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**Integrating Systems Thinking and Storytelling**  
An overview

**Abstract**

*This paper explores the role of design in conflict resolution when doing so means balancing burdened pasts with present uncertainties. To prove its relevance in today's complex problem spaces, design cannot remain stagnant; it must evolve alongside the pace of development. Designing within complexity is unprecedented. Yet, design can define structures that guide an understanding of this complexity. The methodology and case study described in this paper explore how systems thinking, storytelling and grounded theory can contribute to this understanding. The methodology aims to combine subjective perspectives with systemic analyses to create a collective narrative that reveals the multitude of individual understandings of conflicts. Ultimately, this methodology does not attempt to resolve conflict; instead, it aims to provide an in-depth diagnosis of a wicked problem and question the role of design therein.*

**Keywords:** design, systems thinking, storytelling, conflict, diagnosis, wicked problems

**Introduction**

No problem space is new. All problem spaces have been formed by layers of history, (in)action, failure and insight. Understanding complex problem spaces as having a beginning, middle or end is irrelevant, if not impossible as the human condition is endlessly entangled and complicated. Environmental degradation, economic recession, socio-political fragmentation and rapid population growth have created a complexity that must balance burdened pasts with shifting nonlinear uncertainties. Any potential solution will not be a simple fix; it must be crafted from an understanding of the nuances of what came before and the foresight into what will occur in the future. As Richmond (1993) has noted:

The problems that we currently face have been stubbornly resistant to solution, particularly unilateral solution. As we are painfully discovering, there is no way to unilaterally solve the problem of carbon dioxide build-up, which is steadily and inexorably raising the temperature around the globe. The problems of crack cocaine, ozone depletion, the proliferation of nuclear armaments, world hunger, poverty and homelessness, rain forest destruction, and political self-determination also fall into the category of "resistant to unilateral solution" (p.113).

Empathy and foresight are capacities built into the design approach. This makes designers well-positioned to create nuanced and human-centered solutions that can respond to the depth of complexity found in today's problem spaces. As Simon (1981) has noted, design moves existing situations into preferred ones. In a time when local revolutions are quickly broadcast in the digital world and unite people across continents, it can feel as if the preferred situations are harder to grasp than ever before. Yet, designers are trained to deal with shifting circumstances and to forecast the desires and needs of their customers. They are taught to look into the future and to act now. Designers possess a necessary set of methods and capacities (Hanington & Bella, 2012), but they have yet to fully apply them to complex problem spaces. There remains a lack of understanding of the relationship between design and complexity that must be understood before design can position itself to address the world's largest challenges and begin to add value. According to Willis (2013):

If design is to be the means towards a radical change of direction of our ourselves and our made-world, if we are to move from the ‘existing situations into preferred ones’ – it cannot be understood and confined within its current forms. It has to change into a far more ambitious and intellectually informed practice (p. 1).

For design to begin to situate itself within complexity without overburdening already crowded problem spaces, it must differentiate itself from other fields by offering alternatives to what already exists. This paper seeks to explore whether design has the ability to offer such alternatives, and it suggests a possible methodology that can be used to arrive at these alternatives within the most stuck and stagnant problem spaces. In other words, it aims to answer the following question: Does design have the ability to find understanding, clarity and insights that can lead to action?

Explored conceptually since World War II (Mindell, 2002), systems thinking is a methodology that comprehends how individual parts are integrated into the whole. It supersedes previous methods of understanding through, “analysis (to gain knowledge of the system by understanding its parts) with synthesis (explaining the role of the system in the larger system of which it is a part).

Analysis is useful for revealing how a system works but synthesis reveals why a system works the way it does” (Ackoff, 1999, p. 3). However, the term, ‘synthesis’, should not be misunderstood as a simple coming together or fluid process of understanding. Rather, systems thinking should be respected as a tool that can reveal complexity by displaying the entirety of a wicked problem. It is a way to diagnose or understand, on the greatest scale, while examining the ‘what is’ in nuanced detail. In no way is this simple or clarifying.

Making no attempt to discover why a system works the way it does only results in superficial designs. According to Pourdehnad, Wexler, and Wilson, (2011, p. 3) “one of the consequences of Systems Thinking is the willingness to sacrifice the performance of the part for the performance of the whole.”

As a complement to systems thinking, design can begin to thrive in complexity. Indeed, when systems thinking is applied to designing spaces, the intricate layers and subtle moments within complex problems are exposed. The unknown is acknowledged, and the details are pertinent rather than being beside the point. As Pourdehnad et al. (2011) noted:

It is possible—and necessary—to create an approach that explicitly incorporates the strengths of each (systems thinking and design thinking), thereby addressing their gaps and increasing the chance of creating sustainable solutions to the wicked problems facing organizations and society today (p. 13).

Using this expanded understanding of cognition, design can complement a systems thinking approach and enter into conversations about the so-called ‘wicked problems’, a term coined by Rittel and Webber (1973). Defined in their nominal article, wicked problems are the problems that are most malignant, tricky and unsolvable (Rittel & Webber, 1973). As opposed to tame problems, wicked problems arise when multiple intertwined elements lack clarity or distinction, thus testing the capacity and possibilities of the design. When the relationship between systems thinking and design is activated, wicked problems can be tackled with creativity, design thinking, contextual mapping and road-mapping of potential unintended consequences (Buchanan, 1992).

Perhaps the need for systemic understanding and innovative insights, as well as the frustration that can result when these are absent, is never felt more keenly than in complex conflict, where the most wicked of problem spaces can be found. In conflict mediation, conflict is defined as an interaction of interconnected people pursuing multiple opposing goals

(Barki & Hartwick, 2004). In terms of systems thinking, conflict can be understood as the lack of alignment within or consciousness of the system, whether this be an individual not understanding her/his position in the larger context or the system not being responsive to the needs of the individual. The key idea is that conflict is multi-layered; it is formed by perceptions, actions and feelings (Mayer, 2012). These individual characteristics are compounded within complex conflict, which is a combination of the tensions of multiple people or perspectives that often overshadow any single individual.

Isolating systems thinking in complex conflict is too large-scale of a task, and it does not incorporate individual sentiments, reactions and empathies. These are the very means through which persons—the individual parts of the system—identify with conflict. To counter this, it is necessary to focus on the individual and subjective within a conflict, and to include the connection between multiple perspectives that form the collective subjective. Design is a field that has been shaped by the basic need of making things work for individuals; thus, it can be relied on to integrate these perspectives in ways that complement larger-scale systems thinking methodologies. According to Jones (2016):

Systems theory and design thinking both share a common orientation to the desired outcomes of complex problems, which is to effect highly-leveraged, well-reasoned, and preferred changes in situations of concern. A central difference in perspective is that systems thinking (resulting from its theoretical bias) promotes the understanding of complex problem situations independently of interventions or solutions (p. 1).

Systems thinking can sort through the complexity of differing actions, feelings and perceptions in conflicts, while design introduces the individual perspective and leads the way towards change. By directly connecting these two methodologies, the strengths of each are amplified. This was tested through several recent case studies in which different organisational structures experienced conflict. This included conflict in hierarchical organisations, conflict in grassroots organisations, citywide conflict and the large-scale challenge that Lebanese people struggle with to re-define their nation after a war but amidst continuing corruptions and tensions. What was found is that without the capacity to include individual subjectivities, systems thinking loses the ability to identify a complete diagnosis of a problem space; therefore, it will not lead to the design of viable, substantial solutions. A whole is greater than the sum of its parts, but neglecting the parts cannot create a whole. Moreover, when individual subjectivities are located within the broader system, previously overlooked insights are found. Deriving systems thinking directly from subjectivities strengthens and encourages systems mapping or diagrams and enables more rigorous understandings that acknowledge the political and biased nature of the problem space. Only in this way can problem space (even in the most complex conflict) reach a consequential level of diagnosis that is formed from a comprehension of the present that can be reframed with concrete insights to reveal the emerging design potential.

This paper introduces a methodology that leverages systems thinking and storytelling to locate an in-depth diagnosis of conflict based on individual perspective. The first section addresses the methodology. This is followed by a section dedicated to one of the case studies conducted in Beirut, Lebanon, a capital struggling with the aftermath of a civil war. That section is immediately followed by a reflective section that extracts the knowledge and lessons learned from the application of this methodology. The paper concludes by discussing the larger role of design and designers within complex problem spaces.

## The proposed methodology

The goal of the methodology is to find clarity and understanding within complex conflict. Through an accessible and engaging diagnosis, or understanding, of conflict, this proposed

methodology raises individual consciousness and identifies a way to enter into the systemic problems using the personal subjective experiences of individuals as revealed through stories. By connecting individual stories and experiences to inform the building of an intertwined system, it is possible to reveal the perception of the complexity of relationships within conflict. Tying the stories directly to the system creates a more informed, more useful and more ethical understanding of a conflict derived from individual subjectivities and framed by the larger systemic issues that impact a system.

The Design Align methodology described in this paper creates empathy by uncovering a diverse range of perspective through storytelling. This methodology relies on the built capacities of designers to strike a delicate balance between systems thinking and storytelling. Understanding conflict through the inclusion of various perspectives can extend empathy from the individual to the conflict itself, creating a re-framed understanding. At the same time, Design Align extracts data and information directly from the stories to learn about the conflict. By mapping relationships between different stories, new insights can be revealed and strategic points of intervention can be identified that address larger-scale concerns. Through pattern-finding, clustering and re-clustering of information, patterns and themes can begin to emerge from the system. These themes are re-framed as a narrative, which takes on different visual and auditory forms depending on the conflict and the people involved. This accessible form of the narrative conflict—this in-depth diagnosis—is handed back to the individuals living in conflict as well as the original storytellers. The narrative is now theirs. The next section provides a detailed description of Design Align, a four-step methodology.

### ***Story collection***

Winslade and Monk (2000, p. 3) have noted that “People grow up amid a multitude of competing narratives that help shape how they see themselves and others”. Stories define the people who tell them; they are an expression of self. In a neurological sense, stories assist the human brain in navigating the world. Stories allow people to test out scenarios in a safe way before deciding how to act in reality. Eagleman (2012) stated:

Clever animals don’t want to engage in the expensive and potentially fatal game of physically testing every action to discover its consequences. That’s what story is good for. The production and scrutiny of counterfactuals (colloquially known as “what ifs”) is an optimal way to test and refine one’s behavior (p. BR17 ).

However in conflict, stories are known to take on other purposes. Storytelling is most widely used in the aftermath of complex conflict; people in these situations benefit from storytelling in order to heal from and reflect on their experiences. This type of storytelling has been seen after such grotesque events as the Rwandan genocide (Fullerton, Steward, & Morgan, 2013) and the Holocaust (Fold 3, 2013). Storytelling helps people comprehend and reflect on past events to eventually, and hopefully, move forward.

During ongoing conflict, stories tend to show up in a very different way and have a different effect. Myth building refers to the idea that opponents in conflict understand one another through grandiose stories that have little to do with reality. These myths become ingrained in everyday life and affect how people relate to others and to the conflict itself. This mythical perception of the ‘other’ becomes the more difficult conflict to overcome, and Design Align focuses its efforts on this type of complex conflict. A particular focus is how the myths associated with the conflicts are subject to domestic political manipulation, how ‘enemy images’ are created and how this, in turn, serves to impede the ability to solve those conflicts. The image of the ‘enemy’ is one of the most pernicious cancers gnawing away at societies in conflict (Kvarchelia, 2013, p. 10).

Searching for subjective perspectives within conflict unearths an endless supply of individual stories and, therefore, endless ways to understand a conflict. The story phase of the Design Align methodology negotiates this truth by focusing on the collection of diverse perspectives and by avoiding ‘totalizing descriptions’—a subjective description of the conflict tightly woven around the specific experience of an individual that sums up a complex situation through one person’s perception (Winslade & Monk, 2000). This occurs when an individual perceives a conflict only from her/his own subjective standpoint and cannot comprehend or include other perspectives. An inclusive process of story collection invites participation and maintains respect for all stories and points of view. Yet, amongst the multiple subjectivities collected during this phase, commonalities and overlaps appear as the individual experiences begin to merge.

Stories come in many different forms—visual, oral, written, the performed, and so on. To gather a diverse range of stories and remain accessible, the Design Align methodology uses tools to appeal to different types of storytellers. Descriptions of two different story collection tools are described below: an interview-style conversation and a visual-style represented through live mapping.

### ***Storytelling through conversation***

With the aid of an interview protocol, a story collector guides storytellers through a telling or retelling of their story. The storytelling phase must continue into the analytical phase. To achieve this through conversation, the story collector asks the storyteller to respond to different themes and scales of conflict. For example, the story collector first asks a question focused on the individual, perhaps asking how a conflict affects the storyteller’s daily routine. With this low-stakes question, the story collector speaks from a place of comfort and builds confidence in the storyteller’s answers and her/his trust in the questions.

This is an incredibly important insight and strategy, especially for storytellers who are otherwise hesitant to make claims about larger issues. By relying on the storyteller’s personal story, Design Align locates an entry point to then discuss more complex issues. From the personal, the storyteller is guided towards speaking systemically about how daily routines are connected to the larger scale conflicts. The exact questions differ greatly depending on the context and conflict, and they are responsive to the storyteller. However, in general, the path moves from the individual to relationships between individuals, and then to the individual’s relationship with a group, to the community, and so on.

### ***Storytelling through visualisation***

In addition to listening and asking guiding questions, the story collector also has a separate task: to diagram or live map the story. This visualisation process has been accomplished in different ways and has been very effective. For several storytellers, there is great value in the ability to visually see what is being said. Many storytellers have proclaimed that seeing their conflict in this new way was incredibly important. On more than one occasion, storytellers revealed insights, astonishment or clarity during this stage of the process. One participant noted that seeing the conflict on one piece of paper made it feel easier to overcome. In order to not downplay the significance, it should also be emphasised that the visualisation step aligns closely with current peace-building initiatives. According to Maiese (2003):

Peacebuilding measures also aim to prevent conflict from re-emerging. Through the creation of mechanisms that enhance cooperation and dialogue among different identity groups, these measures can help parties manage their conflict of interests through peaceful means. This might include building institutions that provide procedures and mechanisms for effectively handling and resolving conflict (p. 2).

By visually revealing what an individual says, it is possible to begin the process of renegotiating one's identity in relation to the conflict and in relation to other individuals involved in the conflict. This creates a space for dialogue surrounding the conflict and emphasises the dialogic intentions of the Design Align methodology.

Stories are a tool to understand and relate to conflict. The human brain makes sense of complex conflict through stories, and a person can even begin to analyse and reflect on painful memories through stories. As Carl Jung said, "the healing of trauma only begins when the traumatised person is able to transform traumatic events into a logical and coherent narrative"(as cited in Andermahr & Pellicer-Ortíz, 2013, p. 2). Another value of storytelling that is often left unexplored is the ability of stories to help imagine preferred scenarios. A vision of the future is exactly what is needed in moments of complex conflict. Thus, alongside the comprehension of the past and present, the interviewing protocol used in the Design Align methodology aims to collect ideas and visions for the future. Even if these notes seem small or are seemingly insignificant, collecting them for the future hints at what is possible. They are the foundation upon which an individual can take what is and turn it into a preferred future.

### ***Analysis***

As Ackoff (1999, p. 3) noted, Albert Einstein once said, "Without changing our patterns of thought, we will not be able to solve the problems we created with our current patterns of thought." By acknowledging the relationship between systems thinking and design, the Design Align methodology has evolved from previously argued reasons for overlapping worldviews. While this paper does not have the capacity to present the full argument, it will provide a brief explanation. While systems thinking and design have built different languages, metaphors, knowledge and experiences, fundamental overlaps exist, specifically in how these factors relate to the future. The designer notion of creating preferred alternative futures is reminiscent of systems thinkers who "generally, aim to do something today to improve the system tomorrow" (Pourdehnad, Wexler, & Wilson, 2001, p. 6). A vision for the future along with the desire to act towards creating that future, aligns systems thinking and design thinking. By drawing parallels between these worldviews, systems thinking and design thinking can strengthen each other by examining the methods, tools, questions and drivers used by each approach.

The analysis phase of the Design Align methodology introduces systems thinking into a design conversation. This next phase identifies the connections and disconnections between stories, moving from the individual level to the systemic level. The system includes diverse stories that are brought together in a holistic visualisation that captures many subjective perceptions of the conflict. This creates a highly politicised systems map that diagrams the conflict through the lens of the collective subjective. The resultant map also portrays the perceived, the agreed upon, the conflicting situation and the possibilities for preferred futures. Through this messy visualisation the conflict in all its complexity is revealed.

Drawing systemic knowledge directly from the stories allows individual subjective experiences to inform the larger-scale understanding. This stage involves a layering process that leads to pattern finding. The placement of elements in the systems diagram adds clarity as every introduced element reveals a new perspective and a new potential for patterns to form and insights to emerge.

By connecting individual stories to a structure that invites analysis, the ethnographic process can begin to be informed by the system analysis. However at this point it does not dive deeper into the insights found from the overlaps in individual stories. To do so, it was necessary to develop a research approach as a guide. Drawing on a method from the social sciences, grounded theory became the most effective approach to adapt. The grounded theory

approach was developed in the 1960s by Barney Glaser and Anselm Strauss (1967) as a reaction to the quantitative positivist paradigm dominant of that epoch. In essence, this method aims to extract theory from qualitative data through a systematic analysis by “interpreting [the] meanings or intuitive realizations” (Charmaz, 2006, p. 36). Emphasising the overlaps from the previous step, this method extracts themes from the systems diagrams grounded in the empirical realities. In other words, themes are established from the organisation and reorganisation of the raw data—the systems and the stories. According to Tummers and Karsten (2012, p. 8-9) “the supposed advantage of this is that the theories that are being developed, almost by definition, are grounded in the data and therefore do justice to the social reality”. Combining grounded theory with systems thinking results in explanatory theories rather than descriptive or purely conceptual theories.

Grounded theory fits well with a design process as it is an iterative process that can draw its analysis from the data at hand. In the Design Align methodology, the completed systems diagram is the source of the initial data. All the elements of the system are dismantled and reorganised to extract value—or in this case narratives—from the system. The information is shuffled and reorganised in quick consecutive rounds using common categories. In each round, clusters emerge unveiling different themes, categories, key characters and, most importantly, insights and preferred future scenarios. The grounded theory complements the values of this methodology by informing the creation of the democratic narrative that is then disseminated back to the initial community struggling with conflict. The initial stories are a source of great insight stemming directly from lived experiences. As such, they aim to enable an individual to glean key insights that could support them in forming a more holistic understanding of their own realities and the connections that bind them to each other and the larger conflict.

### **Narrative**

According to Booker (2006, p. 2):

At any given moment, all over the world, hundreds of millions of people will be engaged in what is one of the most familiar of all forms of human activities. In one way or another they will have their attention focused on one of those strange sequences of mental images which we call stories.

A narrative metaphor is based on the premise that ‘reality’ is constituted by society; that reality is constructed and maintained by the members of a particular society in the stories of daily interaction and across generations (Freedman & Combs, 1996, as cited in Legowski & Brownlee, 2001). These social metaphors influence and shape individual metaphors. Thus, problems are viewed as being located within both a cultural context and individual experience (Zimmerman & Dickerson, 1996, as cited in Legowski & Brownlee 2001). On the individual level, the narratives reinforced by society help people grapple with the complexity of conflict by breaking it down into accessible combinations of stories. The perception of the meaning of a conflict narrative is relative because individuals navigate the system from different vantage points and experiences. Capturing stories from many storytellers (including the oppressed, oppressors and others) is essential to understanding the subtle nuances of conflict. Stories act as an entry point, but stories in isolation do not build momentum or provide a full understanding. Together individual stories, consciously or unconsciously, form the greater narrative of the conflict and re-frame the conflict to tell an inclusive and, perhaps, alternative version. But, this narrative also introduces opportunity for insight.

The complexity achieved in the systems thinking and analysis phase is very difficult and inaccessible, especially for people unfamiliar with systems thinking. In a world rife with integrated conflicts (for example, when environmental degradation overlaps with economic

recession as well as social justice issues) it is increasingly difficult for individuals to connect to complex, systemic problems. These problems have fundamentally become too complicated, and individuals no longer see their place in the system. However, narratives have the capacity to engage audiences, provoke thought and provide access for new audiences. In the context of the Design Align methodology, the narrative is defined as the synthesis of the multiple perspectives and stories around the conflict into an impactful, poetic and multi-layered storyline. This phase of the Design Align methodology translates complex conflict into relevant and accessible narratives that invite engagement from a diverse range of people. Essential to this engagement is the emphasis on the multiple entry points collected in the story collection phase and preserved in the analysis. The entry points to the larger conflict enable individuals to engage with the greater narrative.

Narratives package complexity into accessible structures for individuals to comprehend; they translate and reveal the results and insights from the analysis phase in provocative ways. The original stories, now supported by secondary research, allow for the themes that were developed in the grounded theory stage to be more fully and clearly developed. The initial stories are the substance that constructs the whole: the narrative. They are more than just descriptions of the conflict; they are its truth.

### ***Dissemination***

As Gottschall (2012, "Conclusion," para. 11) noted: "But we are beasts of emotion more than logic. We are creatures of story, and the process of changing one mind or the whole world must begin with 'once upon a time'". Stories are the substance that construct the world rather than a means by which to describe it; they hold truth. The narrative then is shared truths. It is what connects one individual to another to build empathy and reveal overlaps. In the midst of conflict, opponents tend to forget that the other sides struggle with similar, daily issues. Understanding the others' point of view and the ways in which it is like one's own, makes it possible for people to move past their differences to build upon shared hopes.

Therefore, the Design Align methodology delivers a holistic narrative to the initial storytellers and the communities affected by the conflict. To uphold the values established through our process and the design criteria that guide the methodology, the dissemination or delivery phase is very important. A delivery system must be identified that hands the narrative to the initial storytellers, as well as other individuals that are affected by the conflict. The delivery system must be adapted to specific contexts, and it must be able to change depending on the specific community and its needs. However, it should also respond to issues of accessibility, transparency, inclusivity and respect.

In this stage, popular technological formats and platforms often emerge as the best option for an accessible and democratic way to deliver narrative. This includes interactive videos and podcasts as well as Facebook, Twitter and other social media networks. While our intention is to hand the narrative back to the original storytellers, we also want these individuals to take ownership of their narrative. This includes sharing, copying, changing or altering of the narrative; it no longer belongs to us (the story collectors), and experimentation, evolution and argument are encouraged.

### **Beirut: A case study**

The following Beirut, Lebanon case study serves to illustrate the methodology described above. On the scale of a nation, the Design Align methodology enters into a significantly complex array of intertwined histories, unclear relationships and corruption. Yet, the value of diagnosing the problem is very clear. Individuals are easily consumed by the levels of complexity at this scale and, for good reason, they often become complacent and live their lives with little or no knowledge of the larger systems. On the other hand, some individuals

reject this complacency and continue to engage with the systems. Still, this is a frustrating endeavour with few useful tools. At this level of complexity, the purpose of Design Align is to bring clarity by diagnosing the problem space, uniting individual subjectivities and pointing the way to insights that encourage people to act. By finding space for agency within an overwhelming wicked problem, individuals can (consciously or unconsciously) make small behavioural changes that will allow them to re-define their place in the system. With more time and increased awareness, this may lead to ownership over the wicked problem. In addition, when individuals locate spaces of overlap between their position in the system and someone else's position, it is possible to develop a shared perspective. This process of finding overlap does not necessarily lead to solutions or answers, but it does recreate a narrative based on ties between the system and individuals.

The Beirut case study uncovered challenging insights that shaped the trajectory of the Design Align methodology. Tackling this issue was only supposed to provide us with the means to start testing our methodology. Even if it meant failure, this large-scale conflict was tackled with the purpose of pushing the boundaries of what this methodology could be. Thus, we humbly approached the issue of corruption in Lebanon.

### ***Stories***

By interviewing five experts from different fields, working either directly or indirectly on the issue of corruption in Beirut, Lebanon, we were able to collect a diverse range of perspectives. In this case study, the storytellers were a sociologist, a political expert, a designer, a United Nations (UN) officer and a historian. Each storyteller related a well-constructed argument explaining the causes of internal conflict in Beirut through the lens of their individual field.

#### *Raed Charaf - PhD in Sociology, Writer*

Charaf's depiction of the Lebanese conflict emerged from his observation of individual behaviours and societal patterns. His story included the idea of 'the other', which separates Lebanese society into two major groups. This is the typical us-versus-them mentality. Guided by the protocol, he directly related this mentality to the media and local coverage of the news that reinforces this divide by "magnifying the differences of the other (Charaf, personal communication, 2012)." Charaf's story revolved around how the media's use of stereotypes portrays an illusion of mass control that amplifies community segregation and hatred. In this scenario, the resulting divide allowed the leaders to maintain power by dividing citizens.

#### *Carole Maalouf - Political Communication Consultant*

Maalouf's story started with her daily frustration with unbearable traffic jams, which naturally led into her description of a corrupt government that does not allocate funds towards maintaining infrastructures. Going through the scales of her story, she described a core political concept known as the "societal security dilemma (Maalouf, personal communication, 2012)." She illustrated this theory using the Lebanese War<sup>1</sup> as example. The war was the result of fear; the Christian Lebanese community feared the Palestinian armed presence. Although the Palestinians never made a direct threat, the Lebanese population perceived one. At the same time, the Lebanese Muslim community felt alienated by the Christians, and they saw this as an opportunity to form an alliance with the Palestinians. This basic setup essentially describes the existing conditions that aggravated the materialised conflict or war.

#### *Marc Baroud - Designers and Program Director of the Design Program at A.L.B.A*

Baroud's depiction of the conflict was told through his daily struggles with individuals who lack accountability for their actions. Driven by profit and greed, the Lebanese society he once

knew had lost its drive for passion, creation and innovation. According to Baroud, the main issue was economic corruption. He described this as *economic racism*, or the tendency of people to think that income is an indication of status. Building from there, Baroud spoke about cultural values, which seem to be the last thread holding this society together. He still has hope in the future and he locates alternatives for his students who can, and will, bring change.

*Ahed Sboul - Chief of Conference Services United Nations*

Having lived and worked in Lebanon for nearly 10 years Sboul has amassed enough experiences and knowledge to understand both the native and non-native view. Yet, despite the amount of time she has resided in Lebanon, Sboul (who maintains a diplomatic status) feels that she is an outsider who does not belong to this nation. In her story, she critiqued the individualistic behaviour of the Lebanese. She defined individualistic behavior as the tendency for people to act on their own behalf with little thought to the greater collective.

*Gregory Buchakjian - Historian, Photographer*

Coming from a historical perspective, Buchakjian's story begins in a traffic jam, similar to how Maalouf's story began. Buchakjian compared this individualistic behaviour to historical drifts and cultural tendencies of the 1600s and the Ottoman Empire. He explained how many of the informal structures, which the local Pashas (representatives of the Ottoman authority) instilled to govern their land in a world with no technological communication, have been preserved to the present day. Consequently, the local leaders are able to maintain control over communities and neighbourhoods, which facilitates corruption.

**Systems thinking and analysis**

Although each interview was imbued with great insight and connected the individual's struggles to bigger systemic issues in the Middle East, none of the stories offered a complete narrative. By not overly limiting or defining the problem space, the five stories that were collected had little overlap and major divergences. Yet, it was interesting to combine the five perspectives into a coherent system because it showed how large a global system can become, and how narrow an individual's perspective can be.

This process revealed a lack of alignment not seen on the other scales. The interviewed individuals were not only unable to locate themselves within this conflict, they were completely separated from it. This resulted in the need to show people different perspectives of the same problem, and to also guide them to take ownership over the absence of alignment.

**Narrative**

Through system mappings and several rounds of grounded theory led pattern-finding, several recurrent themes were identified. This included individualistic behaviour, as well as corruption, and the individual fear and need for protection. Several themes emerged—education, the collective, and revolution—that resonated with multiple storytellers. These major themes were then organised into thematic clusters informed by the Seven Basic Plots (Booker, 2006). The plots were further developed with character sketches, detailed events and a set story structure. Based on the systemic insights, the central context of the narrative was focused on a traffic jam, and the character of 'the other' became the antagonist.

With the structure of the story set, a storyboard was created in order to fill in the details. In visualising the different scenes, it became apparent that the narrative defied the rules of a linear storytelling format. The complexity of this conflict required constant jumps in both time (when referring to historical incidents, such as the war) and space (when simultaneously

addressing several issues). The lack of linearity or the ability to understand the problem chronologically needed to be highlighted. So, we created a pop-up book where the structure could evolve to fit this demand. This pop-up book combines the materiality of the stories with a structure that allows the pages to be flipped to show the passage of time. Physically extending beyond the two-dimensional paper also enabled us to, metaphorically, extend beyond a linear narrative. To keep the book grounded in reality despite its seemingly whimsical structure, the narrative referenced many real-life places, dates and people.

### ***Diagnosis***

In the midst of a wicked and complicated conflict, claiming a diagnosis is a bit naïve, especially at this early stage of the process. However, at this point it is possible to present the interesting insights that were uncovered through the combination and analysis of different stories. For this case study, the emergent themes included ideas about corruption, the lack of unity, fear and protection and individualistic behaviour.

The theme of individualistic behaviour resonated with several of the original storytellers and other members of the general public in Lebanon who were introduced to the pop-up book after its completion. Lebanese people do not clearly distinguish between individualism, individual behaviour, the right to privacy and a sense of unique self. There is an unspoken assumption that Lebanese people have the right to judge others based on their behaviour. Yet, this only applies to individuals (on the more superficial level) because there is a refusal to behave for the common good—thus, individualistic behavior and the lack of accountability reinforces a corrupt society.

### ***Dissemination***

The pop-up book created during the narrative phase was filmed for a short video to capture the narrative as a whole. The video was shown to close friends and members of the Lebanese community to solicit constructive feedback. It will soon be released to wider audiences, including the original storytellers. The structure of the pop-up book allows additional pages to be added that incorporate new insights uncovered through this process.

Today, we live in a world where social media has the capacity to launch revolutions and where connections made in the digital world can be as powerful as they are in the tangible world. While this project never intended to go viral or make lasting change, change does start somewhere and the findings of and reactions to this methodology were powerful. By creating a narrative emphasising the poetry and elegance of the narrative of a conflict, this methodology intends to appeal to the empathetic side of people and to nudge, rather than force, an understanding of the complexity of corruption in Beirut. According to Stroh (2000), through the field of organisational design:

We have learned that aligning people around a shared vision and mission is not enough to make the alignment stick. People also need to have a shared picture of reality and to understand their contribution to the existing situation. Without this picture, people cannot agree on how to get where they want to go because they cannot agree on where they are. Furthermore, they resist acting differently because they do not feel responsible for their current circumstances. They tend to blame others or forces beyond their control and believe that others must change first (Stroh, DP., 2000 p. 7).

The value of this methodology in such a large-scale conflict is that it can be used to diagnose complexity, which confers ownership to individuals through their own subjectivities, while also introducing the subjectivities of others in manageable and respectful ways. This has the potential to lead to change.

## Outcomes

Since the authors assumed different roles for the Beirut prototype, it was possible to examine this context in different ways. Because Diala Lteif is Lebanese and grew up amidst this conflict, we had the benefit of an insider's perspective. On the other hand, Maggie Ollove was foreign to the conflict (though not any longer) and contributed the insight of a potentially less-biased perspective. Together we diagnosed this problem space from a place of empathy, sympathy, passion and scepticism. Through this way of working, we established the importance of acknowledging, and even embracing, our subjectivities, rather than subduing or ignoring them. People enter any problem space with their own biases and assumptions that cannot—or perhaps should not—be designed around. In fact, designers should use the tools, processes and methods of design to creatively and innovatively apply their subjectivity to a problem space.

The complexity of the Beirut prototype became all-encompassing and, at times, even frustrating. We were easily lost in this wicked problem. However, from our personal reactions and empathies for the storytellers and the conflict itself, we realised it was necessary to establish different entry points into the complexity. Each person understands conflict in a unique way. Therefore, multiple entry points are needed to engage a more diverse group of individuals in our Design Align methodology. Stories have the capacity to deal with the varied personal connections to conflict, while the systemic approach launches a step towards transforming the stories into a stronger and immortal collective narrative that is relatable even after the passage of time.

This is especially relevant for Lebanon, a country left without a modern history book. In that country, history textbooks taught in schools do not recount stories past the early 1970s when the war began. Once the civil war ended, vastly different perspectives emerged about what happened and what should be remembered. These disagreements prevented a consensus about what the common historical narrative should be; therefore, no history book was written. Consequently, Lebanon's history and present intertwine, thereby preventing citizens from reflecting on events that can only be gained through the passage of time. The country remains in conflict, never healing from past events.

The Design Align methodology applied in the Lebanon context highlights the importance of a collection of narratives at such a large-scale, and it begins to take the place of a history book. Through the preservation of individual perspectives, every citizen begins to understand her/his conflict through a subjective entry point into this system. This encourages individual reflection on a larger conflict. By understanding how she/he fits within this wicked problem, an individual can also begin to imagine exit routes and preferred futures. This is how alignment is attained. This Design Align methodology strives not to make the change, but to diagnose conflict and locate opportunities for change.

## Conclusion

For systems thinking to work with design praxis, large-scale understandings need to be grounded in subjective perspectives and individual stories. Without this connection, the most integral piece of conflict is missing: the stories that create the system of conflict. In its most basic form, a story is a moment in time. Through the collection of many moments or stories, the larger narrative can be found and then analysed through systems thinking to lead to a thoughtful, necessary diagnosis that can be the basis for thoughtful design. As Rittel and Webber (1973, p. 161) concluded, "the formulation of a wicked problem is the problem! The process of formulating the problem and of conceiving a solution (or re-solution) are identical, since every specification of the problem is a specification of the direction in which a treatment is considered." Focusing on the connection between systems thinking and individual stories is

a methodology of problem formulation. It is design that focuses on a diagnosis, not on a solution.

With a viable, empathetic and understanding diagnosis, design can begin to do what it does best—to act. Perhaps the expertise of designers working within complex problem spaces can be aimed at connecting different methods that entail several incompatible processes, in this case, systems thinking and storytelling. Design has the capacity to balance the incommensurable within a designed artefact. In fact, “reconciling incommensurate requirements is an essential aspect of design” (Sargent, 1994, p. 390). With its hopeless complications, the foremost need of design is not to solve problems. A more pressing need is design’s ability to function as the interpreter and translator of the chaos of complex conflict, by integrating systems approaches and individual subjectivities. By respecting that problem spaces are inherently multi-layered, complex twists of ever-changing systemic thought and subjective stories, design praxis needs to evolve into a cognitive and dialogic field that is reshaped through integrated praxis. In embracing the subjective, the individual, the whole, the systemic, the political and the empathetic, design can be the means for first understanding and then acting.

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<sup>1</sup> This is more commonly known as the Lebanese Civil War, but Carole disputed the use of the word ‘civil’.