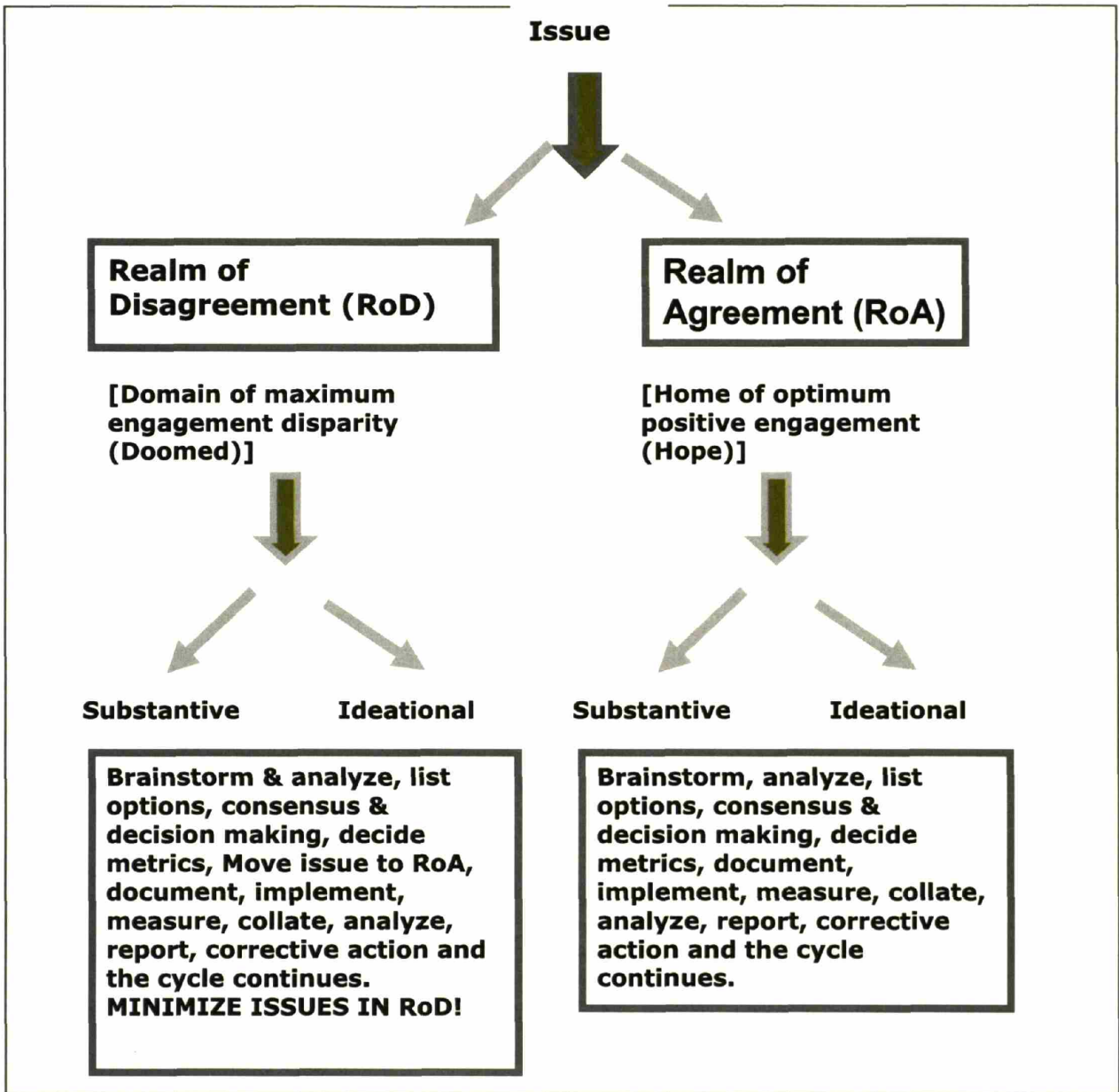


Figure 29: Dealing with an Issue

Once the issues are partitioned on the basis of their dissimilarities or aggregated based on their commonalities, we then go through the steps listed below (also shown in figure 27) that take them from RoD to RoA or from **DOOMED** to **HOPE!** They are as shown in table XIII.

Steps in Converting Issues from RoD to RoA

- Step 1: Brainstorm & analyze**
- Step 2: List options (Cost/benefit)**
- Step 3: Seek consensus**
- Step 4: Take decisions**
- Step 5: Decide on metrics**
- Step 6: Move issue to the RoA**
- Step 7: Document**
- Step 8: Implement**
- Step 9: Measure impact**
- Step 10: Collate & analyze data**
- Step 11: Document & report analysis**
- Step 12: Brainstorm the report**
- Step 13: Decide on corrective action if any**
- Step 14: Document corrective action with details of what, where, when, who, how and how much.**
- Step 15: Document and disseminate list of all pending issues both substantive and ideational (say every quarter) and refer to the next level of negotiations/mediations.**

Table XIII: Steps to move Issues from RoD to RoA (From Doomed to Hope)

However, not all issues are convertible into agreements and there could be a stalemate situation especially if it is position based. Thus there needs to be provision for anger/emotion management and a loop back into the mediation/negotiation process after a break (if any happens).

Robustness of Architecture & Stable Intermediate Forms (SIF)

Another important issue is that of the stability and the robustness of the architecture. In any large complex system a stable architecture emerges much more rapidly when it is made up of numerous stable intermediate forms. These are primarily the bedrocks of future stability of the overall architecture. Dispute systems are systems that seem to exist stably in their **Dysfunctional Equilibrium***. The resolution system architecture should seek to end this dysfunctional equilibrium. The architecture of a resolution system must facilitate the purging of the system with many stable intermediate forms around which solidification of consensus can happen at any point in time. These stable intermediate forms can serve as hooks in the architecture that provide continuity for future thereby assisting the emergence of a dominant or stable architecture more rapidly. In this context, the aim of the SIF's is mainly to heighten the barriers to break the effort. In other words, it tends to increase the stakes in the success of one another thus turning the focus from an adversarial stance to a co-operative posture. These essentially could take the form of restitution or steps that ease off tensions among the stake-holders. All the confidence building measures (CBM's) that the track I diplomacy usually employs prior to any peace initiative, is an example of a SIF. Track II diplomacy can also give rise to many SIF's that go a long way in the peace building exercise and building mutual trust.

* A term used by Prof Edward Crawley during our discussions.

Table XIV below shows a list of some typical SIF's that can be used and built into the schema for resolution system. These forms could be a part of the state sponsored Track I diplomacy or a citizen supported Track II diplomacy. The list in the table is only a guideline and many more such forms can be thought off.

Some Typical Stable Intermediate Forms

<p>Track I diplomacy :</p>	<p>Ease of travel/ ease of visa restrictions if any, according to “Most Favored Nation” (MFN) status, allowing use of resources water, oil natural vegetation, etc, permission to have deeper economic exchanges, private sector banking and IT initiatives, increased diplomatic interactions, cross postings of bureaucrats, joint ventures for development activities and joint funding especially in border towns, reduction of troops or other de-escalation steps, release of prisoners, opening up of religious shrines and making access to them easy, more frequent visits by heads of state, greater interactions between the ministry of external affairs, conduct of joint military exercises on a regular basis, joint patrolling by troops, employment of individuals who give up armed confrontation, etc.</p>
<p>Track II diplomacy:</p>	<p>Increased interaction through sports and other forms of entertainment like films, theatre, cultural festivals, interaction between the NGO's, programs for the empowerment of youth, capacity building by local groups, both religious and otherwise.</p>

Table XIV: Stable Intermediate Forms

A Proposed Methodology: Six Tier Process Map

Based on what we have put together thus far, we can finally surmise the entire road map for architecting a resolution system till the final disengagement of the entity called “SEED”. This is shown below in figure 30.

- Identify the right stake-holders
- Identify the venue
- Prepare the agenda
- Create a conducive atmosphere
- Mix the stake-holders (burn-in period)

1 SCOPING

- Review stands/positions
- List out issues
- List out agreements (HOPE)
- List out disagreements (DOOMED)
- Anger/Emotion management session
- List out solution space
- Eliminate unrealistic solution sets
- Map out likely solution sets with issues
- Separate substantive & Ideational issues
- Refer the substantive & ideational issues to appropriate committees

2 AGGREGATING/ PARTITIONING

- Create joint problem solving scenario
- Generate multiple options
- Attach cost/ benefit to each option
- Shortlist the most likely options with cost/benefit
- List out hurdles to each option
- Bring out stake-holder in each option and map interests/fears
- Brainstorm stake-holder interests and induce stand softening

3 NEGOTIATING/ MEDIATING

- Identify Stable Intermediate Forms (SIF) for each option
- Identify tools, agents and operands for implementing SIF
- Identify tools, agents and operands for implementing agreed issues (HOPE)
- Decide on metrics for SIF and HOPE
- Generate document for implementation of agreed SIF
- Generate document for implementation of agreed HOPE units
- Approval for the SIF and HOPE document
- Generate document for the issues not agreed upon (DOOMED units)
- Identify the DOOMED units and list out impact/cost

4 ACTION PLAN

- Implement SIF and HOPE units
- Measure metrics for SIF & HOPE units
- Analyze impact through metrics evaluation & surveys
- Prepare feedback document to the governing mediation council
- Brainstorm feedback & identify corrective measures, tools, agents, costs/ benefits
- Generate corrective measures document
- Approval of corrective measure document
- Implement new corrective measures
- Meter impact through analysis

5 EXECUTION & REVIEW

- Prepare disengagement plan
- Approve disengagement plan
- Document lessons learnt for future use
- Disengage

6 CLOSURE

Figure 30: Six Tier Process Map

Most of the points in each of the tiers are self-explanatory. The stability report essentially brings out the success of the implementation of the SIF's and other measures under Track I and Track II diplomacy and forms a part of the disengagement document.

Institutionalization of the Negotiating/ Mediating Process: SEED

We have seen that the territorial disputes seem intractable or are resolution resistant. Thus the bargaining power of the entity facilitating negotiation/mediation matters considerably. The cosmetic approach by many nations to resolve territorial conflicts by making short term visits, engaging in issue based dialogues, etc are at best small steps forward (stable intermediate forms). They may assist in de-escalation but can never in themselves have the wherewithal to resolve the dispute. It is also evident that the ideational forces are too

dominant that always apply social pressure on the players to stick to the traditional stand. Till the time “No Deal” is a BATNA for the stake-holders coupled by a strong sense of mutual distrust a bilateral solution is a near impossibility. Mediation alone remains a way forward to assist the disputing entities to negotiate amongst them. However, a few well meaning individuals, holding official office or otherwise do not have the ability to keep at it on a sustained basis. These conflicts are serious issues and pose the highest inherent risk of escalating into a military confrontation. All attempts to secure a lasting resolution through a bilateral dialogue between two heads of the nation state in a limited time frame (a few days to less than a month) is not likely to change the dynamics of the dispute system.

In this part we respond to the “**who**” aspect of the issue of architecture. This study makes a strong case to institutionalize the mediation process built around few individuals who are perceived as peace-makers (by virtue of their persona and good offices), through administrative and governance structures that would lend credibility, value and sustenance to the entire process. This implies looking beyond a few non-profits and some free lancers (they can be used nonetheless in some ways). This distinct entity (can be termed as an enterprise or a project or a mission) with a third party (perceived as neutral) or a hegemon for its support in terms of venue and administrative cover, would house the relevant stakeholders’ representatives regardless of all biases and work under the ambit of a governing mechanism.

We term this time- based functional entity as **“Strategic Entity for Ending Disputes”** (SEED) (this was highlighted earlier in chapter II) and could be housed under a suitable global umbrella like the UNITED NATIONS (but this is not the focus of this proposal). The SEED is an organization proposed to be created to institutionalize and formalize the knowledge captured during the process of resolution. It would discharge it’s duties through a governing council. The organization would be time-based and would disengage once the task is accomplished. It is envisaged that SEED would give the requisite stability and permanency to the in-house expertise that would develop in the form of training methodologies, documentation, etc. It would aim to re-use the experience gained by creating replicable process for each scenario in the resolution process. The judicious use of IT resources and infrastructure would act as an enabler for the governing council. The entity would also carry out meaningful policy analysis and create practical solution templates that can be used in any part of the globe with suitable customization.

The stress here is on the structure of such an entity that would bring about some science into a art-like field of mediation/ negotiation. Figure 29 shows the structure of such an entity. The time line in a resolution process is something that cannot be easily defined in the early stages of the functioning of “SEED”. It would operate from any neutral venue acceptable to the stake-holders in the dispute system. The legitimacy and the credibility of “SEED” stems from the quality and credibility of the members on its governing council and the support of the global community.

The formation of this entity would bring certain spin-offs in the form expertise that would develop in the area of resolution of territorial disputes. These are as follows:

1. Training of stake-holders through the mixer stage.
2. Anger & emotion management
3. Joint problem solving techniques
4. Documentation
5. Technical analysis/impact analysis/Policy analysis
6. Development economics and indicator analysis
7. Key elements of sustainable development
8. IT expertise and capture of the right information, dovetailing it into the reporting channel and provision of single window information across functionalities.
9. Customization of individual processes to suit a given region and cultures and also creating metrics for specific regions.
10. Creation of templates or SOP's (Standard Operating Procedures) for rapid deployment of mediation initiatives.
11. Creation of a pool of trained manpower at an international level on a sustained basis in a formalized way. This can become a pipeline for trained resources capable of handling territorial conflicts around the world.

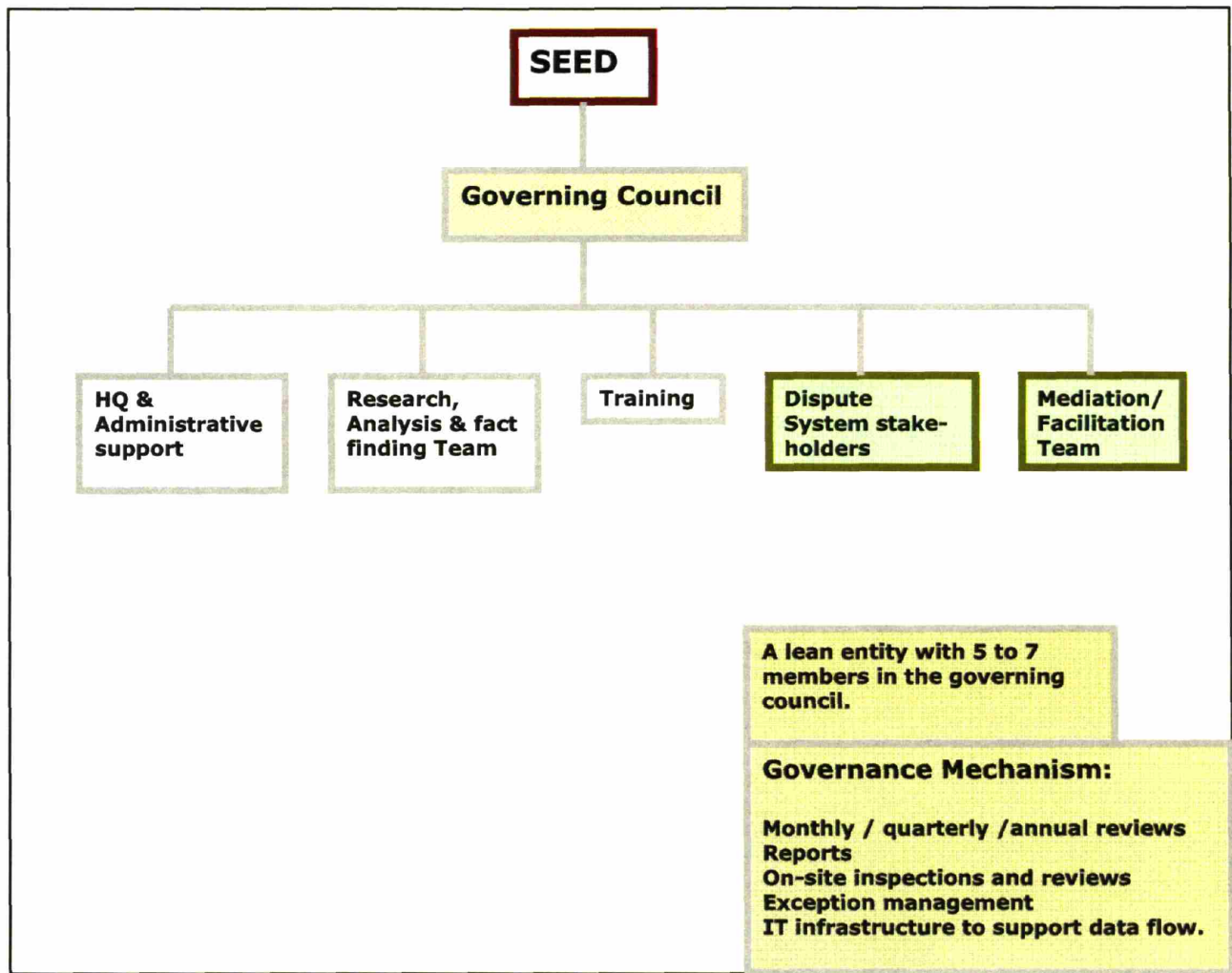


Figure 31: The structure of Strategic Entity for Ending Disputes (SEED)

With this we are now ready to apply the premise developed here and test its efficacy on the Kashmir Dispute as a case under study.

CHAPTER IV

Kashmir Dispute: A Case Study

Introduction

In this case study, we attempt to fit the template that has been developed in this work both for the dispute and the resolution system. Kashmir is an important dispute that has caused three military confrontations between India and Pakistan namely, 1948, 1965 and 1971. The last military exchange that took place in Kargil sector in 1998 nearly brought the two countries on the brink of a full scale war. Given the fact that both India and Pakistan are recognized nuclear states, a war between the two could de-stabilize the entire Asian continent and have large scale ramifications on global peace. Figure 32 below shows the disputed area on the map.



Figure 32: Kashmir; the Disputed Territory[†]

[†] http://en.wikipedia.org/wiki/Kashmir_conflict#Partition.2C_dispute_and_war

The entire Kashmir region is divided into three areas as seen form figure 31 namely; the green portion of the map representing Pakistan controlled Kashmir, Kashmir under Indian control (the brown portion of the map) and the Aksai Chin which is under the Chinese control. Pakistan also seceded a part of Kashmir to China in 1963. The dispute between India and Pakistan over Kashmir commenced right after the accession of Kashmir to India by its Hindu king Maharaja Hari Singh. It would be prudent to take a peek at a brief past before one makes an attempt to fit the conflict in the framework developed in the work.

Occupied by	Area	Population	% Muslim	% Hindu	% Buddhist	% Other
Pakistan	Northern Areas	~.9 million	99%	–	–	–
	Pakistan Occupied Kashmir	~2.6 million	99%	–	–	–
India	Jammu	~3 million	30%	66%	–	4%
	Ladakh	~0.25 million	49%	–	50%	1%
	Kashmir Valley	~4 million	95%	4%	–	–
China	Aksai Chin	–	–	–	–	–

Ref: http://news.bbc.co.uk/1/shared/spl/hi/south_asia/03/kashmir_future/html/default.stm

Table XIX: Population distribution in entire Kashmir

As per one of the reports Aksai Chin has less than 10,000 people mostly of Tibetan origins. Thus one can say that Kashmir essentially is a nation that was divided between two nations (namely India and Pakistan) in 1948. to bring home the learning from the

understanding developed in chapter II and III, the case study is covered in the following manner:

- a) A brief history of the conflict
- b) Kashmir as a dispute system
- c) The causality polygon for Kashmir dispute
- d) Conflict triangle and the stake holders
- e) Mapping of the dispute system processes to the Kashmir conflict
- f) Is Kashmir Hardwired for a conflict situation?
- g) Stake-holder interest mapping
- h) The trigger for resolution in Kashmir
- i) The Neutralization of the dispute system processes
- j) Solution space & stable intermediate forms
- k) The way forward in Kashmir

Brief History of the Territorial Dispute over Kashmir (Ref 10)

The Hindu king Maharaja Hari Singh, was undecided about acceding to India or Pakistan. There are conflicting versions both by India and Pakistan (as each side understands or wants to understand). The stories on each side have been reinforced through social networks for nearly six decades now (ideational phenomenon) and have led to de-humanization of either side causing deep rooted distrust and ill- will. The king as, is recorded was not clear on which side to go with as independence was not an option given to him.

In 1947 the British dominion of India came to an end with the creation of two new nations, India and Pakistan. Each of the 565 Indian princely states had to decide which of the two new nations to join: secular India or Islamic Pakistan. Jammu and Kashmir, which had a predominantly Muslim population and a Hindu ruler, was the largest of these autonomous states and bordered both modern countries. Its ruler Maharaja Hari Singh preferred to remain independent. According to the Indian theory, Pakistani tribals (Kabailis), aided and supported by Pakistani soldiers, entered Kashmir to force the Maharajah out of power as he had avoided a vote to decide Kashmir's fate during partition. The Maharajah was not able to withstand the invasion; he decided to cede Kashmir to India. The Instrument of Accession was accepted by Lord Mountbatten, Governor General of India on October 27, 1947. The Indian troops then marched into Kashmir. However, the Pakistani theory contests this narrative. According to Pakistan, the Indian troops marched towards Kashmir amidst the tensions resulting from the indecision of the Maharajah. This ultimately forced the Maharajah to accede with India, whether willingly or unwillingly is still unclear. Following this, the kabaili tribesmen of northern Pakistan attacked and took control of over 1/3rd of Kashmir from the Indian army.

Thus we see that there is a classical mismatch in the way the two nation states of India and Pakistan view the issue. In 1941, Kashmir had nearly 85% Muslims and thus according to Pakistan, should have been a part of it as the people of Kashmir would have opted for Pakistan if given a choice. It asserted that the wishes and aspirations of its people was never considered by the Hindu king while making a decision to merge with India. Thus India's argument for the legitimacy of the claim to Kashmir is strongly

grounded in the instrument of accession signed by the Maharaja whereas, Pakistan questions the very legality of that compact based on the dominant Muslim population of Kashmir. One can say that the one decision of the Maharaja to cede to India was a clear trigger for the conflict to precipitate.

The Kashmir Dispute System

The Kashmir dispute system can be seen as shown in Figure 33.

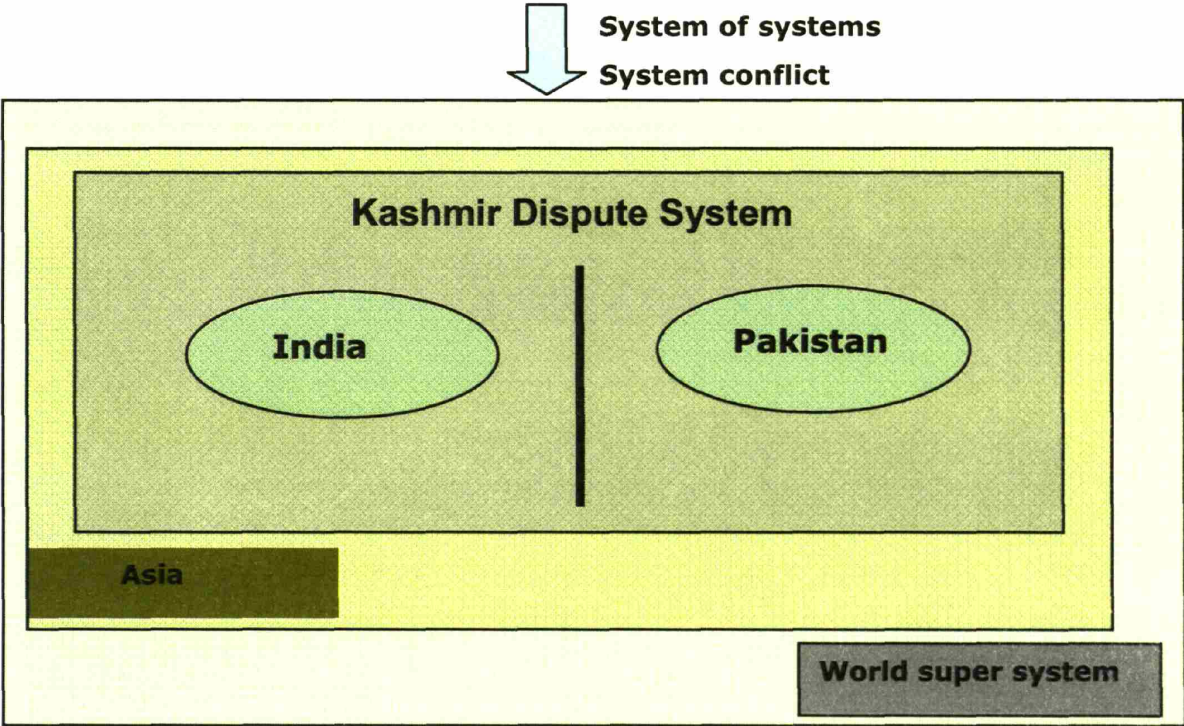


Figure 33: Kashmir Territorial Dispute System

The Kashmir dispute system is entrenched in the system of Asia as a region that is a part of the world as a super system. When looking at Asia at a systemic level one may logically look at China as one of the stake holders in the Kashmir dispute (in the long run) as it also holds some tracts of Kashmir. Looking at the above figure, the dispute

negotiators or mediators would automatically be led to exploring the external players that inhabit the system and that have the ability to affect the course of the future. In this case China definitely emerges as a crucial element.

Causality Polygon: Kashmir

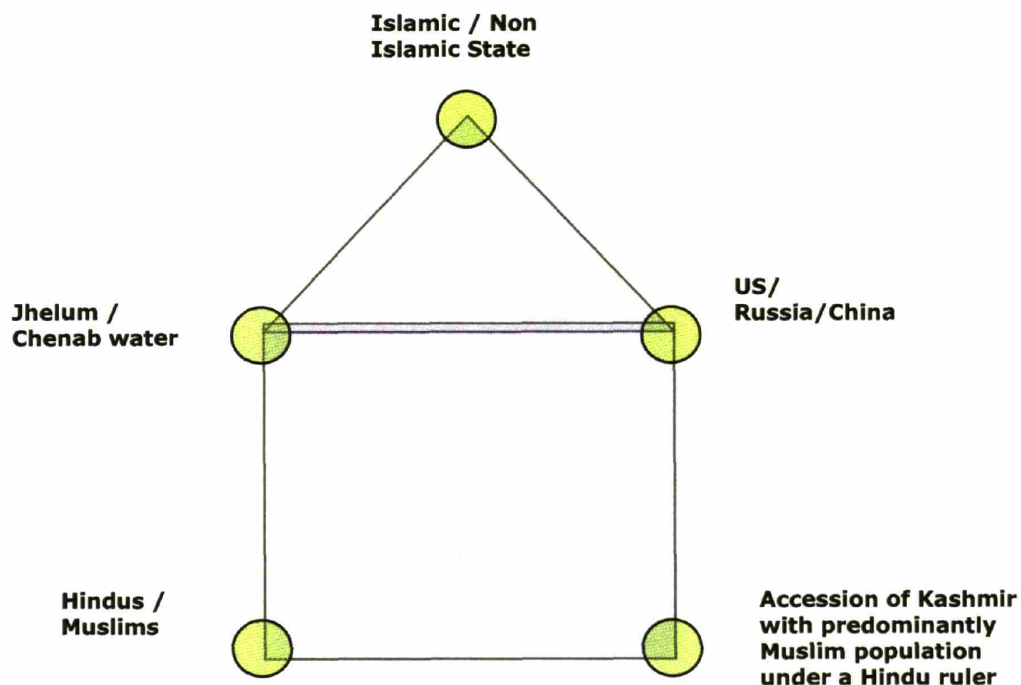


Figure 34: Causality Polygon: Kashmir

The Kashmir conflict practically meets all the points in the causality polygon shown on figure 34 signifying the complexity of the dispute. The trigger came as an apparent hurried decision by the ruler Maharaja Hari Singh to align with India without taking the aspirations of its people into consideration. This provided the energy needed to the

dormant fault line between the Hindus and the Muslims (that perhaps existed and was as hidden). The alignment with the two super powers during the cold war also created further polarization between the two countries. As time passed on, the ideational forces continued to supply the energy for the conflict to assume bigger proportion and the animosity between the two countries escalated to a height that it had three rounds of wars over the territory. Thus we see that a conflict that had its roots in ethnicity, ideologies/ beliefs and a trigger gathered strength due to ideational forces through social networks that further engrained the mutual distrust between the India and Pakistan. Over time the ideational forces applied social pressure on the political leadership that did not have any maneuvering space that was contrary to the traditional stand for the fear of loss of political face and power. In no time, the conflict had engulfed the entire dispute system into a tightly coupled social-political-economic juggernaut that lent to it an air of intractability.

Conflict Triangle and Stake –Holders

Based on the template we created the conflict triangle for Kashmir would look something like as shown in Figure 35.

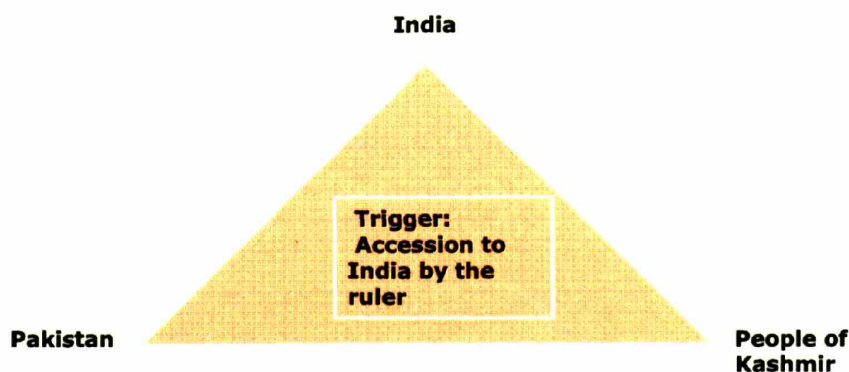


Figure 35: Conflict Triangle for Kashmir Dispute

Not much would be served by reproducing the decomposition chart of figure- as it would be make representation difficult. Hence we have tabulated the list of the major non-state actors operating in the disputed region in the form of tables.

From the Indian stand point table XVI shows a list of all major non-state actors in Indian part of the Kashmir. Similarly, table XVII shows major state and non-state actors in Kashmir that is under Pakistan's Jurisdiction. This highlights the large number of players in the fray which is in line with the high entropy that characterizes a territorial dispute system.

State Actors	Non State (Peaceful)	Non state (Armed)
National Conference	Jamaat-e-Islami	JKLF (armed Faction)
Panther's Party	People's Conference	Hisb-ul-Mujahideen (HM)
Congress Party	Awami Action Committee	Harkat-ul-Mujhahideen (previously known as Harkat-ul-Ansar)
Bhartiya	Muslim Conference	Lashkar-e-Toiba (LeT)
Janata Party		
Janata Dal	Ittehadul Muslimeen	Jaish-e-Muhammed (JeM)
SamajWaadi Party	JKLF (Yaseen Malik)	Al Badr
Communist Party	Mahaz-i-Azadi	Jamiyat-Ul-Mujahideen (JUM)
	JK people's League Party	Harkat-ul-Jehad-Islami
		Al Umar Mujhaideen
		Dukhtaran-e-Millat (DeM) (Women arm)
		Lashkar-e-Omar (LeO)
		Lashkar-e-Jabbar (LeJ)
		Mutahida Jihad Council (MJC)

Ref: www.satp.org/satporqtp/countries/india/states/jandk/terrorist_outfits/

Table XVI: State and Non-State Actors in Indian Held Kashmir (IHK)

As per the above reference there are many more outfits that have become inactive or have re-grouped under different names for e.g. The Muslim Janbaz, Kashmir Jihad Force, etc. The number of in Indian controlled Kashmir have formed an alliance to form a unified force called All Party Hurriyat Conference. It is essentially a pro-Pakistan outfit but has developed factions within itself due to a clash of ideologies within the group. It started with a conglomeration of 26 parties before it split. From the table above, we observe that

there are 21 different non-state actors are operating in the disputed region (IHK). The state actors listed are those that have won elections or have contested them.

State Actors	Non State (pro-independence and pro pak)
Muslim Conference	Muslim Conference
Pakistan Muslim League	Pakistan People's Party
Pakistan People's Party	Jamaat-e-Islami
Jamaat-e- Islami	JKLF (Armed)
	JKLF (peaceful; Yaseen Malik)
	JK National Liberation Front (JKNLF)
	JK Freedom Movement
	JK Plebiscite Front
	People's National Party
	Tehreek-e-Islami Jamhoooria Kashmir
	Quami Tehreek-i-Azadi Kashmir
	National Awami Party
	JK Students Liberation Front (JKSLF)

Ref: <http://shell.comsats.net.pk/~jklf/iii9.htm>

Table XVII: State and Non-State Actors In Kashmir held by Pakistan.

On the Pakistan's side the major issue is between the groups that are pro-Pakistan and that are pro-independence. The first three non-state actors in table XVII are pro-Pakistan whereas the balance, support the idea of an independent Kashmir. In the ultimate analysis what emerges is the fact that there are a large number of Non state actors (that totals to 38) from the two tables excluding many small local factions and groups operating in the disputed region. If we fit this in the 2x2 matrix that we proposed in the earlier chapter the

situation for Kashmir gets easily slotted in the first quadrant (with high state and non-state actors) that makes it a messy and a complex affair (Figure 36).

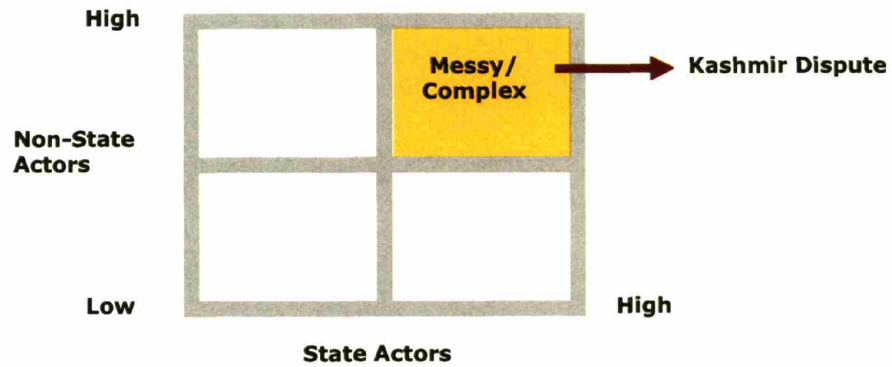


Figure 36: 2X2 Matrix for Kashmir Dispute

Thus any attempt to seek a resolution needs to be preceded by judicious scoping, aggregating and partitioning of the disparate stake-holders based on the interest mapping. With this let us take a look at the way the Kashmir system fits with the sub-processes that are embedded in it.

How Kashmir Maps to the Sub-Processes in the Dispute System?

In our earlier discussion, we have seen that there are six basic embedded sub-processes in a dispute system contributing to the overall specific system operating process of “disputing”. How many of those exist in Kashmir can be gauged from the data. The extent of violence and the disruption of day to life can also be gauged from the nearly 36% fatalities out of the total occurred in Jammu and Kashmir alone in the years between Sept 1999 to Aug 2001. Figure 37 and 38 depict the propensity of damage and loss of life that has taken place in the dispute system of Kashmir. Based on this we can easily agree

that the Kashmir dispute has all the elements that make it fit our framework of the dispute system in terms of the embedded processes. Table XVIII shows the same.

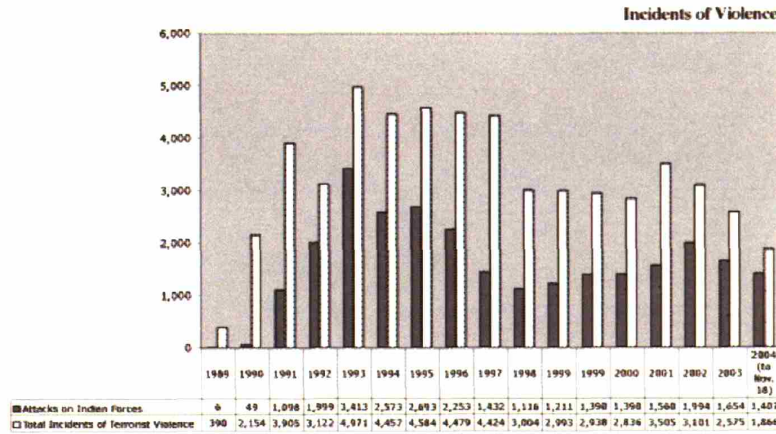
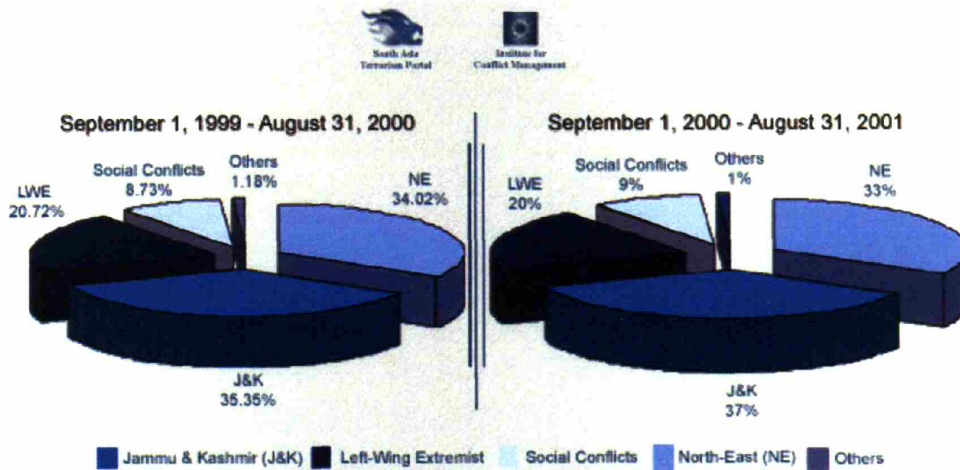


Figure 37. Incidents of Violence in Jammu and Kashmir, 1989–2004.

Source: Quickstep or Kadam Taal?: The Elusive Search for Peace in Jammu and Kashmir by Praveen Swami.



Source: www.satp.org/satporgtp/countries/india/states/jandk/terrorist_outfits/index.html

Figure 38: Fatalities in Jammu and Kashmir Between Sept 1999 to Aug 2001

Sub-Process	Degree to which it is present	Remarks
Physical damage based	Acute	High loss of lives/Property
Trust based	Acute	People have no faith in the system
Coercion based	Acute	High pressure on young ones to enlist.
Information based	Highly bad to acute	Too many subversive, espionage and indoctrination based activities.
Scope based	Acute	Situation keeps Table XVIII: Mapping Kashmir dispute to the sub-processes changing scope alternating between getting worse to getting better.
Time based	Acute	Development activity is badly delayed projects, corruption, etc.

Table XVIII: Mapping Kashmir dispute to the sub-processes

This data is more relevant to the Indian controlled Kashmir as that is where most of the non-state actors (mainly armed) operate. Thus we can safely infer that Kashmir dispute fits quite well in the process based framework proposed in this work. This approach allows one to gauge the conflict under different lenses of political, social and economic standpoint and facilitates a clear thinking process with regards to the spectrum of neutralizing processes that are possible.

Kashmir: Is it Hardwired?

We also developed a thinking approach that explored the possibility of conflicts being hardwired. One can see that in this case, manner in which Kashmir got divided in two parts between India and Pakistan (and later China), created a situation for the conflict to get deepened. Given the deep ideological, ethnic and religious divide that existed even before the division (the first Hindu-Muslim riot in Kashmir took place in 1931 as per Ref 11). Thus the fault lines already existed and needed a trigger that eventually came in the form of the decision to accession to India. In this scenario of vastly opposed beliefs system (cemented or reinforced through strong collective consciousness) , the goals of the two nations states have always been at loggerheads giving rise to architecture of very disparate approaches to solve the problem. Thus, under the present circumstances, there is no way that the two nation states can architect a solution that is bound to resolve the conflict. The repetitive or rather cyclical nature of escalations and de-escalations is a pointer to the fact that the conflict is embedded in the very structure of the issue.

Stake-Holder Interest Mapping

This provides us with a useful template to understand the hidden or not-so hidden interest of the various parties involved (both state and non-state actors). In the Kashmir dispute, what is comes out clearly is the fact that on both the sides (India and Pakistan), there are groups that are fighting for an Independent Kashmir that exists peacefully as a separate nation state combining both Hindus and Muslims (as before) who were the residents of Kashmir. On the other hand there are non state actors that support the merger of Kashmir with Pakistan based in Islamic lines. The state actors of both the countries have not much

choice but to stick to the traditional stance maintaining their legitimacy over Kashmir. Then there are the armed groups who believe that Kashmir can either gain independence or merge with Pakistan through relentless armed confrontation. This taxonomy quickly allows us to precipitate the classification or segregation of groups for further handling. This also helps us then to explore the expressed and hidden needs of each of these stakeholders that facilitates further aggregation and partitioning of the matching groups. In this case it would clearly emerge that the All Party Hurriyat Conference in the Indian controlled Kashmir would emerge as a key group that needs to be aggregated with a parallel group in the Pakistan controlled Kashmir like the Jammu and Kashmir Liberation alliance that demands secession too.

The trigger for resolution in Kashmir

The ripening of a conflict for resolution needs a trigger too since “No deal” is a BATNA for practically all the stakeholders. In case of Kashmir, the Kargil confrontation, the shift in global consciousness after the 9/11 and the possession of nuclear weapons by both the countries have largely worked as a trigger in recent times. However, the sustenance of the resolution efforts is something that has not happened. The causes for that are primarily the “NO deal” as a BATNA, the inability of the hegemon (the USA) to play its role as a true hegemon and force a sustained resolution process (due to its own political agenda and domestic compulsions). Territorial disputes like Kashmir are position based bargaining games and essentially can never be bilaterally resolved unless there is external third party mediation/facilitation.

Thus we can see that the systems approach is a powerful tool that helps us in understanding the epistemology of a dispute system. The fact that we can easily fit the Kashmir dispute in the template so developed suggests its usefulness in providing a crisp understanding of the issues involved thereby assisting the negotiators/practitioners/architects of a resolution system greatly.

The Neutralization of the Dispute System Processes

The framework that we developed in Chapter III for neutralization of the destructive processes in a dispute system allows us to look at Kashmir dispute in that light. All the embedded processes in the dispute system namely, the physical damage based processes, the coercion based processes, the trust based processes, the information based processes, the time based processes and the scope based processes exist in Kashmir to various degrees. The loss of lives and mass exodus of the Hindus from the Indian controlled Kashmir is a pointer to the presence of these processes in varying degrees. It is said that more than 300, 000 Hindus have fled that Indian controlled Kashmir valley since 1990 (Ref 11). The cases of arson, rapes, deaths, extortions are routinely reported that makes life difficult for the people living in Kashmir (ref 10) that creates an increased perception of threat amongst the local and world community which in turn feeds into the processes with more energy. As, proposed in this work, the neutralization of dispute system processes offers a good framework to look at the process of resolution and initiate steps in that direction. The peace builders can identify the generic concept and specific concept forms (and thus the agents and tools for the same) and facilitate steps or discussions in

that direction. The template provided by this approach can definitely be tailored to meet the specific needs of the conflict.

Dominant Solution Space and Recommendations for Kashmir

The solution space template allows the mediators with a tool to list out the possible outcomes that makes sense in terms of cost/benefit. To this end, the OPM for the enlarged goals and the review of the needs of the multiple stake-holders, operands and operators quite upfront in the process brings in clarity much earlier and helps facilitate the negotiation in more tangible terms. The segregation of the issues under the “realm of disagreements” (DOOMED) and “realm of agreements” (HOPE) provides a good starting platform for the negotiation once the initial burn-period is over. The adaptive funnel focuses the mediator’s attention to the adaptive nature of the conflict management process and the need to provide a loop back mechanism in the entire resolution process. By looking at these templates upfront, the experienced mediators/ facilitators can quickly come up with a plausible resolution system design.

All the points under the discussion for the stable intermediate forms hold good for the Kashmir dispute too. The mediator would do well to press for those initiatives during the course of negotiations. In case of Kashmir, some of the stable intermediate forms could be:

- a) Reduction of troops and para-military forces on both sides of the border.
- b) Reduction of troops and de-escalation in Siachin Glacier (the highest battlefield in the world).

- c) Increase of civilian administration in the disputed region.
- d) Increase in development based projects that provide better infrastructure and employment avenues to the educated youth.
- e) Release of some of the prisoners.
- f) Steps to build rapport with the people through NGO's, local community help groups, etc.
- g) Deploying information technology initiatives that bring in good governance and transparency.
- h) Reduce and take strict actions against corrupt and rent-seeking officials.
- i) Build barriers to flow of arms and funds through joint actions by the state actors.

These are just a few stable intermediate forms in addition to the ones already listed as part of Track I and Track II diplomacy. Thus thinking on these lines explicitly allows for the development of a good resolution system design later.

Based on the template we have developed for the generic concept form, specific concept form tools and agents, we now know that the resolution system needs an enlarged goal set aimed at an integrated development on social, political and economic fronts so as to neutralize the ill effects prevalent in a dispute system. This thinking process then leads us to ponder over the problem of “Where”. Where does one apply these tools to bring about the all-round development in order to resolve the conflict? In Indian held Kashmir (IHK), in Pakistan held Kashmir (PHK), an autonomous Kashmir or an independent Kashmir (in the last two situations both India and Pakistan may have no role or lesser role to play).

The resolution system template that we have developed gradually brings us to this line of thinking. Looking at the solutions space in Table IX we find that it is very much valid for the Kashmir dispute too. However, annihilation can easily be taken off as an option given that both the nation states are looking for a resolution. War as a BATNA has not paid off well in the three wars that the two countries have fought. Furthermore given the nuclear parity that is present today, it may not be a good option to seek an all out military confrontation. The other entities in Table IX do not clearly bring out the clear form of the resolved system in terms of territory. It just spells out a few action steps to get there. For example, a UN intervention or a public referendum may just be some steps towards the end goal of seeking a way out of the conflict but that still does not tell us about the final likely territorial form on ground.

The most dominant forms of the territorial structure in Kashmir (that follows from the intent to apply the processes of a resolution system) are as follows:

- a) Maintain the status-quo with the Indian held Kashmir staying with India and Pakistan held Kashmir becoming a part of Pakistan. The line of control (which is disputed) is turned as the International Border (IB).
- b) Grant Autonomy in Kashmir that allows Kashmir to have its own finance and other crucial elements while both India and Pakistan are jointly responsible for the external security of Kashmir.
- c) Grant Independence to the IHK, PHK with or without the parts of Kashmir that are held by China.

The first form implies that Kashmir stays partitioned between India and Pakistan as the current situation is and the Line of Control (LOC) that is contested by both India and Pakistan becomes a mutually accepted International Border (IB). This option apparently is unlikely to create any major upheaval in the public perception as for many decades the people of IJK, and PHK having been living that way. Nevertheless, it may need a political face saving exercise from both India and Pakistan governments as it goes against their traditional stand. Pakistan vehemently opposes this option as it feels that Kashmir with its dominant Muslim population would have opted for Pakistan if it had been given the choice. India may be open to this option to a large extent and so is the world community.

This option implies that the factions seeking complete independence would still be going strong especially the Jammu & Kashmir Liberation Front (JKLF) that operates under the leadership of two faction leaders namely Yaseen Malik (peaceful means) and Amanullah Khan (armed struggle) and both have its offices in IJK and PHK. However, the JKLF with independence as its agenda is certainly not in the good books of both India and Pakistan. The intelligence service of Pakistan (ISI) would rather prefer to spend its energy and resources on the factions that support the idea of Kashmir becoming a part of Pakistan than JKLF. In this scenario, should the LOC be converted into the IB, some of the fault lines would remain (like the JKLF struggle). This would need to be managed by the mediators and India and Pakistan through a number of options. Some of which could be like disrupting or stopping the funding, shutting down their offices, buying out the key

leaders, etc. It is worthwhile to note that many countries the world over have time and gain indicated its preference for this option.

The second option of an autonomous Kashmir with its own finance and other critical portfolios with India and Pakistan jointly assisting its external defense appears feasible. This autonomous Kashmir may or may not include the Northern areas of Kashmir and the parts that are with China. This option too has some fault lines that remain like before. The armed non-state actors may feel betrayed and may ask for more. However this option would definitely reduce their bargaining power and legitimacy. The JKLF too may not be totally supportive of this scenario but nonetheless may find it attractive to some extent. This could also win applause and recognition both for India and Pakistan from the international community. However, both these nation states have nothing much to gain from this loss of territory that has strategic importance.

The third option of an independent Kashmir appears to be a very drastic and a big turn around from the traditional stand that the two nations have taken for so long. This territorial structure introduces a new nation state between India and Pakistan (as it was before the partition in 1947). This structure totally eliminates the non-state actors (both armed and peaceful groups) but renders the two nation states vulnerable to internal political turmoil besides experiencing a loss of territory. Whether Kashmir has enough intrinsic capacity to survive economically as a nation state is also another angle that merits focus and deliberation.

Some more structural variations to the ones suggested above may seem possible but each territorial structure poses a possibility of creating or sustaining the old fault lines of the conflict. The key challenge would be to negotiate or mediate a resolution using the six tier methodology within the above dominant structural formations. Given the constraints of each of the above possibilities, the conversion of the LOC into an IB emerges as the most dominant structural formation with least (apparently) political and social ramifications. Once such a structure is adopted by the two countries they could then apply the processes in a resolution system to concentrate on the deliverance of political goods to its citizens. Just to have a rough estimate of the estimated savings in costs both to India and Pakistan (Ref 12), India could save about \$3.5 billion per in India and about \$ 500 million per year in Pakistan which if re-invested productively would have huge gains in the long run. The costs savings essentially comes from the reductions in the regular armed forces size by 10% to 20% in India and Pakistan. It also includes a 50% reduction in the paramilitary forces in both the countries.

As explained before, the deep rooted ideational forces have increased the mutual distrust between the two countries, thereby rendering a pure bilateral solution impossible. The solution to the Kashmir conflict demands a change of stance both by India and Pakistan which requires extensive training and relentless efforts that go with active mediation. This means that for the dispute system (Kashmir) to be turned into a resolution system, one needs a strong third party mediator that has credible influence with both India and Pakistan. In this context, United States of America emerges naturally as a most viable mediator considering its Hegemonic status and the clout it holds in the international arena

today. However the United States must shed its age old stand of urging India and Pakistan to solve the dispute bilaterally and only volunteering to be an honest broker. This stand of the United States is revealed by conclusions of the report “New Priorities in South Asia” (Ref 10) which said “In the final analysis, only New Delhi and Islamabad can resolve their rivalry and reach an accord over Kashmir. The United States can and should help the process”. This study reveals that the forces of distrust apply and immense social pressure on both the nation states and only an aggressive mediation process by United States would bring the two to the negotiation table.

Thus The United States needs to come out more openly while accepting its hegemonic responsibilities (even at the cost of some domestic compulsions), in order to create a situation from where it can mediate. It needs to leverage its clout on both the countries through economic and policy tools and pro-actively lead the way in mediating. As quoted in by Wajahat Habibullah, a senior government official from the Indian bureaucracy (Ref 10), the United States’ primary concern in the region is for the nuclear dimensions of any Indo-Pak conflict and given the scale of its commitments across the world, the United States may best serve its own purpose through a continued dialogue between India and Pakistan. Most Kashmiris consider United States as an honest broker and they also feel that the sporadic periods of normalcy achieved in the region have been the result of the efforts of the United States (Ref 10).

This work also highlights the need and the importance of institutionalizing the mediation process. Thus through the concept of institutionalization in the form of “SEED” working

under the aegis of a neutral venue an effective resolution system can become a reality. The SEED would house all the stake-holders that are scoped in the game and would continue working on the peace and confidence building initiatives that can be leveraged throughout the entire phase of conflict resolution. Thus creation of “SEED- Kashmir” with United States as its chief protagonist would be a prudent step in the direction of mediating for a dominant territorial construct that resolves the territorial dispute. This institutional entity would also bear the onus of training the multiple stake-holders in the dispute and managing expectations through constant active mediation and facilitation.

Parting comments

To surmise on the key findings of this study, one can say that there is no such thing as a pure bilateral solution to the Kashmir dispute. That would always be a non starter or at best may involve a series of steps by India and Pakistan that could be considered as stable intermediate forms or confidence building measures. The movement from a dispute system to a resolution system would need active mediation from United States as it enjoys the confidence of both the nation states and the people of Kashmir. On its part the United States must shed its age old stand of urging the stake-holders to resolve the conflict bilaterally. The study led us to understand that through there are many processes that are needed in a resolution system in order to neutralize the ill- effects of the processes in a dispute system. The processes in a resolution system take a generic and a specific concept form and have tools and agents that carry out those processes. From the system analysis emerged the fact that a resolution system would manifest if one can successfully enlarge the goal set thereby marginalizing the territorial dispute and

diverting the focus to larger goals. This led us to look at the dominant territorial constructs that are possible (where the resolution system processes would be applied). The study showed that the most dominant territorial construct with least political and social implications is the status quo and the conversion of the LOC into IB. This would greatly reduce the fault lines that exist in the conflict. The other armed non-state actors and those that seek total independence as a nation state need to be managed through facilitation, mediation and other suitable political tools (like a buy-out or some stakes in the future of the new nation state). Lastly, the work proposes that the process of mediation can best be served through an institutionalized body called “SEED-Kashmir” with United States as its main anchor. Such an approach would accord the mediation process more credibility besides creating a mechanism that captures the knowledge on a more formal basis. The use of the adaptive funnel analogy is a good way to plan the entire process of resolution. It provides avenues and ways for all the stake-holders.

to loop back in the resolution process. The Kashmir dispute has resisted resolution for more than five decades now. The only way forward towards stable peace is through a change in the traditional approaches and some strong decisions (in the interest of larger goals of peace and prosperity) by India and Pakistan and active mediation by the United States.

CHAPTER V

RECOMMENDATIONS & CONCLUSION

Recommendations

The systems thinking approach brings in a holistic understanding of the nature and extent of any conflict. This work demonstrates the valuable templates that can be developed using the tools of system architecture and systems approach paradigm. The templates evolved in this work are by no means exhaustive and can be built on further limited only by the creativity and the experience of the architect. Based on the findings of this study the following generic recommendations emerge clearly:

- a) There is no bilateral solution for a territorial conflict. They need active mediation/facilitation by a mutually trusted party or a hegemon.
- b) The trigger that comes up should be grabbed opportunistically by the concerned mediating/facilitating entity (or the world community) to start the process of resolution. The trigger may mark the ripeness of the conflict for resolution.
- c) Territorial disputes demand continuous handling and thus need institutionalized set up. This would facilitate the understanding, creation and capture of the essence behind each step in the resolution process. The creation of SEED is thus strongly recommended.
- d) The use of the adaptive funnel analogy is a good way to plan the entire process of resolution. This provides avenues and ways to loop back and save

face for all the stake-holders. This can also serve as a sound guideline for the mediators.

- e) The mediating agency must encourage and enable the reduction of interfaces in the resolution process through judicious scoping, aggregation and partitioning of the stake-holders and must be open to making changes at any point in time during the resolution process.
- f) Training of stake-holders during the burn-in period (mixer stage) is a must in the entire process of resolution. This helps in overcoming initial communication barriers and builds mutual trust.
- g) Few visits by prominent state actors and a few days of talks can only be treated as a stable intermediate form. It can never alone result in a solution. This only re-iterates the point that the resolution process needs to be done institutionally and on a sustained basis.
- h) The aim of the mediators must be to create an environment where the goals can be enlarged and the territorial dispute gets marginalized. The focus would then shift to larger interests of the stake-holders involved.
- i) The six- tier process methodology developed in this work can serve as a valuable template for the mediators. It can be suitably modified to meet the demands of a specific dispute.
- j) The solution space can serve as a good guideline for the mediators. For this the generic and specific concept forms along with the tools and agents act as guidelines too.

- k) The framework of moving from “DOOMED” to “HOPE” allows the mediators to remain focused on the handling and reduction of issues that arise during the mediation process.

Conclusion

This work demonstrates the strength of systems approach for understanding the epistemology of a territorial dispute system and its ability to assist in the creation of a practical resolution system architecture. The case study on Kashmir (where the author has served in personal capacity) also brings out the ability of systems thinking in systematically arriving at the dominant solution space for the conflict. The study explains the nature of territorial disputes in terms of the objects and processes that are at play in such a dispute system. It underscores the efficacy of using OPM as a tool for communicating and brainstorming in the “**need, intent, process, form**” format. This can serve as a language among the mediators or resolution system architects to communicate crisply. The approach of developing a concept through the solution specific operating process, the generic and specific concept forms provide the practitioners with a new lens to look at these disputes and their constitutive entities. The neutralization of the negative value creating (positive for those who created these processes) appears to be a good starting point while exploring means and ways to go about the process of resolution. The studies show that such disputes cannot be solved through bilateral initiatives and need the mediation/facilitation by a third party that could be a hegemon or someone that all the stake-holders trust. This is due to the ideational forces that are dominant in the system. It also came out clearly that the resolution process needs to be formalized and

institutionalized and there is a need to move beyond a few well-meaning individuals and non-profits. Such a step would help us create a knowledge repository of tools, processes and templates that are replicable (in some form) in other parts of the globe facing territorial conflicts. Towards this end, the entity called “SEED” (as proposed in this work) would evolve such processes and templates on a continuous basis besides developing training methodologies and media management processes in an integrative way. Such measured and deliberate steps (based on a holistic understanding of the conflict) alone can lead these regions of strife from being “DOOMED” to the path of “HOPE” thus heralding the advent of stable peace.

Appendices

Appendix A: Glossary of Terms

(Reference: Conflict Research Consortium, University of Colorado, USA)

1. **Arbitration** : Arbitration is a method of resolving a dispute in which the disputants present their case to an impartial third party, who then makes a decision for them which resolves the conflict. This decision is usually binding.

2. **BATNA**: It is an acronym for “Best alternative to a negotiated agreement” coined by Fisher & Uri in their book “getting to say yes”. A BATNA is a point at which a negotiator is willing to walk away from the negotiation without making a deal. Any set of terms that are superior to the negotiator’s BATNA are a good reason to be in the game.

3. **Conciliation**: Conciliation involves efforts by a third party to improve the relationship between two or more disputants. It may be done as a part of mediation, or independently. Generally, the third party will work with the disputants to correct misunderstandings, reduce fear and distrust, and generally improve communication between the parties in conflict.

4. **GRIT**: Acronym for “Gradual Reduction in Tension”. This is a term invented by Charles Osgood to refer to a gradual de-escalation process, in which one side makes a unilateral, minor concession in the hopes that the other side will then be encouraged to do the same. This is then followed by a second concession, which

hopefully is matched, and a de-escalation process then continues with matched concessions and disarming moves.

5. **Mediation:** Mediation is a method of conflict resolution that is carried out by an intermediary who works with the disputing parties to help them improve their communication and their analysis of the conflict situation, so that the parties can themselves identify and choose an option for resolving the conflict that meets the interests or needs of all of the disputants. Unlike arbitration, where the intermediary listens to the arguments of both sides and makes a decision for the disputants, a mediator will help the disputants design a solution themselves.

6. **Multi-track Diplomacy:** This term has been developed recently to reflect the idea that international exchanges can take many forms beyond official negotiations between diplomats. Examples of multi-track diplomacy include official and unofficial conflict resolution efforts, citizen and scientific exchanges, international business negotiations, international cultural and athletic activities and other international contacts and cooperative efforts.

7. **Negotiation:** Negotiation is bargaining--it is the process of discussion and give-and-take between two or more disputants who seek to find a solution to a common problem. It can be relatively cooperative, as it is when both sides seek a solution that is mutually beneficial (commonly called win-win or cooperative bargaining),

or it can be confrontational (commonly called win-lose or adversarial) bargaining, when each side seeks to prevail over the other.

8. **Power strategy mix:** This term refers to the mix of force, exchange, and integrative power that is used by a disputant in an effort to prevail in any conflict situation.
9. **Resolution-Resistant Conflicts:** We use this term to refer to conflicts that are highly difficult, but not impossible, to resolve. The term "intractable conflict" means the same thing, but often we use "resolution-resistant" instead because some people interpret "intractable" to mean "impossible."
10. **Restitution:** Restitution involves paying a person or group back for harm that was done to them. Although lost lives can never be replaced, making a symbolic repayment of money, social or economic assistance, or otherwise alleviating damage or harm that was done as much as possible can go a long way toward resolving a conflict and moving toward reconciliation.
11. **Ripeness:** A conflict is said to be "ripe" for settlement or negotiation when it has reached a stalemate, or when all of the parties have determined that their alternatives to negotiation will not get them what they want or need. In this case, they are likely to be ready to negotiate a settlement which will attain at least part

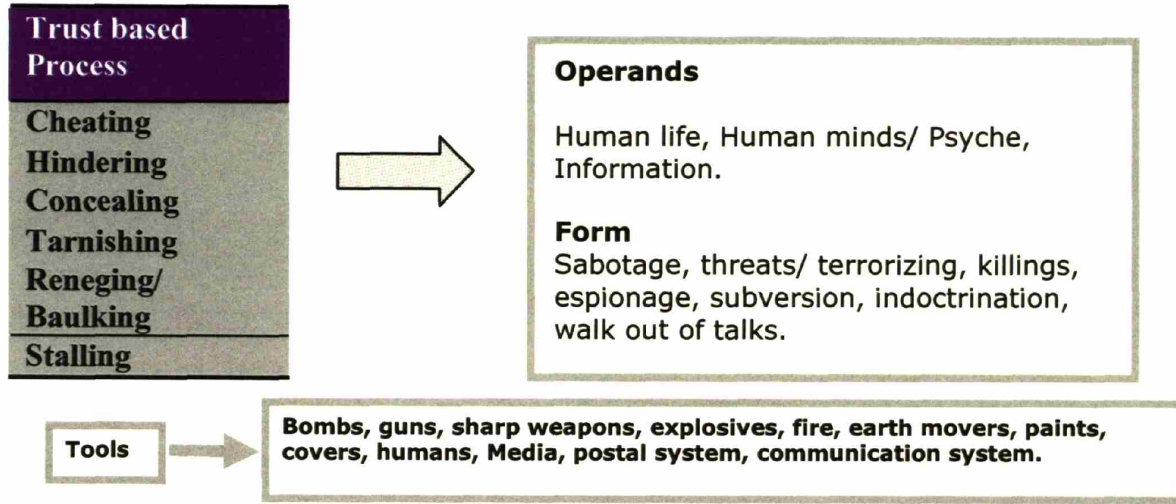
of their interests--more than they are getting otherwise or stand to get if they pursue their force-based options further.

12. **Stalemate:** A stalemate is a standoff; a situation in which neither side can prevail in a conflict, no matter how hard they try. Often parties must reach a stalemate before they are willing to negotiate an end to their conflict.

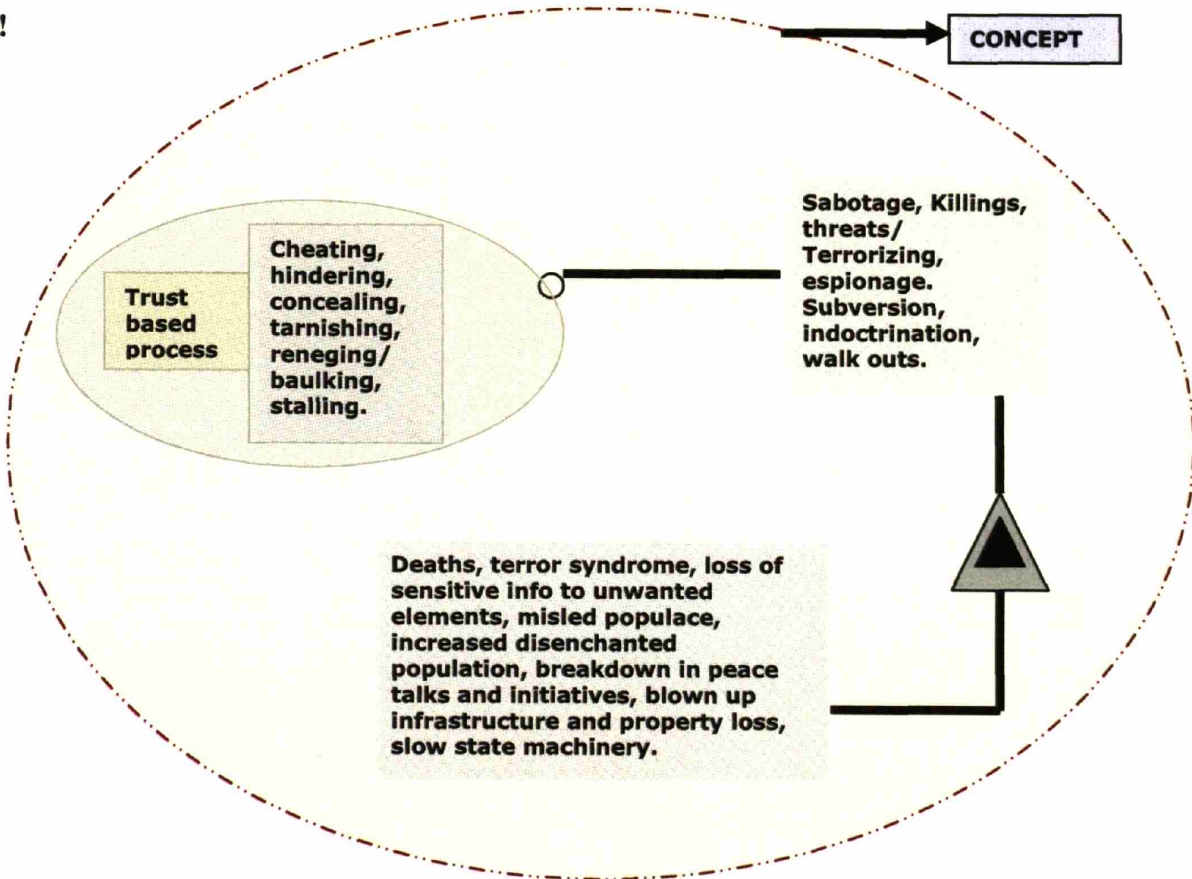
13. **Stable Peace:** Stable peace is the situation in which two countries do not even consider war to be an acceptable or possible option for dispute resolution between them. It is contrasted with unstable peace (in which countries are at peace but think that war is possible at a future time).

14. **Track Two Diplomacy:** It involves unofficial dialogue, discussions, or even negotiations between ordinary citizens about topics that are usually reserved for diplomats--for instance about arms control agreements, or negotiations to end to long-standing international conflict. It is differentiated from Track One diplomacy which involves formal discussions between official diplomats.

Appendix B: Trust Based Process; Dispute System

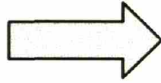


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Appendix C: Coercion Based Process; Dispute System

Coercion based process
Extorting
Depriving
Enticing/ Luring
Instigating
Subverting
Terrorizing

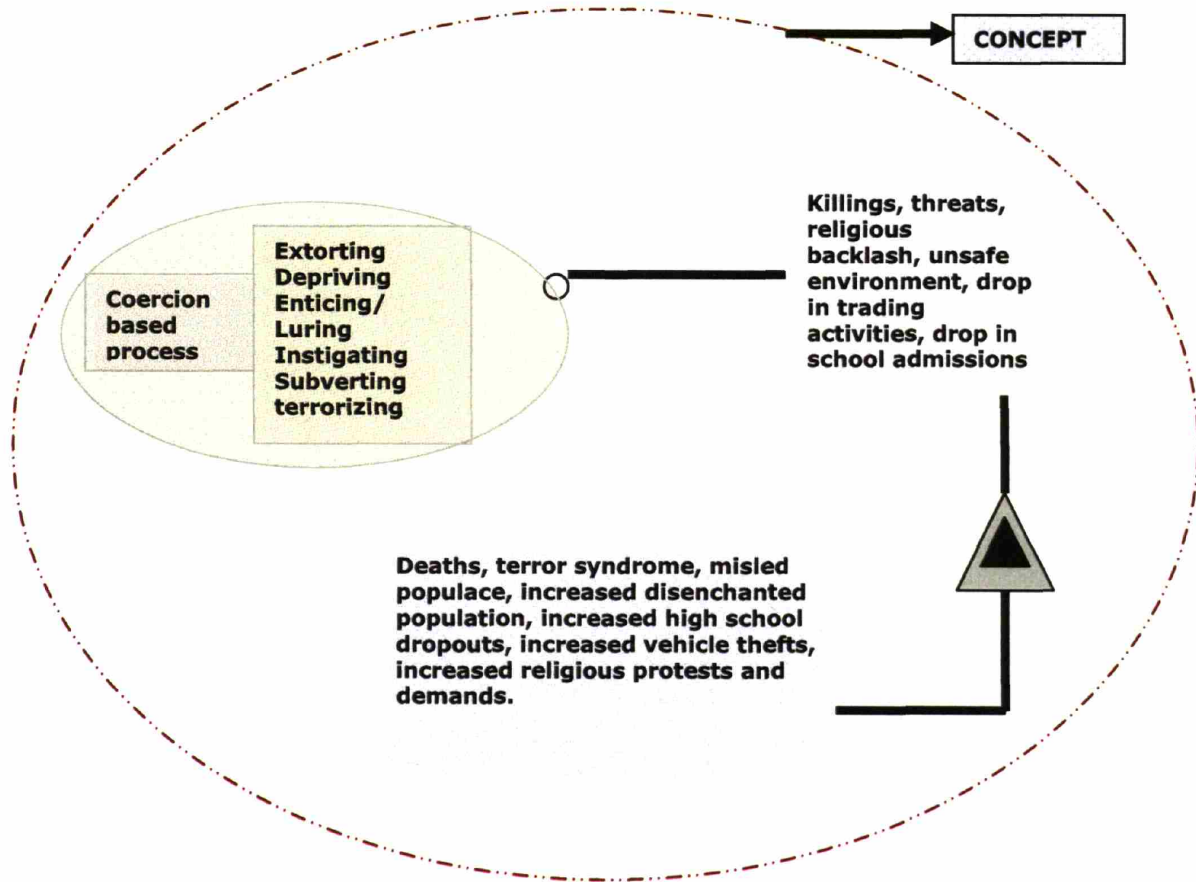


Operands
 Property, human life, Human minds/ Psyche, information, money, religious beliefs, transportation means

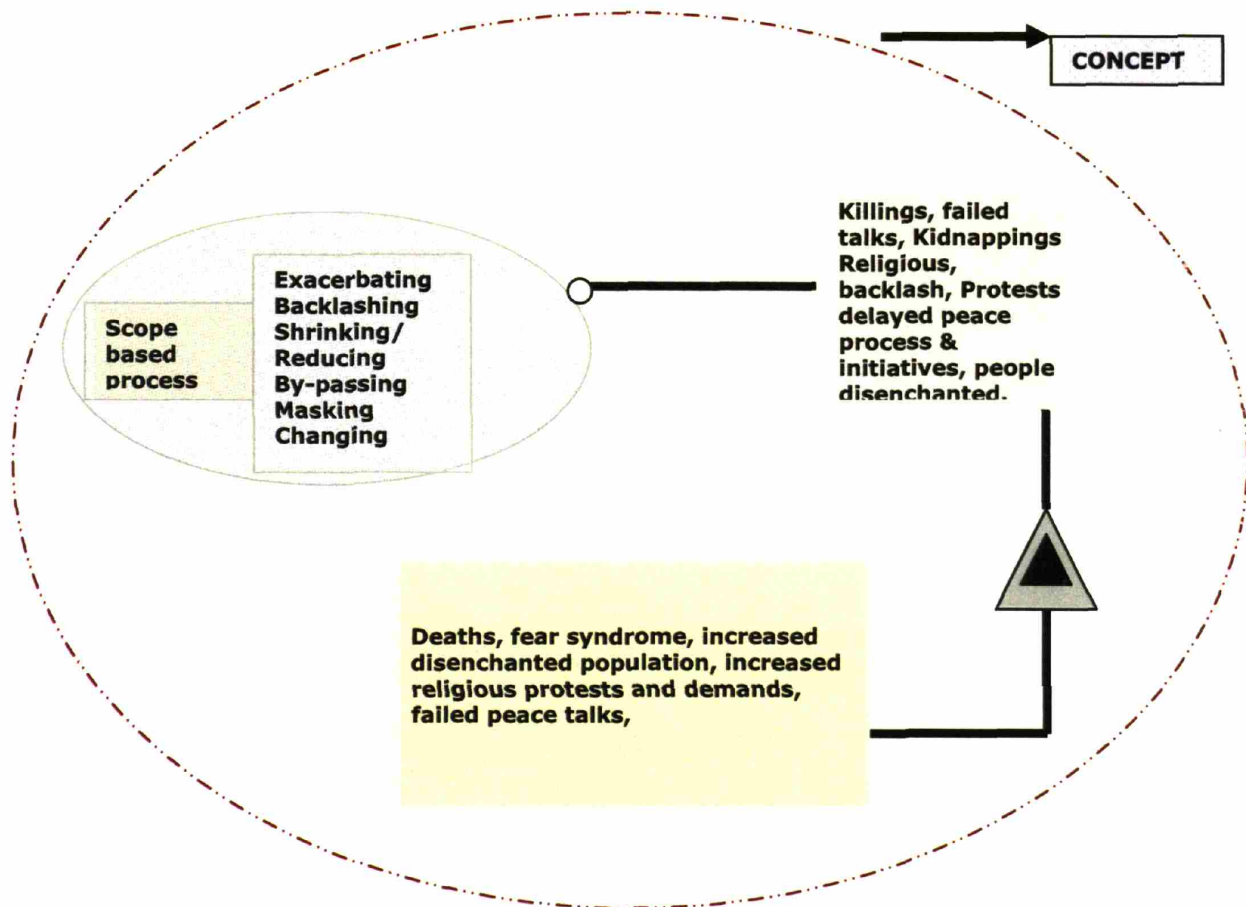
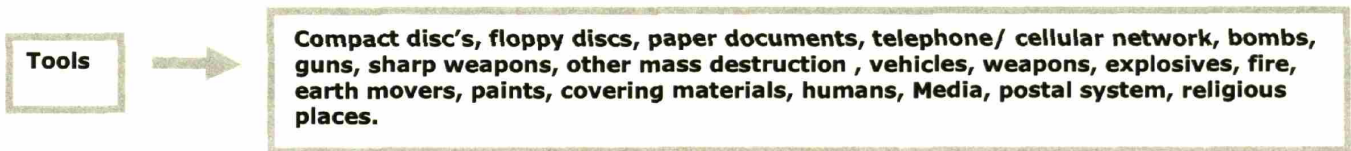
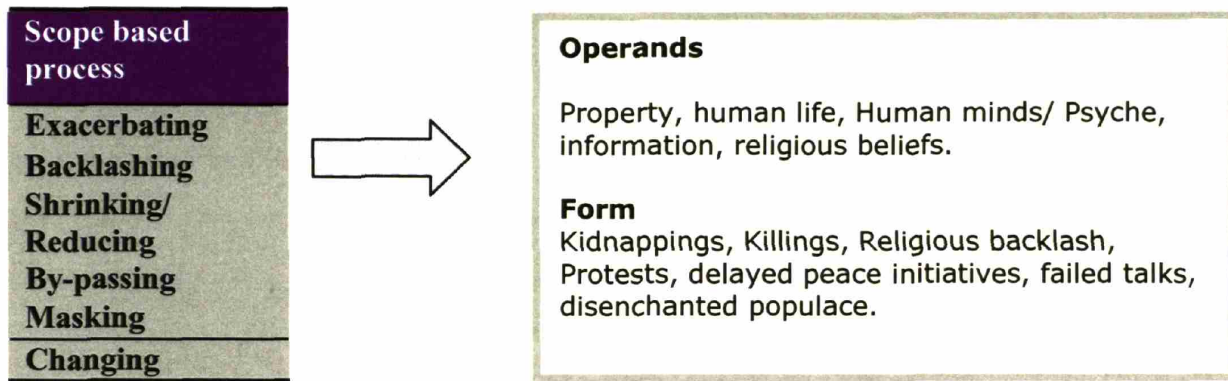
Form
 Kidnappings, Killings, Religious backlash, Increased vehicle thefts, Increased High school dropouts.

Tools

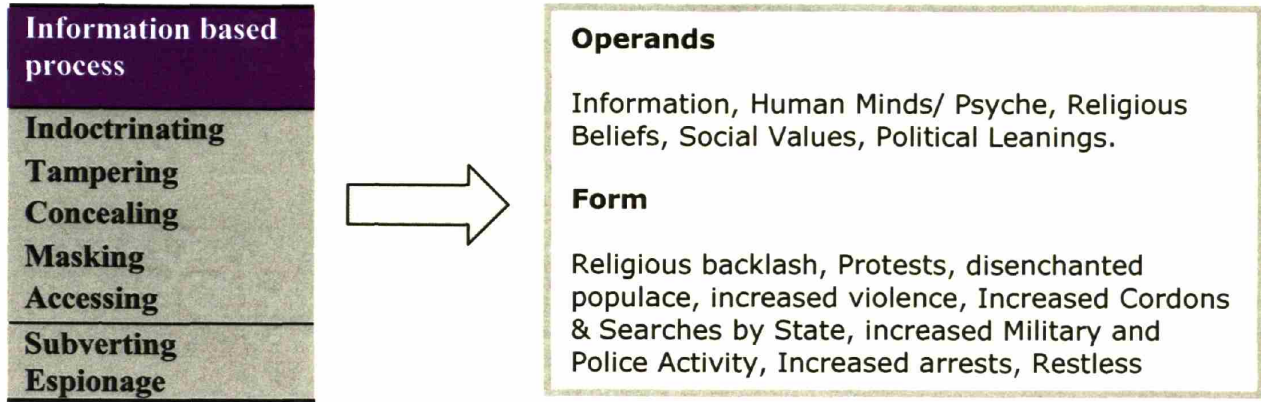
Guns, bombs, sharp weapons, other mass destruction weapons, vehicles, humans, media, postal system, money, power, religion, past events.



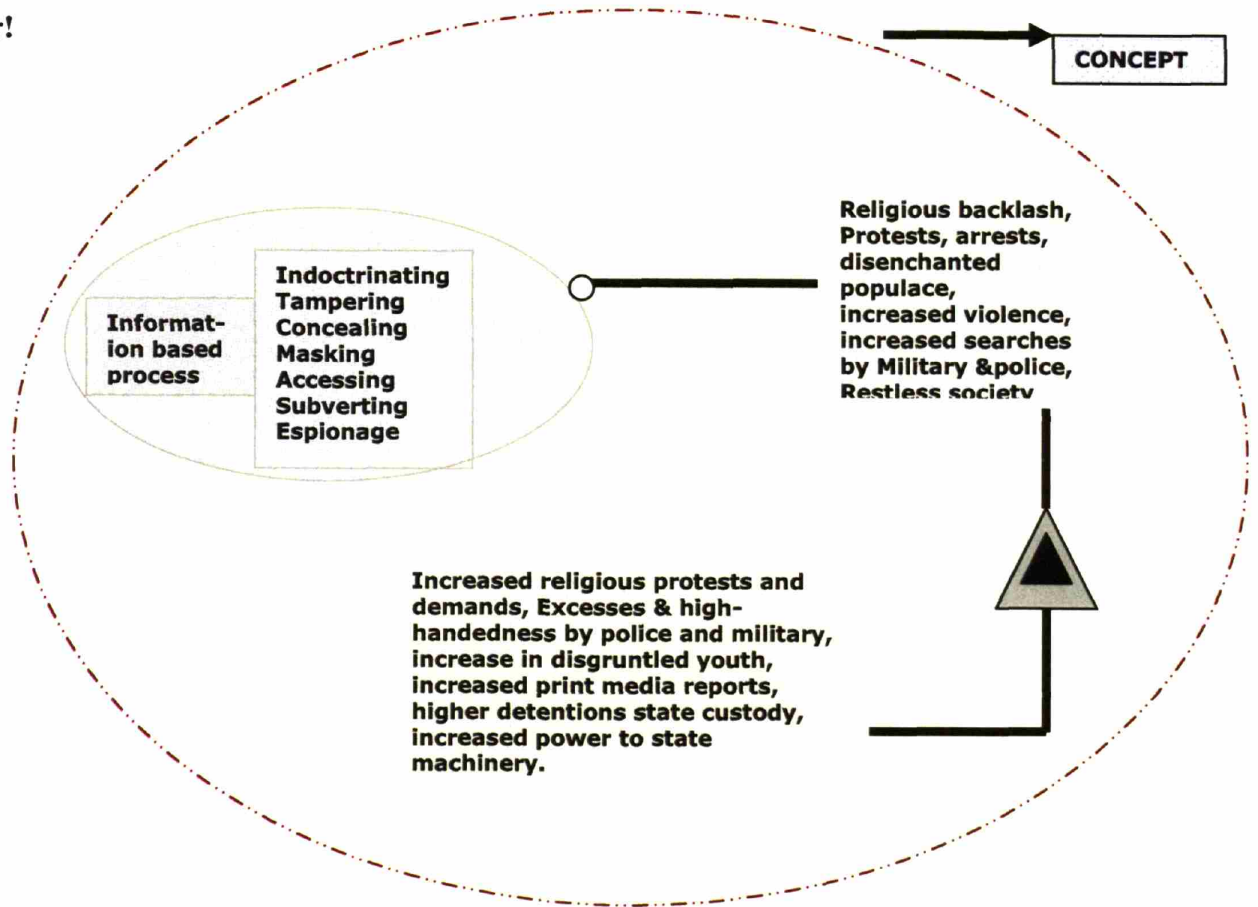
Appendix D: Scope Based Process; Dispute System



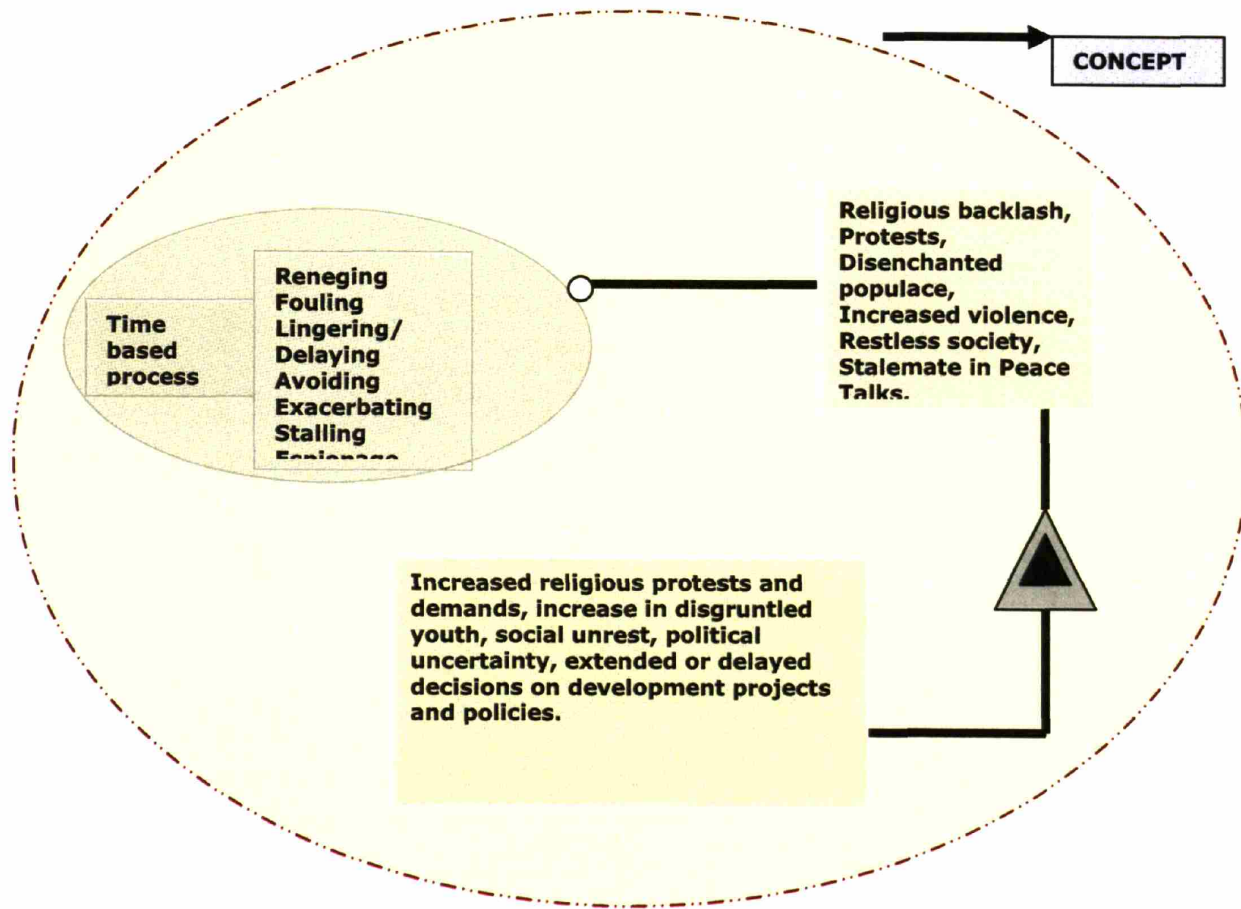
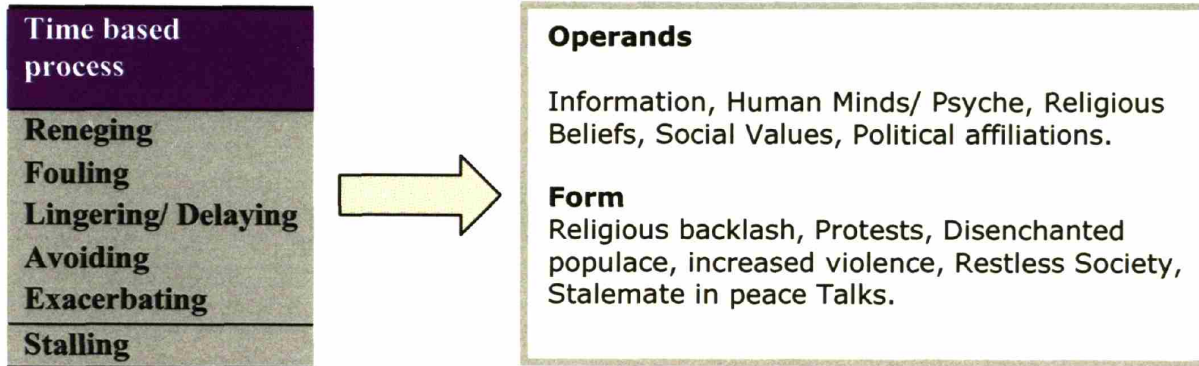
Appendix E: Information Based Process; Dispute System



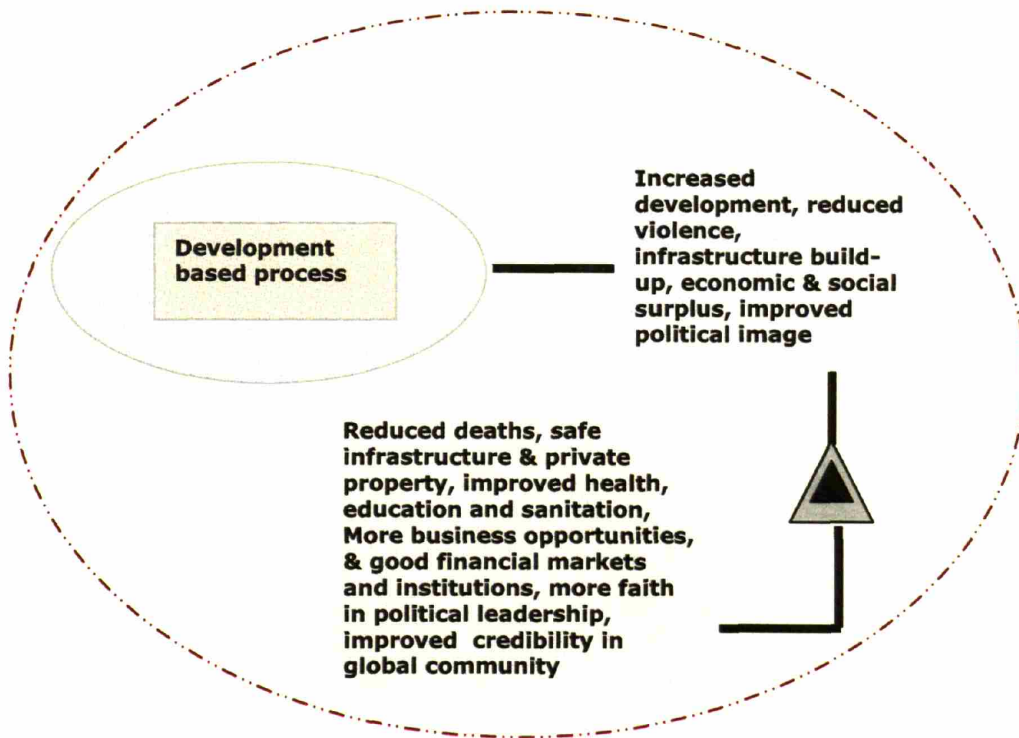
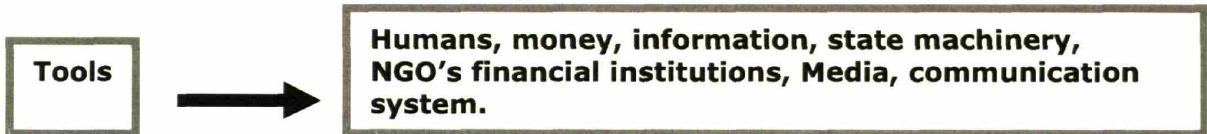
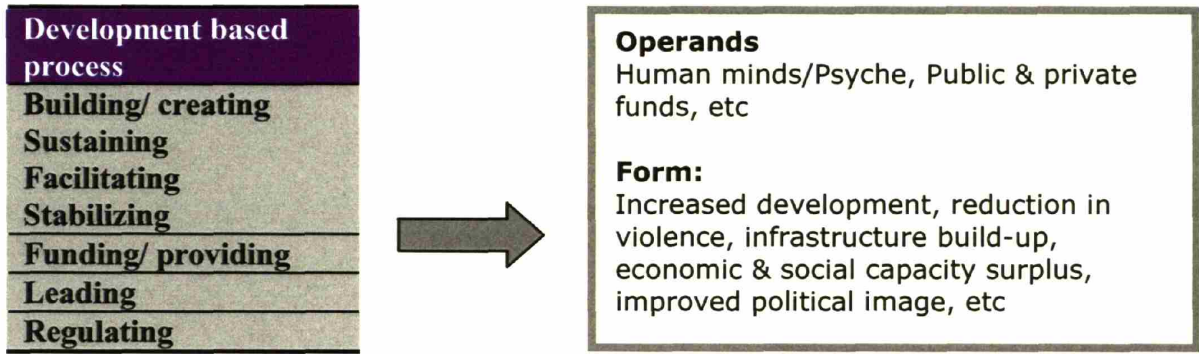
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Appendix F: Time Based Process; Dispute System



Appendix G: Development Based Process; Resolution System



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