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## Making it up as You Go: Educating Military and Theater Practitioners in "Design"

### Leonard L. Lira & Rachel Parish*

***Editors' Note:*** *Following directly from the preceding chapter, Lira and Parish lay out a potential example of a training course for "wicked problems," finding unexpected parallels in two completely different professional environments: the theater and the military. The authors demonstrate how an elective "Design" course in the U.S. Army Command and General Staff College parallels the development of theater professionals. This matches the insights of Jayne Docherty, a professor of peacebuilding, in the previous chapter and the one which follows.*

## Introduction

Negotiation is a practice of "social creation." It is a *creative* practice because the goal of negotiators is to change the current social condition described in a conflict by creating, or facilitating the creation of, a new *social condition*, wherein the parties to that conflict can come to a negotiated solution. The creation of that solution thus advances the interest of the parties, the negotiators, and society (see Blanchot et al., *Education of Non-Students*, in this volume). Negotiation, therefore, as Herbert Simon (1996) once indicated about engineering, medicine, business, architecture, and painting, is concerned not with the necessary (what is), but with the contingent (what can be), and thus how to create, or design, that condition. Since there is a critical and cre-

* **Leonard L. Lira** is a Lieutenant Colonel in the U.S. Army and an assistant professor in the Department of Joint, Interagency, and Multinational Operations of the Command and General Staff College at Fort Leavenworth, Kansas. His email address is leonard.lira@us.army.mil. **Rachel Parish** is Artistic Director of Firehouse Creative Productions, a London-based theater company that specializes in collaborative theater. Her email address is rachel@firehousecreativeproductions.com.

ative reasoning requirement to do this in negotiation, the field may benefit from the same type of "design" thinking that other creative practices such as architecture, art, music, dance, etc., utilize in their professional education courses. If the field of negotiation were to adopt "design thinking" as a part of its curricula, it would also be following the lead of other practitioner fields outside the arts that have already revamped their programs for "executives, educators, doctors, and lawyers" (Korn and Emma 2012: B1).

The premise of this chapter is that to educate and train students in negotiation, perhaps we can apply pedagogical methods similar to those that other creative practices use to educate and train *their* practitioners. While this chapter does not outline a specific course in negotiation, it does use one such course to illustrate the possibilities, and to propose a generalizable method of instruction in design thinking that curriculum developers could tailor for negotiation. To demonstrate the utility of "design-thinking based" pedagogy, this chapter provides examples from the disparate fields of theatrical and military arts. From these examples, we can explore parallels that may demonstrate, for developers and teachers of negotiation curricula, a creative educational approach that is probably well-suited to practitioners who will have to deal with "wicked problems" as discussed in the preceding chapter.

## Design Thinking and Negotiation

Mathematics and systems science literature from the middle of the twentieth century introduced early concepts of "Design" in the specialized term-of-art sense defined below. Eventually it began to influence other disciplines, principally architecture (Spillers 1974: 5), but also social sciences (Simon 1996), and the problem-solving processes, policy-making, and planning curricula of disparate fields such as business administration, public management, city and regional planning, education, engineering, industrial design, communication design, policy sciences, and social work (Olsen 1982: 5).

Design's definition, as modified from the above literature and used in this chapter, is that it is a goal-directed problem-solving activity which incorporates collaborative and participatory methods that involve critical and creative reasoning (Olsen 1982). At first look, conventional wisdom may find it counterintuitive that negotiation and design activities are related. However, Richard Buchanan (1992) articulates four domains of design. These domains are helpful in differentiating between subcategories of the above definition and isolating points where the creative processes of design and negotiation converge.

The first domain Buchanan describes is commonly associated with graphic design, in which designers use symbolic and visual communication. The second, meanwhile, is in the creation of "material objects" such as the design of "clothing, domestic objects, tools, instruments, machinery, and vehicles" (Buchanan 1992: 9). Both of these domains may appear remote from our field's concerns. Some may see the creative process as intuitive in these areas, whereas not everyone will see the requirement for so intuitive a creative process in a negotiation context .

However, in Buchanan's third and fourth design domains the requirement for a more explicit creative process in design, and how that process relates to the negotiation process, becomes more apparent. According to Buchanan, the third area is "the design of activities and organized services, which include the traditional management concern for logistics, combining physical resources, instrumentalities, and human beings in efficient ways and schedules to reach specified objectives" (Buchanan 1992: 9). The fourth area is the "design of complex systems or environments for living, working, playing, and learning" (Buchanan 1992: 10).

These last two areas are associated with managers, planners, lawyers, architects, engineers, and other practitioners who provide social services or deal with human problems as part of their practice. In other words, they are consistently devising creative and negotiated social solutions (see Docherty and Lira, *Adapting to the Adaptive*, in this volume). Thought of in this manner, one can easily associate the activities of negotiation that these practitioners use with the activities of design that they apply to create solutions to problems in their own professions. The thinking that goes into both types of activities is "design thinking" and consists of "places of invention . . . where one discovers the dimensions of design thinking by a reconsideration of problems and solutions" (Buchanan 1992: 11).

More readily, negotiation practitioners who deal with organizational conflict already widely use the term "dispute systems design," and the literature of that specialty generally acknowledges that one form or another of negotiation will be a primary, if not *the* primary, detail activity within the systems design frame (Ury, Brett, and Goldberg 1988). So at one level a relationship between negotiation and some form of "design" is already common knowledge among at least a subset of negotiation professionals. However, it is more debatable whether the full range of potentially useful concepts of "design" as developed by other professions and in other contexts has yet been examined, let alone thoroughly adapted, for possible use in dispute systems design.

## Negotiation as a Creative Practice

As discussed by Jayne Docherty and Leonard in the preceding chapter, negotiation experts clearly recognize negotiation as a creative practice. In this, the parallels to at least some forms of *art* are becoming more obvious and worth further exploration. The role of the artist as a social critic, of course, has long been widely understood. But the concept of the artist as an "operating" figure, a leader – inherent in the concept of Design above – is now growing. Therefore, a discussion of art as a discipline raises the possibility of useful sidelights on efforts to incorporate Design thinking into negotiation, whether in the military or other professions, from experience in the very different domain of art. We will explain further in the discussion below.

A summary of a growing body of research, in particular the British "Artist-as-Leader" research project, puts it this way:

> Artists lead through their practice. One quality of experiencing art is that artists enable us to see the world differently. Our focus is on the ways in which this provides leadership. This is what we mean by leading through practice. Currently, artists are increasingly choosing, or being called upon, to work more directly within social, cultural, economic, and political processes. This is a trajectory that has a complex history in which art is increasingly active in the formulation of cultural processes (Douglas and Fremantle 2009).

Seen within this context, art increasingly takes *people* to be its main material, and often defies traditional categorization into form. However, art practices that share the same basic material as negotiation (people), and particularly those practices that involve:

   a) an emphasis on spoken or written forms of communication and
   b) working directly with groups of people who will co-create the design

stand to be most relevant to this discussion. The form most obviously fitting these criteria is theater, particularly collaborative theater.

For reasons described elsewhere in this volume (see Blanchot et al., *Education of Non-Students*), Rachel's London-based theater company effectively puts her in the role of an artist-leader. She describes what is for practical purposes a Design problem:

> *As, in effect, an "artist-leader" myself, I listen a lot and let what I hear guide my actions. When I heard contemporaries working in new theater in London say consistently, "there is a lack of creative space," I was curious to figure out what this meant. It turned out that this*

*"space" meant a space: 1) to really think laterally; and 2) to connect meaningfully at the start of a creative process with other collaborators. Writers were lonely, actors felt like they were tools, designers felt they were brought in far too late in the creative process to have a meaningful impact. So, I set up a Big Idea workshop.*

*The Big Idea workshop is a week-long exploration of something that we're wrestling with in contemporary life; belief, time and power are the three ideas we've tackled through this platform so far. Once a year, I gather together groups of artists interested in pushing their boundaries and engaging with collaborative theater making. Over this week we throw open wide the questions about this theme. We debate, have presentations, write, devise, and create. I work as the instigator, creating the platform for the creativity of others to flourish and find form. After the week's workshop, interdisciplinary teams form around ideas generated in the workshop. I work with these teams to develop, draft, dramaturg, and find producing outlets for their products.*

This work sits squarely within the context of artistic practice explored in Anne Douglas and Chris Fremantle's description of the Artist-as-Leader research project, cited above. It is also led by a design-thinking approach similar to the fourth variety outlined above, "design of complex systems or environments for living, working, playing and learning." Artists such as Suzanne Lacy, Helen Mayer Harrison and Newton Harrison, Barbara Steveni and John Latham are among those whose work as "artist-leaders" has been the subject of a comprehensive research study relevant to this discussion. As part of this research, Douglas, a professor at Gray's School of Art, identifies that such artists

> think about the long term implications of their actions where most other areas of production or service are expedient, solving the problem on hand and in the immediate context. They are capable of working across hierarchies and social groupings, enabling individuals to transcend barriers of discipline, belief and specialism (Douglas and Fremantle 2009: 7).

The work carried out by many artists working in this area speaks to a shared dedication, much like the overlap Leonard describes of his shared work with Docherty: *a mutual interest in a common theme to design solutions to social problems; the conception and creation of a future condition, artificially created by human interaction.*

Activities in this area of practice are often about the *way* of working rather than a catalogue of a series of products. This does not mean the quality of the outputs need suffer, and indeed it is often the exis-

tence of the end goal that can provide common ground and guidance in difficult times. To emphasize this point, Douglas states

> *many artists and other related roles would place the emphasis in terms of creativity and quality in the process as well as its end result, considering its conceptualization and articulation and even its power to create change"* (2009: 13).

Similarly, many writers on negotiation, mediation and dispute systems design have valued the normative effects of these processes on the parties' ability to work constructively and creatively in the future as highly as, or even more highly than, the immediate prospects for settlement (see, in particular, Bush and Folger 2005). There is overlap of other kinds, too, between the arts and negotiation (see, e.g., LeBaron and Honeyman 2006, Honeyman and Parish 2013). This area of arts practice and the recent research around it provide a rich background of complementary findings that could be of interest to strategists of Design and related teaching in the military as well as in other professions.

## Reconsidering a Foundational Text

Roger Fisher, William Ury, and Bruce Patton indicate the need for a creative process in negotiation in their third step of the *Getting to Yes* methodology. Recall that the third step requires negotiators to "invent" options (Fisher, Ury, and Patton 1991: 56–80). They articulate their prescription to create negotiation options in their circle chart, which depicts a process to determine what is wrong and then to devise actions that negotiators might take to solve what is wrong by shuffling back and forth between real world practicalities and theoretical propositions (1991: 68). It is a simple four-step process:

1) identify the problem;
2) analyze the problem;
3) develop general approaches; and
4) develop specific actions to solve the problem.

It is also a concept that undergirds much of contemporary negotiation instruction. In practice, however, this instruction tends to occur not in the circular pattern designed by Fisher, Ury, and Patton, but rather in a linear step-by-step process.

In this sense, the field of negotiation may have followed the same pattern of development as the design field, in that it implemented variations of linear models that essentially held two distinct phases: problem definition/analysis and problem solution/synthesis (Buchanan 1992: 15). We would offer three observations about the application of Fisher, Ury, and Patton's approach to inventing nego-

tiation options in general negotiation pedagogy, observations which have previously been made in other contexts by earlier critics of design thinking. First, the creative process of developing solutions generally does not follow a simple linear process. (For a demonstration of how failure to understand this can undermine a peacekeeping process, see the Bosnia discussion by Calvin Chrustie in *Playing the Percentages*, in this volume.) Fisher, Ury, and Patton imply this by fashioning their four-step process into a circular pattern, rather than a linear pattern. This demonstrates a *shuffling back and forth between* the theoretical and practical applications of problem analysis and solution creation. But not all their followers have really understood this element.

Second, the negotiation problems that are pervasive in wicked problems in particular – as encountered by practitioners of other professions who may not be negotiation experts per se but nonetheless use negotiation to achieve their goals – are not easily rendered into linear analysis and synthesis. And third, the Fisher, Ury, and Patton four-step process, in and of itself, offers a means of *practice,* not education. That is to say, it is prescriptive enough to articulate the practice of creating negotiation solutions, but not descriptive enough to generalize to a larger curriculum of negotiation study.

Thus, the majority of negotiation curricula apply Fisher, Ury, and Patton's steps for inventing negotiation options under the assumption that there are definitive conditions or limits to negotiation problems. In contrast, we contend, like Buchanan's assessment of Horst Rittell and Melvin Webber's wicked problems, that most social negotiations of human problems are in fact indeterminate, meaning that they have no "definitive conditions or limits" (1992: 15). Therefore, the development of negotiation solutions to these human problems may be best served through the application of the same design thinking that other types of creative practitioners use when dealing with wicked problems, as in Rachel's example above. It is in this sense that we assert that the activities of negotiation are in a fundamental way "design" activity.

## Negotiation as Design Activity

Similarly to the design field, the negotiation field is *integrative*. In this instance, we are not using the term in reference to the dichotomy between integrative and distributive tactics within a negotiation; we mean that all negotiation, even when it is heavily distributive, *must* draw from multiple sources of expertise and ideas (e.g., a factory official negotiating price and delivery dates with a supplier is likely to talk internally with people from sales, marketing, production, engineering and so on.) According to Buchanan, in the broadest terms, the design

field's diverse practitioners, professions, and academic disciplines are drawn together in the activities of design because "they share a mutual interest in a common theme: the conception and planning of the artificial" (1992: 14). By artificial, Buchanan means any condition created which is not natural, or found naturally, but human-made, such as graphic art, a new toaster, an urban plan – or the creation of a negotiated settlement. As in other professions that employ design, a wide variety of practitioners from very diverse fields of practice use negotiation out of necessity, to create new social situations in which they or their practices must live and operate.

Two ready examples are the authors of the preceding chapter. As disparate practitioners, Docherty and Leonard are drawn towards the field of negotiation because they share a mutual interest in a similar common theme, to design solutions to social problems: the conception and creation of a future human condition, artificially created by human interaction. In this manner, the creative processes of both design and negotiation intertwine in liberal arts and social sciences.

Another example, superficially far removed from the military but in our opinion highly relevant, again comes from Rachel's work in theater. Below she outlines a typical design setting and activity that occurs during improvised group auditions.

> *In a room in an old office building, a group of actors who do not know each other meet for the first time in an audition situation. They are each there to show themselves to be the best person for a particular role or roles. They are grouped in with several people, some of whom are their competitors and some of whom are applying for unrelated jobs. They are presented with a task: Together, as a group, create the first scene of the play – in twenty minutes. They have come to the audition having read the whole play, but they are not to use the scene itself in the task. What they have instead is a few guidelines: The scene has three movements, which I outline for them to follow (the protagonist is revealed, there is a battle, the antagonist is revealed and the protagonist suffers). I also give them a list of fifteen "ingredients" to include in the scene (including a moment of silence, a moment of pure fear, the demonstration of "supervillain" powers, flying, a choreographed dance, a song sung, an explosion, etc.). They then must improvise a solution – a scene to perform to the people who are considering hiring them. No leader is set in this task and there is no prescribed starting point, not even a prescribed performance space. They must work it out between themselves with the clock ticking and in a high stakes situation. Once the instructions are given, the improvisation has begun.*
>
> *In this recent audition process, I worked with twelve groups of performers with this very task. Each group has a completely differ-*

*ent approach to devising a solution and arriving at a performance. Several points emerge that make for a successful process and product. You can't be afraid to fail. Without a starting point, you have to just begin – a simple movement of a chair can spark in someone else a new idea/solution to another part of the project. Everyone must take part, but there is no set pattern of participation. The project is shared and joint responsibility must be taken: complete commitment to the project is required. A lot of what is created will be useless. Yet these experiments always provide some moment of brilliance that can be extracted from the solution in the improvisation and used in a considered and crafted staging of a scene. These moments that are created through improvisation would not have happened outside of a collaborative and networked process.*

In addition to this improvised section of the audition, there is a one-to-one section in which the performer has a chat with the director, and in which the performer reads sections of the script:

*The main purpose of the auditions is to establish the tone of the process clearly and to start a conversation with your future collaborators. An audition of this sort conveys a lot of information to the performer; in addition to the techniques we will use, they also learn that they will have a lot of responsibility to collaborate, that they will have to expend a lot of physical energy, that they will take a lot of risks, that they will always be listened to, etc. What a director looks for is a set of people who will be best suited to work together on the process that lies ahead. There are always specific criteria that come into play, according to the particularities of the process that lies ahead, and there is very little intuition that comes into play in putting a team together.[1]*

Below, we will discuss a military equivalent.

## Design Education and Negotiation

Buchanan foresaw the expansion of design thinking into both the liberal arts and social sciences. His quote below states as much:

As the field of design matures in the coming years, we will begin to teach design as a liberal art of contemporary culture. In other words, we will include within our programs individuals who come to study design but with no intention of entering into professional design practice. They will study design as a preparation for many other types of careers, in the same way that students today study literature or natural science or history or social science (Buchanan 1998: 66).

From this starting point, it is easy to see how the utilization of design thinking and education in many professions and practices has grown to include negotiation.

The political scientist Herbert Simon attempted to develop a general "teachable doctrine about the design process" for professions in his book, *The Sciences of the Artificial* (1996: 113). Simon's description of design relates closely to "Design" as known by other professionals. For example, even though he recognized design's origins in the engineering profession, he emphatically states:

> Engineers are not the only professional designers. Everyone designs who devises courses of action aimed at changing existing situations into preferred ones. The intellectual activity that produces material artifacts is no different fundamentally from the one that prescribes remedies for a sick patient or the one that devises a new sales plan for a company or a social welfare policy for a state. Design, so construed, is the core of all professional training; it is the principal mark that distinguishes the professions from the sciences (1996: 111).

To Simon, design theory focuses on how professionals should think social constructs ought to be created, thus searching for a "satisficing" design instead of an "optimized" design.

Donald Schön, meanwhile, has sought to establish "processes which practitioners bring to situations of uncertainty, instability, uniqueness, and value conflict" (1983: 49). He addressed how to teach this new theory of knowledge to design thinkers of all professions by contending that "professional education should be redesigned to combine the teaching of applied science with coaching in the artistry of reflection-in-action" (Schön 1990: xii). Specifically, he recommends that professional education follow the "deviant traditions of education for practice as studios of art and design, conservatories of music and dance, athletics coaching, and apprenticeship in the crafts, all of which emphasize coaching and learning by doing" (1990: xiii).

Schön (1983) labels this educational methodology the "reflective practicum." He describes the process of this reflective seminar as one in which teachers coach students into conducting "reflection-in-action." Schön defines reflection-in-action as the ability of professionals to think about what they are doing while they are doing it. For Schön, the way to teach how to manage the areas of professional practice that are not easily determined, i.e., operating in complex adaptive (i.e., in this series' terms, wicked problem) settings, such as social negotiation in human conflict settings, is through the ability to reflect

as you work through the problem and apply previous experience to new situations. Schön describes the practicum as:

> (A practicum is) a setting designed for the task of learning a practice. In a context that approximates a practice world, students learn by doing, although their doing usually falls short of real world work. They learn by undertaking projects that simulate and simplify practice; or they take on real-world projects under close supervision. The practicum is a virtual world, relatively free of the pressures, distractions, and risks of the real one, to which, nevertheless, it refers. It stands in the intermediate space between the practice world, the "lay world of ordinary life, and the esoteric world of the academy . . . The work of the practicum is accomplished through some combination of the student's learning by doing, her interactions with coaches and fellow students, and a more diffuse process of "background learning (1983: 37-38).

Some professional educational institutions are following Schön's prescription. In fact, business schools today are looking at how to modify their educational methodologies to incorporate this different approach. In a 2005 special report in Bloomberg BusinessWeek, Louis Lavelle and Jennifer Merritt ventured that "business schools have been trying to inject design thinking into their curriculum for well over a decade, with mixed success" (2005: para. 6). In *Negotiation Stands Alone* (chapter 26 in this volume), Alexandra Crampton and Michael Tsur take this further, discussing Tsur's conclusions from years of practice and teaching of crisis negotiators in terms of a necessary body of experience that far exceeds what can be achieved in normal "school" environments, even those that include a practicum. It is not irrelevant that Tsur argues that some of the most promising "new" professional negotiators in his proposed advanced professional structure are likely to be experienced military officers.

## Design Education for Military Practitioners

As a profession, the military is lately coming to incorporate design thinking and design education into its professional military education curriculum. For example, the Army's Command and General Staff College (CGSC) devotes six hours to Design in its core curriculum, and an additional twenty-four hours to Design as an elective course (Lira and Culkin 2011). This must be evaluated in the context of a great number of specialty subjects competing for very limited student time, such that even the six hours represent a notable shift in priorities. The

six hours are devoted to explaining design thinking and how the Army incorporates design into planning doctrine. However, the twenty-four hour elective course (see Appendix for a detailed course outline) actually applies an example of Schön's practicum. Throughout this course, instructors attempt to follow David Kolb's experiential learning model (discussed in Docherty and Lira, *Adapting to the Adaptive*, the preceding chapter in this volume), melded with Schön's reflective practicum process. The twenty-four hours of the course are therefore broken into three segments, consisting of a deconstructive module, a constructive module, and a reflective module. (The hours applied to each module, again, are based on the tight scheduling constraints at CGSC. For all intents and purposes, a course developed elsewhere along the three modules – deconstructive, constructive, and reflective – can shape the number of hours according the time constraints that apply to the particular teaching environment.)

In the deconstructive module, the course breaks down the process of design, explaining the theory and praxis behind it. Instructors introduce Design as a term-of-art concept, and the rationale for design thinking is discussed with the students. Although the first module describes the concept of design as non-linear, it has the students sequentially analyzing the parts of the concept, so that they gain an in-depth knowledge of the concept's components. This module follows the experiential learning model (ELM) detailed in the preceding chapter in this volume (Docherty and Lira, *Adapting to the Adaptive*).

In the constructive module, the course teaches the students about design according to Schön's recommended model, i.e., by having them practice it. The instructors divide the students into design teams, and set them upon what Rittell and Webber (1973) would call a "wicked problem." The students therefore learn the principles of design by *applying them in a case study*, centered on complex human-based problems that they wish to change artificially through some sort of problem-solving intervention. One example that students have used is the violence induced by drug wars along the Mexican-American border. The students conduct the design activities to develop the design concept that articulates their understanding of the problem and its solution in the form of a graphic and narrative depiction. They then brief their design concept before a critique board, which judges the students on their creative as well as critical reasoning. This experience forces students to articulate very complex issues, problems, and potential solutions clearly and concisely. Since the entire exercise is fundamentally an intra-group negotiation under other terminology, in the language of the Rethinking Negotiation Teaching (RNT) project the exercise also constitutes a form of "adventure learning" of the "oblique" type, in which a team must negotiate internally in order to

accomplish a set goal (see volume 2 in the RNT series, chapters 7-10, Honeyman, Coben, and De Palo 2010).

Finally, in the reflective module, instructors expose the students to the learning methodology, and facilitate their reflection of their learning, through a seminar-type discussion and an online reflective forum, where students consider various aspects of applying and learning design fundamentals. In the online forum, the students answer open-ended questions that motivate them to wrestle with the complexities of the problem and to reexamine their decisions and the solutions they selected. Through the application of the deconstructive, constructive, and reflective modules, the design elective attempts to integrate the best of both experiential and reflective learning. The benefit of this is that through experiential learning, students gain new knowledge for the long term. Through reflective learning, students can transfer that new knowledge to settings never before experienced by the learner – thus (the instructors hope) helping them to become more adaptive and effective in changing environments.

## The Course Outline

The instructors applied the ELM and a reflective-practicum-style teaching methodology in designing this course. The overall objective was for instructors to facilitate learning by harnessing the students' personal experiences, critical and creative thinking skills, and focused application of new concepts in a "reflection-in-action" method.

There are five fundamental steps in the ELM:[2]

1) Concrete Experience (CE) – The instructor presents an activity or text that evokes individual responses from the students. Students can then actively connect personal experience to the subject matter.

2) Publish & Process (P&P) – The instructor attempts to link the concrete experience to the lesson learning objective. Students understand better that their discussions are part of a larger context, connected to the curriculum.

3) Generalizing New Information (GNI) – The instructor presents new information to the students based upon readings and other pre-assigned work.

4) Develop – Students reflect on how this new information will affect their lives professionally and personally.

5) Apply – Students conduct an exercise – e.g., write a paper, orally present a report, or coordinate an activity – which employs the general concepts introduced during the lesson. The instructor assesses their performance in accordance with established standards defined in the curriculum.

A detailed class-by-class overview (twelve two-hour lessons) is reproduced in the Appendix. The instructors organized each lesson (represented by shaded blocks) according to specific steps in the ELM. For instance, lessons one and two introduced the concept and rationale for design; this served as the Concrete Experience & Introduction. Lessons three and four addressed the "What/How design?" and correlated with the Publish & Process and Generalize New Information steps. The first four lessons approached the material in a deconstructive manner – i.e., they sequentially analyzed the methodology of the doctrinal concept. During lessons five through eleven, students personally learned the principles of Design ("Develop") by applying them in a case study centered on the complex border issues with Mexico. In the final lesson, students presented their initial design concepts to an audience of Command and General Staff instructors who had not participated in their planning. This experience forced the student teams to articulate very complex issues, problems, and potential solutions clearly and concisely. In addition to the staff-training benefits, the students could reflect on their experiences during a question-answer period afterwards. Furthermore, students considered various aspects of applying and learning design fundamentals in online discussion boards.

An allotment of reflection time assumed that students brought intellectual preconceptions about design to the course. Many students wanted to know more about design in order to validate or disprove their self-developed hypotheses. Some of their concerns centered on how design (broadly termed as "conceptual planning" in Army Field Manual 5-0) links into predominantly detailed planning processes such as the Military Decision Making Process (MDMP).[3] Others wondered about the expected products and how Design is being disseminated and developed throughout the joint military and interagency professions. The instructors found that asking open-ended questions about these topics effectively enabled motivated students to wrestle with these issues in class and thereby better understand the nature of design as it applied to their experience and practice. It was the instructors' impression, based on this feedback, that *not* addressing these topics in class or via the virtual discussion board would likely have become a barrier to further learning. (For more on this theme, see Deason et al., *Debriefing the Debrief*, in this volume.)

## Design as Negotiation Pedagogy

After the course, both instructors and students responded to a post-course survey. The survey suggests multiple lessons learned (Lira and Culkin 2011), all very likely applicable to course designers and instructors of negotiation elsewhere.

### Lessons Learned (Joint Perspectives)

Both instructors and students reported the desire of the students to practice design in an exercise that dealt with a relevant "real world" issue, as opposed to a real world location incorporated into a fictitious scenario, or an exercise with both a fictitious location and scenario. The students reported that when the exercise contained any fictitious aspects, they would not as readily see the exercise's relevance to what the students perceived as their world. To respond to their appetite in this regard, the instructors focused on an exercise selected from a current crisis widely reported in the media, i.e., the narcotics gang war along the U.S. and Mexico border.

### Lessons Learned (Student Perspectives)

One of the biggest issues reported by students was that they wished they had previous examples, or "schoolhouse solutions," to use as a framework for developing their solutions. But the instructors were concerned that the students might become "fixated" on those design solution examples, which after all were created for problems in other contexts, and lose the opportunity to practice developing creative solutions for the problems they were currently confronting. The instructors based this concern on the potential problem of fixation as documented by Nigel Cross (2005) and Greg Lawson (1980). Cross cites a study by D. G. Jansson and S. M. Smith, who studied senior students' and experienced professional mechanical engineers' solution responses to design problems. They compared groups from both sets, with one group charged to design a solution to their problem with no examples given, and the other group provided with examples of previous design solutions. Their comparison found that the latter group appeared to be "fixated" by the example designs, producing solutions containing many more features from a single option (the example design) than did the solutions produced by the groups not shown any examples. The not-so-obvious problem with this is that in complex settings that may vary greatly depending on the context, solution sets that work in one setting may not work in another setting. According to Cross, providing specific examples may therefore act against the development of creativity in the development of solutions to complex problems.

We will discuss a theater equivalent below.

### Lessons Learned (Instructor Perspectives)

Another lesson that the course authors learned was that students reported better understanding if prompted with open-ended questions during the reflective module. Students reported in post-course

evaluations that they felt this enabled them to internalize the learning objectives of the course better. Combined with experiencing the problem at first hand, students reported that this also elicited a better understanding of how they made their decisions and whether those decisions were conducive to solving the problem presented.

The instructors also reported learning in the process of delivering their course that they needed to apply the lessons of the course without preaching a *method or procedure*. In the course of solving the problem, each design team developed its own style, dynamics, and general group understanding of the problem. Each group articulated the problem, along with a broad operational approach to solve it, differently from the other groups. The instructors surmised that the dynamics of organizational decision-making required such an "instant organization" to take on and exhibit the traits and thinking patterns of the organizations' inhabitants, i.e., the team members themselves. This would be no different from any negotiation team's composition and personality. (And indeed, it is quite similar to Rachel's experience with different audition groups.) Therefore, during the elective the instructors allowed the diverse characteristics of each group to develop naturally. Task organization, such as adopting or assigning leader, recorder, or researcher roles, evolved on their own. Additionally, each group internally decided and developed the manner in which the group would brief the problem statement and solution. Instructors reported that this appeared to allow greater group buy-in. Furthermore, it enhanced the group's ability to express to outsiders the type of problem they encountered in the exercise and how to deal with it. (For more on the value of allowing students to design parts of a course themselves, see Nelken, McAdoo, and Manwaring 2009.)

Finally, another issue instructors reported dealing with was deciding how to evaluate the learning of the students, and grading their design products. How does an instructor evaluate critical and creative thinking, let alone teach it in design or negotiation? Schön (1990) offers two methods for design evaluation: the "instructor method" (desk criticism, in Schön's terminology), or the critique board (Design jury) method. The instructor method only requires the student to present to the instructor and then receive an evaluation. The problem with this method, according to Schön (1990), is that the student may tend to emulate the instructor's creative and critical style (a form of fixation), while the instructor, seeing what he/she perceives to be correct – because it is what he/she would have done – does not provide an accurate assessment.[4]

The critique board method, meanwhile, requires the student to present the design product to a board of evaluators, who are expe-

rienced in his/her design field (for the military student, that field is the Military Decision Making Process). The problem with *this* method is that if the student does not have time to develop the design products to the point where they can be fairly exhibited to outsiders, and instead only the internal participants understand them, the external evaluators may be observing a product for which they have no context and little understanding of how it was developed.

Lawson and several other Design scholars have documented this description of a working Design product – used for internal understanding – and a presentation design for such a product. If the course is too short, affording the students time only to develop a rough design product, the individual teacher evaluation is best. If, on the other hand, there is ample time for the students to develop a presentation-level product, then the instructors follow Schön's recommendation to conduct a critique board. In the end, in the sample CGSC course, the instructors felt that the process of creativity and critical thinking was a more important outcome of the course than the products developed. Here too there is a useful parallel to collaborative theater, in this instance to the thinking behind Rachel's "Big Idea Workshop" discussed above. A great many other considerations, many of which are just as relevant to assessment of students in this environment as in others, will be found in *Assessing Our Students, Assessing Ourselves* (Ebner, Coben, and Honeyman 2012), volume 3 in the RNT series.

On reading Leonard's first draft of this chapter, Rachel was particularly drawn to the above point on the potential problem of fixation: "*the instructors reported concern that the students would become fixated on those design solution examples, created for problems in other contexts, and lose the ability to develop creative solutions for the problems they were currently confronting.*" Douglas discusses a distinction made by anthropologists Elizabeth Hallam and Tim Ingold (2007), on the nature of creativity within policy discourse. The distinction they draw is between innovation and improvisation, with innovation being product focused and looking towards the past, and improvisation being process focused and forward looking. They go on to characterize improvisation in terms of four key qualities: being generative, relational, temporal, and the way people work in daily life as well as in reflective creative practice. Creating a culture of improvisation in designing a process is a key to sidestepping the pitfall of fixation.

Again Rachel offers a connecting example:

*Recently I was commissioned by the Ideas for Creative Explorations Research Institute at the University of Georgia to develop a piece of performance about food. My approach, as described in the Informal Education chapter of this book, is one designed to engage a broad spec-*

*trum of people in each of the stages of creative practice. The goal is to make a good show. It is equally to involve an array of individuals within a community to contribute to a conversation through creativity. I ran workshops with artists exploring the relationship to food, which operated very much like the "big idea" workshops. Colleagues and I also met with individuals, to listen to their ideas, feelings, and memories of food.*

*These meetings were partly arranged and partly happenstance, facilitated by stopping individuals in the street or in their place of business, or arranging meetings with them if they worked in an industry related to food. We listened, but did not have an agenda, and this made all the difference. The stories, information and investment people made into the project were very strong. Individuals talked, wrote, and contributed to the project very openly and repeatedly.*

*Because we were not there to judge, but rather to understand, people wanted to give more, and they admitted to feeling free to contribute more honestly than otherwise. In this kind of approach, new ideas flourish, surprising connections can be made, and the problem of fixation is sidestepped. This is done by designing situations, creating conditions of discourse and collaboration, and making room for improvisations and space for shared creativity.*

We believe that experiences such as this, generated in the theatrical community, may well prove valuable both for practitioners from stereotypically hierarchical professions, such as military officers who are attempting to get their minds around Design, and for peacemakers presented with much the same problem in their very different professional community (see Docherty and Chrustie, *Teaching Three-Dimensional Negotiation,* in this volume).

To sum up, Design, like negotiation, is not a linear activity. Nor is it an activity that follows a purely analytical train of thought. On the contrary, it is creative, recursive and non-linear. Therefore, the methodology to teach it should match its application by practitioners – broadly, in the same way that Rachel's audition process modeled the way the company would work once the actors and other professionals were selected. Since the military method of practice is in other ways, of course, very different from the collaborative theater method, in the CGSC's conditions a *deconstructive* module of instruction is necessary to break down the concept's components. Having successfully completed this, instructors should immerse students in a *constructive* module, in which they learn by doing. Then the course should give time to the students to be *reflective*, while they are still doing their activity, so they can better internalize what they are learning.

## Conclusion

This chapter contends that both design thinking and negotiation are activities of social creation. Like design education, negotiation education could benefit from the integration of experiential and reflective learning methodologies – at least some of which have been highly developed in other fields, such as theater. This suggests that a welcoming attitude toward unconventional sources might allow methods to be adapted economically and without a sustained campaign to re-invent the wheel.

As examples, the vignettes Rachel provides represent education activities just as much as does the elective course example provided by Leonard. Rachel's examples may contain less formal structuring, but, like Leonard's examples, they take place within a pool of practitioners. The only differences she would make between application of these principles with students in formal educational settings and with individuals working professionally in the field come in evaluation practices.

One lesson that Rachel's work in theater has reinforced in this chapter is that we teach largely through our actions, rather than through our directives. This is where Design is clearly important, and requires the educator to have a healthy engagement with reflective thinking about her own work before she can outline a curriculum *and* while she delivers it. A learning practice with a design that displays a balance of structure and flexibility will communicate the importance of these skills to the learner. The design itself can impart to the student skills that are necessary to do the job required of them in the future. Instructors guide their student practitioners in bringing a flexible approach to creative problem solving if they demonstrate this through the form and content of their (the educator's) practice. As Leonard's approach outlines, this can equally be done in the highly formal settings of military education as it is through Rachel's work in theater.

The description of the "design elective" above demonstrates that both reflective practice and ELM learning methodologies can be integrated in a course that contains deconstructive, constructive, and reflective modules. This combination allows students to analyze the concepts studied, practice the concepts, and reflect while practicing the concepts. By combining experiential and reflective learning in this manner, students can gain new knowledge for the long term, and internalize that knowledge enough to be able to transfer it to new problems never before experienced. This helps them become more adaptive and effective in rapidly changing negotiation environments – which, as Howard Gadlin, David Matz and Calvin Chrustie (*Playing*

*the Percentages in Wicked Problems,* in this volume) and Chrustie et al. (2010) demonstrate, are increasingly being recognized as characterizing not only the 21st century military and peacemaking professions, but also many other professional environments that are not so obviously implicated. Modeling the Design education curriculum within a negotiation curriculum may provide negotiators, as Nigel Cross (2005) would say, with a "designerly way of knowing" how to identify and solve complex [negotiation] problems.

## Notes

[1] The reader may find similarities here to Calvin Chrustie's discussion of the design and formation of a crisis negotiation team, in Bosnia and elsewhere, and the difficulties some members have had in comprehending and adapting to the equivalent demands for creativity, flexibility and systems thinking. See *Playing the Percentages in Wicked Problems*, chapter 20 in this volume.
[2] CGSC, Faculty Development Program, Fort Leavenworth, Kansas. See also Kolb 1984; Conner 1997-2007.
[3] The military decision making process is an iterative planning methodology used by the Army to understand the situation and mission, develop a course of action, and produce an operation plan or order.
[4] In a world which often valorizes the related concept of apprenticeship, it is worth noting that this concern is not just "academic." It was one of the core criticisms of then-current training practice in a field closely related to negotiation, which starting in the 1980s led to a comprehensive effort to rethink skills, training and selection of mediators. See Honeyman 1988, Honeyman et. al 1995 and the numerous intermediate publications cited therein. And, for an updated "take," see the annotated bibliography of the International Mediation Institute (http://imimediation.org/assessing-mediators-an-annotated-bibliography, last accessed Nov. 16, 2012).

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# Appendix

## A559 Course Overview:  twelve meetings, two hours each

| CE | P & P | GNI | D & A |
|---|---|---|---|
| **1** Design Experience *LTC Lira* | **2** Design Overview *LTC Lira* | **3** Design & the Operations Process *LTC Culkin* | **4** Design Application *LTC Culkin* |
| The context of design.  Concrete experience. | Design in Doctrine and unpacking it for our use. Why design and how? | Design in real-world action; Key questions | Capitalize on multiple perspectives; Is this intuitive? |

Instructors led a *deconstructive* approach and organized the first four lessons according to the steps of the experiential learning model as depicted (Concrete Experience, Publish & Process, General New Information, Develop, and Apply).

The students then led a case study in which they sequentially addressed the frames using the design methodology.  The instructors concluded that a *constructive* approach would be more effective for Lessons 5-11.

**Develop & Apply**

| | | | | | | |
|---|---|---|---|---|---|---|
| **5** Case Study: Introduction & Env. Frame PT 1 | **6** Case Study: Environ. Frame, Part 2 | **7** Case Study: Problem Frame | **8** Case Study: Problem Frame | **9** Case Study: Operational approach | **10** Case Study: Operational Approach | **11** Case Study: Assessment / Reframing |
| History, Current State, Future Goals of Actors | Endstate, Conditions, Time | Tendencies and Potentials | Tensions between Current State & Desired State | Areas for Action; Opportunities, Challenges, Risk | Problem Statement; Command Products | How is the approach going? Is it the right approach? |

**Apply**

**12** Reflection *Instructors*

Caveats about employing Design, the way ahead, & future doctrine

**Terminal Learning Objective:**
Apply critical and creative thinking to help a commander & his/her staff understand, visualize, and describe a complex, ill-structured problem and develop an approach to solve it.  Anticipate change and the need to reframe.

**Standards:**
1. Understand the narrative.
2. Cultivate and employ new perspectives as a learning organization.
3. Collaboratively produce, via dialogue, a mutually understood narrative and graphic representation of the environment, the problem, and the operational approach.

**Cognitive Domain Learning Level:** Synthesis.

1

**Assessment:** 40% class participation (individual), 40% Practical Excersice/case study (group), 20% discussion board

**Note:** Instructors lead discussions during Lessons 1-4 & 12. *Students lead class activities during Lessons 5-11.* Class folder for products and materials: https://courses.leavenworth.army.mil/webapps/blackboard/content/listContent.jsp?course_id=_3373_1&content_id=_612169_1.