

Discourse in Systemic Operational Design

**A Monograph
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Abstract

DISCOURSE IN SYSTEMIC OPERATIONAL DESIGN by MAJ Joseph A. DiPasquale, U.S. Army, 43 pages.

Within the literature on Systemic Operational Design, discourse is generally treated as a mechanical communicative process. The monograph presents alternative ways to consider discourse, the implications of this for theory of Systemic Operational Design; and how these alternatives can lead to a richer understanding of discourse's role in design. To answer this question, it conducts a structured inquiry into the nature of discourse from the perspectives of agency, narrative and artifact structure, and socio-cultural relationships.

Agency in design is viewed from a linguistic anthropological perspective that de-emphasizes individual agency in favor of agency that is significantly mediated by the linguistic structure of the participant's language and how they use language to define the power relations in their interactions with others.

Choices in narrative content, particularly temporal points in the narrative's structure significantly influence the content and capabilities of the discourse to function in design. The paper also finds that choices for artifacts used to both transmit and maintain historical integrity of the discourse are not neutral, but affect its content and use.

The importance of understanding the internal discourses that form the socio-cultural structure of the design team, and by extension that of its strategic sponsors is found to be critical in the development of effective discourse related to operations.

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THINKING ABOUT DISCOURSE: BEYOND TALKING

Within the literature on design in military operations, and particularly with regard to the core design theory, Systemic Operational Design, discourse is a ubiquitous term. However, there is a relative lack of specificity in setting parameters for its use and meaning in design theory. The upside to this situation is the broad range of interpretation for the meaning and role of discourse in design. A downside is that there has been a tendency to treat discourse from a primarily mechanical approach. The focus has been on defining a function for discourse. The result, generally, has been the conceptualizing of discourse as a “step” in design.

The assessment that the idea of discourse as process dominates current discussion of discourse in design led to the following research question:

What are alternative ways of thinking about discourse relative to the theory of Systemic Operational Design?

As the Army, and more generally, the Joint community moves forward on doctrine development, it is helpful to consider the socio-cultural perspectives in which such development is grounded. Without such grounding, it will be difficult to pursue development with regard to design in a coalition environment where linguistic and cultural issues may become central to constructing an effective design team. This in turn questions the likelihood of a successful design outcome supporting operations.

Further, ongoing and iterative analysis of the design process and artifacts in operations is a meta-inquiry that is necessary to building a design capability in the Army and in the Joint environment. Such inquiry provides an avenue to evaluate and develop theory about design in operations by providing material derived from socio-cultural and linguistic processes.

In the course of exploring the narrative and artifact component of the discourse experience, the paper discusses the potential for inclusion of narrative theory and theories of agency in the education of officers about design use and practice. This comes from the idea that if

the discourse of systemic operational design is conducted from the perspective of a structured versus unstructured exchange of impressions and ideas, it is advisable to understand mechanisms of cultural exchange that are both supportive and detrimental to these particular socio-cultural interactions. By extension, this may also open up further inquiry into the nature and evolution of leader requirements and development within military cultures attempting to implement design as a function of operations.

The monograph offers the following thesis for consideration:

A more comprehensive understanding of discourse in systemic operational design is achieved when discourse is considered from the perspectives of agency, narrative and artifact structure, and socio-cultural relationships.

What follows is an overview of the contents of the paper's principle sections. The paper will examine discourse in systemic operational design through six primary sections, with a seventh section reviewing observations, conclusions and recommendations for further research.

In the first section, "Theoretical Contexts of Discourse in Design," is reviewed some background information on how discourse assumed its central role within systemic operational design. Beginning with the Israeli Defense Force's (IDF) initial concern with their existing planning paradigms, the paper follows the development of the IDF's Operational Theory Research Institute (OTRI). The basis of SOD theory has its genesis in research by Dr. Shimon Naveh. For this reason, his work on Soviet operations theory is reviewed, emphasizing salient conceptual observations relevant to his later work on SOD.

It then moves on to considerations of personnel relationships and their effect on the design process. The emphasis is on how the commander and staff interactions are required to change when moving between designs and planning; focusing on time perception and management. An introduction to artifact development in design is provided, and establishes background for the narrative discussions found in the next section.

In “Narrative and Discourse in Design” the relationship of narrative to design is explored. Narrative as a vehicle for manipulating how designers capture and manage discourse in time is discussed, as well as the function of narrative as a means for maintenance of historical integrity of the discourse through time. The implications of choices in how time is conceived by the designers are viewed through historic examples of East and West Germany’s post-World War Two discourses of Nazism and fascism. Legitimacy of participants in the discourse is discussed, and the ways that the narrative moves from oral tradition to recorded artifacts, and what this implies for discourse in the development of military design theory.

“Discourse as Process” explores the existing literature of systemic operational design. The various ways discourse is presented by these authors is discussed, with emphasis on how discourse is used as part of a framework for conducting operational design. This review is the basis for developing a more in-depth discussion of how artifacts and group dynamics are related through discourse.

The theory and use of discourse in other disciplines forms the basis for the section “Moving Away from Discourse as Process.” The medical profession is used as a comparative example for the way relationships help define discourse within a military environment. This is then related to Naveh’s conceptual description of generalship within the design construct. Out of these comparisons are drawn insights into discourse’s role in problematizing the strategic sponsor’s issues, as well as highlighting the areas of divergence between design theory and its practice, particularly with regard to participant relationships.

In “Agency, Discourse and Design” discourse is approached as an expression of socio-cultural practices in design. The link between these relationships, language and power is explored. The effect on discourse meaning when discourse is dissociated from its context during artifact transmission is examined; as well as how discourse itself shapes the perception of the system toward which it is directed during design. Following critique of several views of agency, a

perspective incorporating Michel Foucault's theories of power is offered as a basis for the final section of the paper "Dissociating Discourse from Process."

The last section of the paper uses a structuralist/post-structuralist view of discourse as a cognitive contrast with the way it is used in the process-oriented literature discussed earlier. Foucault's perspectives on discourse are contrasted with those which are more Marxist-oriented.

In "Conclusions and Further Research," the thesis is reviewed, and issues and findings of the paper placed in context of the thesis. From this context, six specific areas for further research are suggested. These are not exhaustive, but provide examples of the types of inquiry that offer potential for expanding the ideas about discourse explored over the course of the monograph.

THEORETICAL CONTEXTS OF DISCOURSE IN DESIGN

What is the theoretical context in which discourse occurs and is used within systemic operational design? During the conception of systemic operational design, the Israeli Defense Force's Operational Theory Research Institute theorized that existing planning paradigms were becoming increasingly irrelevant in their operating environment. Moving deliberately away from commonly practiced, teleological approaches to planning military operations, the researchers looked to systems theory as a way to understand and affect the operational environment.¹ As development of theory progressed, the concept of adapting design concepts and processes found in other disciplines such as architecture came to the forefront of their thinking.² The idea of

¹For an introduction to systems theory, see Ludwig von Bertalanffy, *General System Theory: Foundations, Development, Applications*, Rev. ed. (New York: Braziller, 1988). The fallacy of using a teleological basis for military planning is examined by Timothy L Challans, *Emerging Doctrine and the Ethics of Warfare* paper presented at the JSCOPE (ISME), 2006, URL: www.usafa.af.mil/jscope/JSCOPE06/Challans06.html, accessed 16 February 2007.

²William T. Sorrells and others, *Systemic Operational Design: An Introduction*, (Monograph, School of Advanced Military Studies, U.S. Army Command and General Staff College, Fort Leavenworth, Kansas, 2005).

design as a structured discourse between the operational commander and a designated design team emerged as a central feature of systemic operational design.³

Why is discourse fundamental to the theory of operational design? The military roots of its necessity are found in Shimon Naveh's *In Pursuit of Military Excellence*.⁴ Placing analysis of warfare within a systemic context allowed a richer and more flexible cognitive connection between the physical reality of maneuver and abstract thought regarding the logic that defined these systemic relationships. These are the unique traits of operational command whose genesis for systemic operational design theory is found within Soviet operational thought.⁵ Formalizing academic inquiry into systemic approaches to warfare assisted in establishing the primacy of theory over technology, and attempted to bring the rigor of scientific research process to military thought.⁶

By establishing a systems orientation to operational art and science, the early Soviet theorists opened the path to using patterns of abstract thought to develop an understanding of

³In addition to Sorrells, general overviews of systemic operational design can be found in several sources. Bell discusses SOD in the context of institutional culture bias in planning; see Christopher J. Bell, *Is Systemic Operation Design Capable of Reducing significantly Bias in Operational Level Planning Caused by Military Organizational Culture?* (Monograph, School of Advanced Military Studies, U.S. Army Command and General Staff College, Fort Leavenworth, Kansas, 2006) For application of SOD outside the U.S. military, see Jelte R. Groen, *Systemic Operational Design: Improving Operational Planning for the Netherlands Armed Forces*, (Monograph, School of Advanced Military Studies, U.S. Army Command and General Staff College, Fort Leavenworth, Kansas, 2006) and Craig L. Dalton, *Systemic Operational Design: Epistemological Bumpf Or a Way Ahead for Contemporary Operational Design?* (Monograph, School of Advanced Military Studies, U.S. Army Command and General Staff College, Fort Leavenworth, Kansas, 2006) A discussion of SOD in comparison to the MDMP, and effects oriented planning is found in Ketti C. Davison, *Systemic Operational Design (SOD): Gaining and Maintaining the Cognitive Initiative*, (Monograph, School of Advanced Military Studies, U.S. Army Command and General Staff College, Fort Leavenworth, Kansas, 2006) Dixon places SOD in an interagency context; see Robert G. Dixon, *Systems Thinking for Integrated Operations: Introducing a Systemic Approach to Operational Art for Disaster Relief*, (Monograph, School of Advanced Military Studies, U.S. Army Command and General Staff College, Fort Leavenworth, Kansas, 2006)

⁴Shimon Naveh, *In Pursuit of Military Excellence: The Evolution of Operational Theory*, (London ; Portland, OR: Frank Cass, 1997).

⁵*Ibid*, 183.

⁶*Ibid*, 183.

rational and logical relationships within the system being studied. Out of the development of the operational school emerged a new paradigm for thinking within the operational realm. Perhaps most relevant to the present discussion was the achievement of the Soviet theoreticians to delineate more clearly the difference in the way war is conducted at each level of war. From this understanding emerged the distinction between the ideas of *initsiativa* and *tvorchestvo*. The first, “initiative,” is the primary quality attributed to command at the tactical level, in contrast to the second, “creativity,” needed by the operational commander. It is here that the conception of cognitive tension, so prevalent in systemic operational design, is also found, as well as the idea of creativity as a means to confront and function within the ever present conditions of uncertainty that characterize war.⁷

The identification of creativity as a critical characteristic and function of the operational commander initiates thought about the ways in which this trait is practically leveraged for use in the military environment. The existence of cognitive tension acknowledges the infinite perceptions of the system in the minds of those observing it. It seems that by using the idea of structured discourse, systemic operational design has a means to give form to creativity, transmit that form, and establish a mechanism for the form to undergo evolution and reevaluation. In order to accomplish this task, translation of strategic directive and policy into operational plans, systemic operational design structures itself through seven discourses.⁸

In the literature concerning systemic operational design, or more generally, design as a necessary function within the operational level of war, discourse is pervasive as a central component to the structure and utilization of the design process. The necessary attributes of the discourse are themselves less explicitly described. What is the nature of discourse within design?

⁷Ibid, 186.

⁸William T. Sorrells and others, *Systemic Operational Design: An Introduction*, (Monograph, School of Advanced Military Studies, U.S. Army Command and General Staff College, Fort Leavenworth, Kansas, 2005).

How do the use of discourse and the choices designers make in its morphology affect the design process and the ways in which staff members think about design? Some assert discourse is a connection through which disparate cultural and linguistic actors can participate through conversation in the iterative processes necessary for effective design.⁹ Although true in the most general sense, certainly language is a common characteristic; such statements offer little insight into the complexity of discourse itself.

The efficacy of design for operations is dependent upon the nature of the discourses, their internal structure; and its theoretical and epistemological baseline. In addition, the explicit and implicit choices the participants make concerning the discourse's components and the relationships among participants also directly affect the outcome of the design process. To this end, the nature of discourse is examined with the goal of achieving insight into its effective use during the design process.

One of the difficulties in assessing discourse in relation to systemic operational design has to do with the multiplicity of disciplinary perspectives the operational designer is forced to entertain. Philosophy, political science, anthropology, theology and somewhat more indirectly, linguistics and art are among the areas of academic inquiry that are drawn upon simultaneously during design. Adding to the challenge is that even this disparate list will expand and contract based upon the unique issues that are an inevitable part of each design event.

Discourse as a mechanism within systemic operational design is the means through which the design is developed. As the design goes forward in time, discourse is also the medium through which the design evolves relative to changes within the observed system. Discourse provides a means of maintaining the historical integrity of the design. It also serves as part of the social and

⁹John F. Schmitt, Marine Corps Warfighting Laboratory, "A Systemic Concept for Operational Design," Web-only essay, URL:<www.mcwl.usmc.mil/concepts/home.cfm>, accessed 14 February 2007.

cultural structure linking the participants to one another, linking participants to the system which is the design's focus, and finally as a means of communicating the design external to the group.

Participant relationships in design discourse are problematic. Power and domination characterize the nature of relationships in the martial environment. During the exercise of designing a campaign, the use of systemic operational design demands a shift in the communications architecture utilized by the commander and his staff to achieve the design. In apposition to a standard military hierarchy oriented on planning functions, where information and goals are generally transmitted from the power centered at the top of the organization, design discourse requires communication that is more egalitarian in its structure.¹⁰

Inherent to any dynamic are the characteristics of the designers themselves. Some general characteristics include gender perception and bias, and nature of their gender interaction. Other participant characteristics include age, their political and social ideological orientation, experiential content, rank dynamics, and authority dynamics.

This last is of particular interest since it goes to the heart of structure in the military and how participants both perceive and relate to one-another. Some aspects of the dynamic include the relationship of rank to power, perceptions of knowledge to experience, responsibility and accountability, and the ways in which the individual perceives and responds to pressures emanating from outside the design team. This response is relevant to the manner in which the commander moves between his or her roles as designer, planner, commander, mediator and facilitator.

Other observations of systemic operational design demonstrate that in the design discourse, the relationships between the commander and the staff shift as well. In contrast to the

¹⁰Shimon Naveh, "Generalship as a Mental System: The Rhomboid Concept of Me'tis," MS Powerpoint briefing included in the Operational Command Seminar Reference Book, Operational Command Seminar, 16-26 January 2007 (Fort Leavenworth, KS, 2007).

operational planning process, which is generally conceived as staff driven and commander led, the design process is commander driven and staff led.

Within a design construct, advocacy has little or no relevance. Certainly, the designers will differ significantly as the process moves along. In fact, exploitation of tensions is a critical feature of systemic operational design in general. However, this exploitation is principally for the purpose of exploration; how the design team gains knowledge and insight into the system in order to understand its logic.

Within operational planning, the dynamic is often quite different. In particular, when the planning process enters into the process of a war game involving multiple courses of action, there is a natural tendency for the plan developers to evolve stakeholder relationships to their vision of the operation. This distinction between design and planning is critical to note, since any dynamic which has the effect of suppressing ideas or creativity is counterproductive for design.

There are other implications derived from the conceptual shift in the relationship between the commander and staff. One of these implications concerns time. When the commander is principally external to the staff, because the group is split along specialized functions for planning, his time is not a shared resource with the staff, but instead is a commodity the staff competes for amongst itself, over and above external demands on the commander's time. In contrast, during the design process conceived by systemic operational design, the commander's time is one and the same with the staff. Legitimately, the claim can be made that the commander's presence and time is always a resource that is in demand. However, in contrasting design and planning, there is both a quantitative and qualitative difference in how this resource is used and allocated.

During planning, the commander's time allocation is primarily used for the processes of giving directives, decision making, and mitigation of issues. During design, these functions of the commander take a much more subservient role to time's utilization in mutual communication and development of the group's vision of the issues driving the commander's attention.

During planning, particularly when the military decision making process (MDMP) is the primary process employed; time has a linear quality marked by specific milestones driving the staff's interaction with the commander. These milestones are characterized by relatively formal content codified in unit tactics, techniques and procedures, (TTP) and standard operating procedures (SOP) which facilitate the clear, rapid and expected routing of information and decisions within the organization. In contrast, during design, the staff's time resources are shared with the commander to a much greater extent, and are not as product or decision point driven.

The discourse process also makes support demands on the staff, particularly with regard to research and artifact development, that are different from the norms expected by and from the staff during operational planning.

The group dynamic present in the design discourse has to have means to account for the development of idea threads during the discourse, manage the build of the developing systemic picture, as well as to maintain an appropriate amount of rigor in guiding an inherently organic and non-linear process.

The fundamentally organic nature of discourse demands creative and adaptive mechanisms for managing and maintaining the discourse's content integrity. As with any oral tradition, translation, transmission and transcription errors or changes increase through time and repetition. Many of the inherent protections to these risks that are present in the current models of operational planning are still highly amorphous within the operational design construct. First, planning itself is constructed around the teleological conceptions of certainty and premonition that make the planning process amenable to codified and prescriptive mechanisms for generating and recording institutional knowledge. The MDMP and all of its supporting doctrinal and TTP functions are the archetype within the U.S. military.

Efficient recording and transmission of information in the existing planning structure is further supported by the evolution of the staff system. Beginning with the Napoleonic system that forms the norm exhibited in many modern militaries, functions and purpose of the system

components have a representative staff counterpart for their command and control. Although this staff paradigm in the U.S. army is evolving and exhibiting new structural and functional dynamics, at its core it remains planning centric.

Artifact generation, such as orders and graphic overlays, which support or result from the discourse are not central to the design process. Codification of specific forms of design artifacts may in fact be detrimental to the core function of design. This presents difficulties to the organization, whose transmission and maintenance of information and ideas is largely predicated on using specific medium and formats. In particular, the tactical conception of time demands a certain level of uniformity and predictability in the way dialogue generation and maintenance occurs. Without this predictability, utilitarian dialogue, such as battle drills, troop leading procedures and command and control (C2), would be far less efficient and useful. In the modern U.S. military conception of networked war fighting, which is dependent upon information technology and distributed systems and agents, such dialogue may not even be possible.

NARRATIVE AND DISCOURSE IN DESIGN

Design discourse has a narrative, story-telling component that is critical to its function and utility for operational planning. Through the development of the meta-narrative, the juncture of relationships, meaning, history and policy can be explored. The ultimate goal of narrative in the design discourse is to provide the ontological framework against and from which the commander's world view and conception of the strategic sponsor's demands is built.

Design narrative as one type of artifact in discourse, has a practical function as a platform for carrying the reframing process forward in time. Narrative is a natural process that can capture both the impetus and outcome of system reframing. Similar to other oral traditions, its structure has breakpoints which emerge efficiently and naturally as the story develops.¹¹ The nature of

¹¹Gillian Bennett, "Narrative as Expository Discourse," *The Journal of American Folklore* 99, no. 394 (Oct. - Dec. 1986): 422.

narrative allows it to retain its historical integrity, which evolves to account for changes in the system it seeks to describe. The aural and visual metaphor of radio and film serials is apt, exemplified in the past by the newsreels seen in theaters during World War II. Through these artifacts were maintained a cultural, conceptual narrative of operational and strategic situations. This metaphor also highlights a difference between design and planning artifacts. To a much greater degree, design artifacts reflect the internal discourse of the participants.

This example also illustrates a potential pitfall of design by demonstrating how preconception can cloud more objective representation of our worldviews. Exploring this metaphor may also give rise to exploring the utility of using alternative conceptions of strategic reality in building narrative. For example, how does the representation of facts as perceived by Al Jazeera or the BBC affect development of the strategic narrative and its subsequent effect upon operational design? The point here is the criticality of designers understanding their reference points, and knowing the potential implications of choosing them over the alternatives.

The choices designers make in the structure of the discourse's supporting narrative, particularly with regard to time have an effect on how the facts of the discourse support the designer's conclusions.¹² The following discussion of narrative periodization in relation to German unification after the fall of the Berlin Wall explores this idea. It examines how legitimacy with regard to the law is affected by the way in which participants view the timing and relationships of events in the past to one another – that is, the specific and peculiar historic circumstances each position uses as its basis in legitimacy.

Borneman¹³ uses the counterpoised positions of East and West Germany concerning when Nazism began and ended as the differentiation between the two states on their own

¹²Nancy D. Munn, "The Cultural Anthropology of Time: A Critical Essay," *Annual Review of Anthropology* 21 (1992): 101.

¹³John Borneman, "Uniting the German Nation: Law, Narrative, and Historicity," *American Ethnologist* 20, no. 2 (May 1993): 288-311.

relationship to this part of the larger Germany's past. In so doing, the East legitimated its claims to West Germany's still suffering from the result of capitalism's role in the emergence of Nazism, and its further claims that because of East Germany's break with capitalism, it also established its freedom from Nazi influence.¹⁴ The example given here is to illustrate that the structure of narrative helps to define its utility as both a communication mechanism, and as a recording of history and ideas. In fact, such choices themselves may serve to limit the content and subsequent application of the narrative.

In the example of the East and West German states, each interprets an image of Nazism and fascism (a shared set of historical events) in distinct ways. In the East German case, periodization of events beginning in 1918 and ending in 1945 serve to universalize the German experience as an outgrowth of world-wide virulent capitalism. Its history is situated in economics and politics, and more importantly as non-local and universal experience. In contrast, West Germany internalized the rise of Nazism and fascism by linking to a specific sequence of events- Hitler's rise to power in 1933, and ending with unconditional surrender in 1945.¹⁵

Who participates in narrative, the contents and the temporal sequence and period of the narrative are all critical components of narrative that require agreement of participants. Borneman's observation of the link between law and narrative reveal as well the importance of legitimacy of participants, and how that legitimacy is obtained. Interpretation and understanding of meaning in political narrative, in particular development of the narrative of the "other" is based on multiple presuppositions which serve to place the "other" in specific contexts.

Cultural artifacts for recording and transmitting narrative take numerous forms. Examples are the graphic novel, kabuki theater, and Native American tribal historians. Some of the issues here are how does the narrative maintain integrity in transmission, and how does the narrative

¹⁴Ibid, 292.

¹⁵Ibid, 307.

evolve through time while maintaining this integrity? At what point does a narrative stop and a new one begin? What are the conditions or pressures that engender a shift in narrative, or a new chapter to be started?

This speaks to the role of emotional content within a narrative, and insight into the nature of relationships. Relationships have several aspects. The first is that of the discourse participants, another is the relationship between the discourse designers and the receptor “audience”, and the relationship of components within the narrative itself.

The design discourse and supporting narrative can likely, and effectively, draw from multiple traditions and typologies for narrative relations and structures. As design theory within the context of military operations evolves, there may be benefit to understanding the ways in which narrative proceeds from oral tradition to visual/recorded artifact, and subsequent reflection of the recorded content back into the oral tradition as it proceeds forward in time, and looks back on the genealogy of the narrative for support, enrichment or understanding in its current context.

Storytelling as a form of narrative is inherently a creative process. Yet, as target systems are observed for the purpose of framing operational design, the nature of the system pulls the designer to deconstruct and work in the concrete world of facts and observations. An unresolved question in systemic operational design theory is to explicate the role of the abstract to narrative development within systemic operational design, and more generally to the act of design in the military context. This question speaks directly to the use and function of assumptions in discourse development.

DISCOURSE AS PROCESS

In order to understand the role of discourse within systemic operational design, it is helpful to understand how the systemic operational design construct defines discourse and its purpose. Beyond dictionary definition, discourse is a diverse conception. Broadly, discourse has multiple meanings and connotations that inform and influence its use in operational design. In

much of the literature on systemic operational design, the connotation is one of cooperation in communication between actors. As a component of group interaction, it also exists as a mechanism for expressing both the organization's ideology and its control over the group members.

One of the issues in the discussion of discourse in the design process is how critical it is for the commander and the designers to actively engage in the process of narrative. The complexity of narrative processing, and its effective use in design relies on how well the participants are able to function in this creative realm. Processing of the narrative occurs at multiple levels. It is also both a linear and non-linear process. The explicit uses of assumptions within the various techniques of planning as place holders awaiting confirmation have a different role in design. As the narrative unfolds, assumptions take on a larger role as agents moving the discourse participants forward in the design process. The choices of assumptions themselves loom large in directing the path of the design. In this sense, assumptions have a more dynamic role in shaping the design versus their role in planning.

The cultural back drop of the designer and the objects of inquiry shape the development of the questions that contextualize the systemic operational design process. Narrative, art and their relationship to discourse are at their most powerful when the participants not only are able to have a keen insight into their own systemic frames of reference, but are also able to divorce themselves from a hierarchical valuation of these frames relative to the objects of their study.

The importance of empathy (not to be confused with acceptance or concurrence) between team participant's as well as toward the system under consideration should not be under emphasized. There are an infinite numbers of ways to view the system, as there are infinite structures and ranges of the system itself. The bounding of the system frames is only meaningful when the mechanisms for viewing it are also clearly delineated and understood.

There is not a "best" way to frame the system, only ways of greater or lesser relative fitness within the system's landscape. As the system changes in response to the environment, the

lenses with which it is viewed may also have to change. The issue is the design team's ability to flexibly respond while maintaining a link to baseline frames of reference. Here, these could be grouped around the sponsor's strategic goals, or the designer's own cultural, moral, political or legal references.

When members of the design team have differing educational philosophy reference points, the same knowledge may be processed in significantly different ways. Similarly, these differences inform the commander's perception of the system, and his response to it. Awareness of this issue informs the efficacy of the discourse process. In particular, if we begin to envision supporting versus leading roles for the U.S. military in operations, circumstance or necessity may require designers to support commanders from significantly differing socio-cultural backgrounds.

Within the literature of systemic operational design, a basis of theory is established regarding what the design process should be, and in particular, the characteristics the seven discourses should exhibit – the normative standard that is hypothesized to lead to effective design, and iterative learning within operations. This has relevance in particular for doctrine writers, who are themselves attempting to place design within the existing planning architectures used by the U.S. military.¹⁶

¹⁶At the time of this writing, attempts at integrating design functions with existing planning doctrine were occurring for both Army and Joint doctrine. For examples of what such an integration might look like, see the pre-decisional draft of U.S. Army Training and Doctrine Command (TRADOC) Pamphlet 525-5-F-1, *Commander's Appreciation and Initial Guidance for Campaign Design (Version 0319.3)* (Fort Monroe, VA: U.S. Army TRADOC, 2007). This publication and anticipated changes to Joint Chiefs of Staff, Joint Publication 5-0, *Joint Operation Planning*, online ed., 2006, URL: <www.dtic.mil/doctrine/jel/new_pubs/jp5_0.pdf>, accessed 30 September 2006; Joint Chiefs of Staff, Joint Publication 3-0 *Joint Operations*, online ed., 2006, URL: <www.dtic.mil/doctrine/jel/new_pubs/jp3_0.pdf>, accessed 30 September 2006; U.S. Army, Field Manual (FM) 3-0, *Operations*, online ed. (Washington, DC: Department of the Army, June 2001), URL: <https://akocomm.us.army.mil/usapa/doctrine/DR_pubs/dr_aa/pdf/fm3_0.pdf>, accessed 30 September 2006 and U.S. Army, Field Manual (FM) 5-0 *Army Planning and Orders Production*, online ed. (Washington, DC: Department of the Army, January 2005), URL: <https://akocomm.us.army.mil/usapa/doctrine/DR_pubs/dr_aa/pdf/fm5_0.pdf>, accessed 30 September 2006 all demonstrate the emphasis on process when discussing discourse within design as well as the desire to see design tightly bound to and integrated with doctrinally acceptable processes of planning.

The systemic operational design literature treats discourse from multiple perspectives. One approach is to orient discourse as a textualized process covering the seven basic forms of systemic operational design.¹⁷ Bacon's four idols of poor reasoning, in particular the 'market place' are noted as sources of problems in the military's ability to reason about the operational issues. Doctrinal discourse exists, but is ineffective due to misunderstanding and differences between the organizations engaged in the problem.¹⁸ There are three elements to a unit of information: symbolic, technical and human¹⁹. Bell places discourse within the technical element, defining it as the medium of communication, for example, and oral discourse. Reason, the human element, is separate from the observable components of symbolic and technical. The form of the technical component and the implication for conceptualization of knowledge is not expanded upon. Discourse is indirectly addressed in his discussion of value bias. Here the relation of the observer to the system, and the choices the observer makes from among the infinite variables is little improvement from the analytical and reductionism approach present in the natural sciences oriented empirical model.²⁰

For systemic operational design to be successful, a more sophisticated sense of situational awareness through a deeper self awareness is required of the designer.²¹ "In short, a design approach starts with the definition, purpose and qualities of the whole, and then seeks to create those qualities through selection of the parts. This approach builds upon the systemic model already discussed, because of its emphasis on the desired qualities of the whole, and learning

¹⁷Christopher J. Bell, *Is Systemic Operation Design Capable of Reducing significantly Bias in Operational Level Planning Caused by Military Organizational Culture?* (Monograph, School of Advanced Military Studies, U.S. Army Command and General Staff College, Fort Leavenworth, Kansas, 2006), 4.

¹⁸Ibid, 14.

¹⁹Ibid, 15.

²⁰Ibid, 30.

²¹Christopher Alexander, quoted in Ibid, 31.

through interaction with it, as a means to know the components.”²² Bell’s observations on how design functions in the operational context hints at the qualities or attributes that define the typology of an effective discourse model. The construction of the discourse, in all its forms, must support the nature of the problem studied. This is self-evident from the perspective of the discourse’s content, but not very explicit in descriptions of its form.

“In simple terms, the components of a problem are most efficiently identified not through linear decomposition or seeking out systemic linkages, but through the interactive and emergent learning process of trying to comprehend the whole.”²³ The discourse form will encourage thinking that sees in wholes, and discourage seeing parts, in its most simple sense. Creative process by its nature must always exist at some point outside the boundaries of convention.

The tension continues to exist between the professional’s (and by extension the profession’s) need to be creative in order to grow, with the justified responsibilities to maintain the standards of quality the larger society grants to the profession as keepers of kernel knowledge and practice. Bell rightly identifies the criticality of maintaining external dialogue during design.²⁴ However, the nature of that dialogue is not addressed. What characteristics do dialogue need to be effective for design?

Venturi’s “parallel lines of thought”²⁵ require the designer to sustain interaction with others, an activity of compromise and argument, while at the same time avoiding mistakes in timing of convergence toward a particular form. In his summary, Bell defines characteristics of

²²Ibid, 35.

²³Ibid, 36.

²⁴Ibid, 37.

²⁵Ibid, 37.

the design learning process that the form of discourse must promote on the one hand, and characteristics which it must discourage or inhibit on the other.²⁶

In the initial stages of the design process, the strategic sponsor and the designer's relationship is characterized in particular by a sense of negotiation. As Bell points out, in order to effectively meet the client's needs, the architect must tease out the terms of the system, its qualities, and the range of action within the chosen system among other variables.²⁷ This is, of course, a mode of dialogue that is counterintuitive to the "normal" conception of client relationship expected within a military hierarchy. It is here that perceptions of power relations become more critical, and where investigation of discourse structure and evolution relative to the design process begins. Such a change in view leads to questions over what is the "real" range of acceptable flexibility in the negotiation posture between strategic sponsor and designer.

On one level, the answer is whatever the sponsor says it is, and that is the range within which the designer works. The question may be better reframed as the designer assuming he will be dictated to, but must insist that in the client relationship the negotiation must at least take place. Perhaps that is the key change – the demand by the designer for revisit, and the acceptance by the sponsor that the revisit is not an inherent challenge to its authority or a source of concern over loyalty or willingness to execute. This is a critical distinction.

What is emerging about discourse in the context of design is that there are more than the seven levels of discourse comprising systemic operational design as a process. The negotiation piece, through which the designers interact with their own organization and external to it, forms a separate and distinct set of discourses that inform the discourses out of which the design is developed and is subsequently refined.

²⁶Ibid, 40.

²⁷Ibid, 42.

So far there are then two principle areas of inquiry for the nature of systemic operational design discourse. The first is organizational and relational discourses and the second is the epistemological structure of discourse in the design itself. The seven core discourses require a significant, hostile, and questioning characteristic in order to be successful, in contrast to an enquiring, negotiation-oriented style associated with the inter- and intra-organizational discourses. Some issues this condition raises concern the mechanisms by which discourse shifts between the two opposite characteristics of the discourses, and how the individual and organization learn in ways that are most appropriate to conducting design. This in turn appears to demand understanding the connection between learning and the process and structure of discourse; and the way the structure of discourse (oral, or otherwise) affects and is affected by the learning processes that the individual and group experiences.

Bell's analysis of the sociology of military thought would indicate that the more successful development of effective discourse comes by promoting an ethos that is in diametric opposition to that required to be developed at the tactical level.

The role and function of discourse is principally descriptive in the introduction to systemic operational design presented by Sorrells et al. In common with Bell, and the body of work on systemic operational design, there is no deviation from the basic model of seven discourses presented by Naveh.²⁸ Here the meaning of discourse is in the very general term of "conversation". Each of these conversations has a descriptive moniker attached that delineate, generally, the range within which the conversation can occur. Although not explicitly

²⁸Shimon Naveh, "Questions of Operational Art: The Depth Structure of SOD," unpublished research paper funded by the Operational Theory Research Institute (OTRI), October 2005. Also see Shimon Naveh, "Asymmetric Conflict: An Operational Reflection on Hegemonic Strategies," information paper, n.p., 2002, provided in December, 2006 by SAMS AY 06-07 Seminar 5 Leader, COL Richard Beckinger. This paper was originally part of student assigned readings from Yarom, Amir, Israeli Defense Force, Operational Theory Research Institute, "From Routine Security through Protracted-Limited Conflict to Structuring Asymmetric Conflict through Series of Operations: A Journey through the Israeli Conceptual Evolution and its Operational Consequences," seminar presented at the School of Advanced Military Studies, Fort Leavenworth, KS, 31 October-4 November 2005.

prescriptive, it is clear from the descriptions and graphic framework in the document that the discourses themselves have a temporal relationship that is accorded its own internal logic.²⁹

The process works from an overarching iterative conversation about the general system framework “systems framing” toward “operations framing” and its subcomponents. The designer is lead “from the broad to the narrow, the abstract to the concrete, leading the designer toward a final design. Each discourse informs the next...”³⁰ It also describes relationships as “more discursive,”³¹ presumably more so relative to a more generally accepted hierarchical view of military relations. What is interesting is the example of this relationship – that of the city council and urban designer. It is not so much that the example is not illustrative of the systemic operational design process, but that it is indicative of a particular power relationship.

In general, while demanding a level of egalitarian behavior, systemic operational design still maintains recognition of inequality of place and power in the development of its discourse. Just as the council and designer have a patron – client relationship that places the designer in a defensive position this paradigm exists for the designer and the strategic client. This is not a value judgment, but the continuing reality of inequality in power influences the conduct and content of the discourse. The necessity of parity in interaction is in conflict with ultimately unassailable inequality between participants.

This brings up the issue of how many discourses are ongoing within the process of systemic operational design. Systemic operational design, within the idea of creative, abstract thought, does structure the range of debate, by necessity to maintain its internal theoretical integrity. For example, as a systemic point of view, the emergence of discourse would necessarily

²⁹William T. Sorrells and others, *Systemic Operational Design: An Introduction*, (Monograph, School of Advanced Military Studies, U.S. Army Command and General Staff College, Fort Leavenworth, Kansas, 2005).23.

³⁰Ibid, 24.

³¹Ibid, 15.

obviate, exclude or militate against lines of inquiry that take the content outside a systemic context. Sorrells' work, similar to Bell's, implies that discourse occurs on multiple levels. At its most basic one is concerned with the object of the design. Another, at a minimum, is the interactive discourse that guides and structures the first. In both reside issues of power, and influence of socio-cultural processes³².

Sorrells et al begin description of discourse as structure in systemic operational design, and narrative as object differentiated from graphical artifacts normally associated with military planning.³³ Both are presented as vehicle analogies, mechanisms of communication external to the content of the communication. In general, this is the conceptual basis of discourse found in the systemic operational design literature. The emphasis on narrative as the principle artifact also questions whether or not the ability to effectively use systemic operational design is inhibited by graphical information exchange. What is the relationship of this process to the currently envisioned and implemented information systems (ABCS, FCS and network centric warfare, as well as the C2 systems used in Stryker as an example)? The concern is with the overall cognitive differences between the two in an institutional setting, and the decision making and C2 choices each medium emphasizes.

The perspective of discourse as medium continues in Sorrells description of the seven discourses. He emphasizes the egalitarian point of view, but expresses it as carrier for ideas and concepts. Alternative views of discourse emphasize that the process itself shapes and is shaped by the content. Here is also found an explication of one power shift which systemic operational design demands in the context of discourse. In integrating the commander tightly into the design discourse, the commander – staff relationship dichotomy shifts from the planning centric

³²David Bohm, ed. *On Dialogue*, (New York: Routledge, 1996).

³³William T. Sorrells and others, *Systemic Operational Design: An Introduction*, (Monograph, School of Advanced Military Studies, U.S. Army Command and General Staff College, Fort Leavenworth, Kansas, 2005), 24.

command driven and staff led model to staff driven and command led structure of systemic operational design.³⁴ The potential for adjustments to staff procedures is recognized, but no specific guidance or insight into what type of change might be necessary is provided.

Another view of discourse in systemic operational design is provided in Dixon, where design extends into an interagency realm that is focused on disaster relief operations.³⁵ His is essentially a normative discussion that places discourse in the context of actor attributes which enhance or inhibit the execution of discourse. Additionally, the discussion illustrates the difficulty of achieving a consistent and disciplined lexicon of discourse. In referencing various sources such as Bohm and Senge, discourse is, for example, interchanged with dialogue and conversation.³⁶

In Dixon, meta-discourse is conceived slightly differently, as a process of consensus building, a technique of dialogue that, according to Bohm is “aimed at clarifying the process of dialogue itself”.³⁷ As a complementary discourse to the design discourse, issues of power may or may not support such positive resolution, but may have its own ongoing dynamic affecting, affected by and yet independent of the design discourse.

The role of visual aids as presented has some disconnects. On the one hand, narrative (in a narrow sense of a record of expressions within the discourse) is preferred for its potential to best capture the depth and richness of the interactions. Yet, later, as aids in conducting the process of discourse, graphic tools gain more prominence. Problematic is the uncertainty of the role each of these artifacts plays as a historical account of the discourse, and their use in continuing or reestablishing the discourse. This reestablishment or reconstitution of the discourse has spatial, temporal and cognitive issues. It appears that design discourse is more critically bound to its

³⁴Ibid, 30.

³⁵ Robert G. Dixon, *Systems Thinking for Integrated Operations: Introducing a Systemic Approach to Operational Art for Disaster Relief*, (Monograph, School of Advanced Military Studies, U.S. Army Command and General Staff College, Fort Leavenworth, Kansas, 2006), 80.

³⁶Bohm and Senge in Ibid, 46.

³⁷David Bohm, ed. *On Dialogue*, (New York: Routledge, 1996).

artifacts than those found within planning discourse. The reason for this may be found in the context dependency of the design discourse structure and the intimate link between the artifacts and the sensibilities of the individuals producing them. As the artifacts stand alone, the more abstract and graphic they are, the more likely the contextual meaning is to be lost. This returns the discussion back to the potential difficulties of maintaining design integrity as the design is transmitted across communication networks that force information into ever more discrete packets that are distanced from their human originators.

Transcription error in the recording process will change the nature and interpretation of the discourse as historical product. Upon review, the context and content relationship will have changed, and the participant reinterpretation will itself be colored by the change in the discourse. Choices in how the artifact is structured and the discourse recorded will also affect later interpretation of the discourse.

For example, one observed technique is mapping of relations among entities as they emerge during discourse. Relational or spatial concepts translate well between narrative and graphic representation. As observations about entities and their qualities, such as internal logic gain breadth and depth, the graphic transmission or short hand rendering of ideas becomes more problematic. The area of semiotics and the competing theories of how art functions in communication and agency are relevant here.³⁸

While art can certainly communicate emotion or other ideas, the gain in complexity is often through the viewer's subjective interpretation of the artifact. Such a mode of communication is unlikely to have significant utility in the operational environment. By contrast, narrative is a slower means of transmission, but has the potential for greater depth, richness and

³⁸Examples of theory can be found in Alfred Gell, *Art and Agency: An Anthropological Theory*, (Oxford: Clarendon Press, 1998). For a critical response to Gell, see Robert Layton, "Art and Agency: A Reassessment," *Journal of the Royal Anthropological Institute* 9, no. 3 (2003): 447. A more general survey of anthropology and art is Evelyn Payne Hatcher, *Art as Culture: An Introduction to the Anthropology of Art*, 2nd ed. London: Bergin & Garvey, 1999).

clarity. There is also a greater amount of control over maintaining contextual integrity as the design gains temporal and spatial distance from its originators.

MOVING AWAY FROM DISCOURSE AS PROCESS

Power relations work in apposition to the egalitarian ideal of the systemic operational design discourse with regard to time. The operational design milieu, as in planning, has an overarching series of resource constraints with regard to time. The control of time also has a functional effect of contributing to control of the discourse agenda. Design participants intuitively understand there are limits to the expenditure of temporal resources toward each area of the discourse. The choices of where and when to limit discourse will not necessarily be made based on discourse content, or occur naturally. Minimizing external influences on necessary discourse limits will require particular attention in order to come closer to the egalitarian ideal.

Insight into the use of discourse in the military profession can be found in the literature of its use in the other professions. The profession of arms has similarities to the medical profession in several ways. The structure is hierarchical, although the hierarchy of the military profession is codified in legal and traditional ways that are significantly more stringent. However, the medical profession's relationship to consumers of its discourse still encapsulates power relationships that are useful for comparison.

In Kuiper's survey of medical anthropological literature concerning discourse in the clinical setting he identified three general means to understanding discourse that seem prevalent. In this research, medical discourse was examined from referential, post-structural and interactional theoretical points of view. A referential viewpoint considers language's primary use as reference and rapport. A post-structural view connects language to issues of power, social structure and control. The third view, interactional, focuses on "emergent, situated realities of

verbal interaction.”³⁹ Kuiper’s terminology, “entextualization” refers to the stages of institutionalizing discourse through a synthesis of the post-structural and interactional viewpoints.⁴⁰ He proposes integration of post-structural and interactional views as a means to understand the function of discourse in the medical setting; the “semiotic reduction of uncertainty and disorder.”⁴¹ In light of the existing paradigms in military operations theory, this may offer good reference point for potential understanding of discourse in the context of a professional military.

The positive, self-reinforcing imagery associated with being a profession also carries with it baggage which sometimes limits critical reflection. Medicine, in particular, because of the highly specialized nature of its vocabulary and content (a trait common with other professions) combined with high stakes for failure in its professional obligations, loss of life, has absorbed around its corpus of knowledge a historical sense of removal, aloofness and impenetrability. In a similar fashion, the profession of arms cocoons itself in the specialization of its vocabulary, often as a protective response to avoid external interaction.

Power relations are informed by structures inherent in the user’s language. Although intentions in communication may reflect a desire for an interaction based on equality of participants, participant’s roles and language may drive a tendency toward establishment of asymmetry in their relations. Discourse and narrative, aside from their functions within the design process, also serve as a vehicle for personal representation to others, agency and self-identification. Because of this, the use of discourse as a primary means of discovery in the development of operational design runs a significant risk of mirror imaging that is a common threat to effective planning process. Relative to the self, versus the rival, the designer also carries

³⁹Joel C. Kuipers, ““Medical Discourse” in Anthropological Context: Views of Language and Power,” *Medical Anthropology Quarterly* 3, no. 2 (Jun. 1989): 99-123.

⁴⁰Ibid, 107.

⁴¹Ibid, 108.

the risk that the version of self upon which the design is predicated is an idealization of what he thinks he ought to be in the given problem. This contrasts with the desired objective assessment of what he is or needs to be in order to develop valid re-framing as operations progress.

Discourse is simultaneously an objective, an action, an ideal and a condition. Shimon Naveh conceptualizes generalship (here analogous to leader) as a psychological construct of four ideals, the me'tis: skepticism, modesty, heresy, and idealism. In his description of me'tis, that circumstantial awareness by which the commander achieves success, discourse is an activity enabling the quality of modesty. How so? It is the mechanism that allows him to realize his correct place in relation to subordinates; and avoids autocracy in his command style.⁴² Another of the four qualities, idealism, extends discourse as part of the means to articulate operational concepts. Discourse as modesty and idealism.

In the explication of systemic operational design, the designer is required to develop a conceptual framework for learning about the system in question. No one model for understanding exists. Each set of problems or issues presented by the strategic sponsor is a unique learning event. The dynamic epistemological characteristic of systemic operational design differentiates itself from planning, in which the process is facilitated by relatively standardized modes of learning and teaching. The goal is efficacy in process vice the way in which the learning act facilitates understanding. This is, of course, a somewhat idealized construct. In the real world, in the planning mode, even processes are subject to change. The salient point here is that the reason for the change differs fundamentally between design and planning. Design not only assumes, but requires development of a unique epistemological baseline suitable for effective problematization of the strategic sponsor's issues. As Naveh presents the process of systemic operational design,

⁴²Shimon Naveh, "Generalship as a Mental System: The Rhomboid Concept of Me'tis," MS Powerpoint briefing included in the Operational Command Seminar Reference Book, Operational Command Seminar, 16-26 January 2007 (Fort Leavenworth, KS, 2007).

discourse is not only the interactive communicative function among the designers, but the activity of reasoning about the subject at hand.⁴³

Scoping the issues surrounding gender relative to discourse and narrative to align with Naveh's conception of me'tis, one particular characteristic, modesty, seems particularly relevant. Naveh presents modesty, in some respects, from the perspective of repression of characteristics, perceptually masculine, that might otherwise inhibit discourse. He presupposes that the inevitable tension of ideas and observations within discourse and narrative development for design must be protected from a natural tendency toward competition for primacy of one over another.⁴⁴ In mixed gender design teams, other dynamics may be present. A discourse moderation effort that seeks to enhance the modesty characteristics me'tis demands may work against full participation of women designers, based on research illustrating differences between men and women in the ways they engage in communicative events.

These observations are not intended to provide a comprehensive overview of this complicated topic. Instead, they highlight the need for further study into the dynamics of inter-gender communication in military settings, and greater insight into factors that enhance and inhibit optimal communication during evolution of discourse and narrative. The self-selecting nature of the military officer population may also demand re-evaluation of existing research on inter-gender communication to account for this difference from its civilian counterpart.

AGENCY, DISCOURSE AND DESIGN

The relationship between language and agency is important to understanding how discourse functions within systemic operational design. Conceptually, this can be approached from several perspectives. As noted by Ahearn, language is constituted as "social action, cultural

⁴³Ibid.

⁴⁴Ibid.

resource, and set of sociocultural practices”⁴⁵ and is “embedded in networks of social and cultural relations”⁴⁶ This approach demands that discourse be considered from the perspective of how it shapes and is shaped by sociocultural practice. This is intimately linked to the relationship between language and power,⁴⁷ and the idea that words are not neutral, but are themselves containers for the emotion and content of the situations in which they are used.⁴⁸ Ahearn links this concept to Bourdieu’s ideas of power and social domination.⁴⁹ “Meaning is co-constructed by participants, emergent from particular social interactions”⁵⁰ This is in contrast to the metaphor of language as a vessel or vehicle for conveying ideas from one place or person/situation to another. This also has implications for narrative (as an artifact of discourse, in whatever format) being conveyed across networks, or in storage, and what this says about change and loss to referential meaning from the original dialog forming the discourse. How can the discourse be effectively reconstituted in time or place or with changes in design participants across the iterative process that is inherent in systemic operational design? According to Ahearn scholarly investigation into this process demonstrates that “language not only reflects social reality, but helps to create it”⁵¹ From this perspective, it is clear that as discourse is used as structure to examine the operational system, it is also a mechanism through which the system is itself created. This should not be surprising to a systems approach, as designers themselves do not exist external to any operational system in which they find themselves. It is another level of self awareness that

⁴⁵Laura M. Ahearn, "Language and Agency," *Annual Review of Anthropology* 30 (2001): 110.

⁴⁶Ibid, 110.

⁴⁷Ibid, 111.

⁴⁸Ibid, 111.

⁴⁹Ibid, 111.

⁵⁰Ibid, 111.

⁵¹Ibid, 111.

colors the iterative process of learning in systemic operational design. Ahearn advocates a theory of restraint in meaning during interpretation of language. She proposes that “individuals actively construct and constrain interpretations that are both socially mediated and intertextually situated within a bounded universe of discourse”⁵² This is based in the idea that meaning may be infinite, but is still tightly bounded within its context, so it is therefore possible to delineate interpretations that are inappropriate, or incorrect.

“Agency refers to the socioculturally mediated capacity to act”⁵³ Ahearn offers a view of agency that accounts for sociolinguistic influence.⁵⁴ From the perspective of linguistic anthropology, several views of agency are viewed as inadequate. The first is agency as synonym for free will. Fundamentally, the critique is that in this conception, agency is too narrowly defined, and as such will not allow adequate representation of the role of sociocultural aspects which are necessary components of understanding the relationship between language and agency.⁵⁵ Principally, Ahearn’s critique of action theory in philosophy rests in its general focus on agency in the individual to the exclusion of the influence of the external environment and cultural context. The exemplar given is Wittgenstein.⁵⁶ She is careful to delineate the critique not as one of fundamental flaw within philosophical theory, but in its appropriateness for understanding language and agency in the context of anthropological linguistic inquiry. Wittgenstein, is, in fact an influential philosopher within anthropology .Ahearn levels the critique that he acknowledges the place of sociocultural factors without explaining the relationship.⁵⁷

⁵²Ibid, 111.

⁵³Ibid, 112.

⁵⁴Ibid, 112.

⁵⁵Ibid, 126.

⁵⁶Ibid. For discussion of Wittgenstein’s influence on anthropology, see Veena Das, "Wittgenstein and Anthropology," *Annual Review of Anthropology* 27 (1998): 171-195.

⁵⁷Laura M. Ahearn, "Language and Agency," *Annual Review of Anthropology* 30 (2001): 133.

Agency as resistance is a second viewpoint ill-considered for use in viewing language and agency, because it too narrowly defines the role of agency in language. This is interesting relative to examination of group dynamics in the design process. If agency is viewed, for example, from a perspective in which agency is a mechanism against a patriarchal dominance in discourse, the roles of women within the design process take on a position that is different from the normative expectation in Naveh's description of me'tis.

Here, the individual gains agency in the group only through a resisting tension with the overarching discourse. If, in fact, agency in the design group does follow this pattern, this is in apposition to the desire in systemic operational design for a more egalitarian interaction. More pointedly, she critiques the singularity of this use of agency, preferring instead to view resistance as one of many forms agency can take.⁵⁸ Men and women reflect a multiplicity of motivations in human action that all serve to form a concept of agency.⁵⁹

Finally is the concept that agency is principally absent in human interaction, or that it is limited. Ahearn focuses on the influence of Foucault's theories of power, particularly work earlier in his career. At one end of interpretation of Foucault, overarching and omnipresent impersonal discourses do not allow individual agency, from a resistance point of view or otherwise.⁶⁰ Another view is that Foucault acknowledges the existence of agency as "power, mobility, conflict"; here power exists by virtue of relationships, vice existing as an object. It produces both "constraints and possibilities" for agency.⁶¹ Ahearn offers a series of potential approaches to the role of agency in the design process. The way in which different languages situate agency grammatically also offers insight into how this structure affects and is affected by the social and

⁵⁸Ibid, 115.

⁵⁹Macleod in Ibid, 120.

⁶⁰Ibid, 123.

⁶¹Ibid, 117.

cultural contexts in which the language is used. At the micro level, dialogic approaches give insight into how the individual uses language to define personal agency in the discourse process. Understanding and carefully defining agency as a point of reference in studying discourse in design is essential to understanding agency conceptually in design.

It is not enough to gain insight and understanding of the outcomes of design, it is also necessary to understand the underpinnings of how the design culture functions in the military-civilian sociocultural environment as well. We make normative assumptions about the relationships and behaviors associated with the structure and function of the design group. These assumptions in turn lead us to beliefs about the way in which the act of design should occur. The assumptions need inquiry in order to validate them, and to establish the iterative process of adapting design as an activity to the specific operational context in which it is used.

DISSOCIATING DISCOURSE FROM PROCESS

In examining the influence of Foucault on discourse theory related to systemic operational design, it is helpful to look at three particular meanings he attributes to discourse.⁶² In the first, he refers to the entirety of statements as a single domain, next as discrete groups of statements bound in some way by a unifying conceptual integrity. For example, there is a discourse of femininity. Third, he describes discourse as practice, interpreted as the rules and structures through which utterances or texts are produced.⁶³

The use of discourse as a term in structuralist and post-structuralist thinking provides a cognitive contrast with the sense of the term as used in the process oriented descriptions of discourse often found within systemic operational design literature and theory. Where systemic operational design theory tends toward the conception of language as a representation vehicle, discourse in this view of language carries with it the broader view in which language influences

⁶²Sara Mills, *Discourse*, (New York: Routledge, 2004), 168.

⁶³Ibid, 6.

how the participants think, express and operate within the systemic rules and constraints of language.⁶⁴

Discourse is related to both the institutions in which it occurs and to the social context of the individuals involved. These two characteristics, defining commonalities across a number of theorists within Foucault's theoretical sphere, are mechanisms allowing differentiation in discourse typologies. It is here that a particularly strong theoretical linkage can be found with systemic operational design's grounding in systems theory. The structure of discourse occurs specifically because of its apposition to other discourses, often it is opposite. That is, as the discourse shapes discourse external to itself, those discourses in turn shape it. They cannot stand in isolation.⁶⁵

Another facet of discourse in relation to the fusion of linguistics and cultural theory is the concept of exclusion. Particular discourse is allowed expression when other discourse is not. This is relevant to design in the operational context for several reasons. When a discourse is presented from a position of authority, its content's legitimacy may be founded not in any objective sense, a fact, but in what is deemed a culturally accepted norm. If this norm is accepted as fact, it has the smothering effect of excluding discourse that offers a different perspective.

Mills points out how discourse concerning feminine reproductive health often places normal occurrences such as menstruation in a negative, pathological frame of reference relative to male health. Though it can be experientially negative for some women this alone is not enough to characterize the negativity as a singular reality for all.⁶⁶

In this view of discourse, words in the structure of statements only possess meaning when placed in an institutional context. Concepts such as authority and weight given statements issued

⁶⁴Ibid, 7.

⁶⁵Ibid, 10.

⁶⁶Ibid, 11.

from a position of authority are an example. This lack of fixation of meaning of statements is also linked to the idea of access to discourse. Venues where exchange can occur have literal and figurative gatekeepers that serve to moderate both content of the discourse and the participants.

These gates vary in form. Examples include language, professional credentials and position in an organizational hierarchy. These are arbitrary, and reflect aspects of power and control. Theorists such as Michel Pecheux emphasize these characteristics of conflict and ideological struggle in their work. Mills points this out as one of the differentiating theoretical points between Foucault and others. From a Foucault-oriented perspective, access to discourse is relatively egalitarian. Pecheux and others see cultural structures and conditions as more directly influencing access issues.⁶⁷

Just as institutional and contextual placement influence discourse's role in emplacing identity frameworks for the individual and groups, the symbiotic nature of discourse relative to other discourse serves as a vehicle for re-imagining identity and place. These characterizations of discourse by Pecheux shows discourse as "not fixed "but are the object and site of struggle."⁶⁸

With regard to truth, Foucault differentiates between what is accurate representation "real" versus what is constituted as real by virtue of the discourse from which it is constructed, and more specifically what is received as true because of the discourse which predominates. Discourses are systematic objects; they produce effects, and in turn are linked to and influenced by other systemic objects. They cannot be evaluated in isolation.⁶⁹

Power from Foucault's perspective is an unavoidable product of discourse and social relations. Its characteristics are such that it is neither positive nor negative, but obtains attributes

⁶⁷Ibid, 12.

⁶⁸Ibid, 14.

⁶⁹Ibid, 17.

based on the context in which it is observed, and relative to the participants. It is simultaneously restricting and enabling.⁷⁰

The production of knowledge in Foucault's perspective is the result of struggle over what will be constituted or subjugated.⁷¹

In a structuralist/post-structuralist concept of discourse, the role of struggle and power/knowledge is somewhat problematic for systemic operational design. Discourse in systemic operational design is a mechanism of cooperative intercourse. "Struggle" from the systemic operational design perspective is a positive idea, meant as a reflector for multiple points of view. In the ideal, from this struggle emerges a more enlightened perspective on the systemic object of inquiry. For Foucault and others, it seems that the emergent discourse is not particularly or necessarily born of "friendly" struggle toward a common purpose, but has a specifically self-centered perspective. This perspective is concerned with primacy over the other, and establishment of privilege.⁷²

These struggles are not only about the content of the discourse. They also relate to the forms the discourse takes. In these forms are established the mechanisms of exclusion or privilege, which, according to a Foucault perspective, are what inform the development of discourse. They are also the pathways for external influence and internal change.⁷³

The ideological concepts within discourse have fundamental linkages with systemic operational design theory. In the political milieu in which Foucault and others began development of discourse theories leading to modern conceptions of the term, Marxism and the attendant doctrinaire perspectives on social theory were coming into question. As Mills points out, the

⁷⁰Ibid, 17.

⁷¹Ibid, 19.

⁷²Ibid, 22.

⁷³Ibid, 23.

perception of agency becomes decidedly different as theory moves away from Marxist perspectives. Concern with immediate outcomes of action, and an attendant causal perception, gives way to a broader view. The idea of interest in unintended consequences of action, and exploration of their relationship to the agent become more accessible, and begin to inform the systemic issues which are embodied in discourse theory.⁷⁴

Foucault has several perspectives on differentiating between discourse and ideology. These perspectives appear to have basis in receiving "ideology" as a pejorative term, and this quality existing in particular relation to discourse. This is consistent with grounding discourse meaning as principally one of opposition and struggle.

Ideology operates from the basis that its analysis of the other is grounded in the truth of its own perspective. Discourse does not take this position. In discourse, it is recognized that one's perspective is itself the product of and limited by the discourse in which it exists. This establishes the epistemological boundaries of the knowledge within the discourse.⁷⁵ As such there is not "a" truth, but only one informed by the context with all the attendant socio-cultural and individual influence. Of particular note is that Foucault also perceived this condition as applicable to theoretical discourse as well as discourse in reality.

Another aspect of Foucault's post-structuralist perspective is the way the subject is realized. As described by Mills, Foucault attempts to describe history outside of the individual.

One has to dispense with the constituent subject, to get rid of the subject itself, that's to say to arrive at an analysis which can account for the constitution of the subject within a historical framework. And this is what I would call genealogy, that is, a form of history which can account for the constitution of knowledge, discourses, domains of objects, and so on, without having to make reference to a subject which is either transcendental in relation to the field of events or runs in its empty sameness throughout the course of history.⁷⁶

⁷⁴Ibid, 27.

⁷⁵Ibid, 29.

⁷⁶Foucault 1980a in Ibid, 59.

Discourse has its own internal and intrinsic structure within Foucault's theories. Principally, discourse consists of the episteme, statement, discourse and archive.⁷⁷ Episteme are the body of knowledge at a particular time, statements are utterances that are validated by some form of authority, and discourse is the structure and rules by which discourses are made. Statements are speech acts which claim both truth as well as the backing of knowledge. The development of statements is also linked to the process of exclusion. Exclusion decouples utterances from the cultural body of understanding, which in turn gives them the context, the knowledge, to make them "true". Through exclusion, an exercise of power occurs, and by extension, control of the person. In a similar fashion, institutions control their discourse through the structure and validation of the discourses in which communication occurs. Discourse is treated by Foucault with a difference from discourses. Unlike the varied discourses which have specificity in their content and context, discourse more generally describes the mechanisms by which such discourses are created. The last component is the archive.

"I mean the set of rules which at a given period and for a definite society defined: 1) the limits and forms of expressibility; 2) the limits of forms of conservation; 3) the limits and forms of memory; and 4) the limits and forms of reactivation."⁷⁸

Foucault's perspective of language as a form of regulation or control is apparent in this statement. Valuation processes are important in this view. What is discarded and what is kept as record and as memory intimately shape the further development of the discourses informing the larger discourse of the institution.⁷⁹

From this structuralist basis, further research has led some authors to examine the bounding properties of discourse from a less stringent perspective.

⁷⁷Ibid, 53.

⁷⁸Foucault, 1978:14-15 in Ibid, 56.

⁷⁹Ibid, 57.

The notion of discourse displaces the analysis from the text as originating in writer or thinker, to the discourse itself as an ongoing intertextual process. In the context of Foucault's archaeology, the concept of discourse has some of the same force as structuralism in displacing the subject or reducing her to a mere bearer of systemic processes external to her. Analysis of the extended social relations of complex social processes requires that our concepts embrace properties and processes which cannot be attributed to or reduced to individual 'utterances' or 'speech acts'.⁸⁰

These quotes from Smith and Mills' subsequent commentary demonstrate a modification and expansion of some of the theoretical propositions Foucault developed concerning discourse. Smith moves from Foucault's initial, highly structural analysis of discourse into one more attuned to the individual's role within the discourse. Foucault focused squarely on the ways in which the discourse functioned as an external force to the individual. Smith sees these structures as less independent. In her construct, discursive structures take on a more environmental perspective. In this light, the individual, in executive agency, becomes interactive with the system, as opposed to becoming a passive subject to it.

“Since discourse is something that you do (rather than something to which you are subjected), engaging with discourses of femininity constitutes an interactional relation of power rather than an imposition of power. Femininity does not have a single meaning, but depends on a wide range of contextual features, such as perceived power relations, for its interpretation and effect. Discourse theory sees power as enacted within relationships and thus as something which can be contested at every moment and in every interaction.”⁸¹

Smith argues that discourse is the means through which social relations between individuals are negotiated.⁸²

Other approaches to viewing discourse in this way include bifurcation of the concept of discourse into one in which there are institutional structures and processes which assign a place and role to the individual, and an individual discourse that either confronts or negotiates the institution from a particular vantage point.⁸³ One of the advantages of this approach is its ability to account for institutional situations in which there is not a particular authority wielding control

⁸⁰Smith in Ibid, 77.

⁸¹Ibid, 79.

⁸²Smith in Ibid, 82.

⁸³Thornborrow in Ibid, 84.

over individual actions, commentary or beliefs. In a more structured view of discourse, such institutional, cultural norms have a much more regulatory interpretation.

Initiating new discourses, such as the ones constructed to interpret military actions against terrorism, evolve within the contexts of other competing discourses; civil liberties, neo-conservatism and just war theory are examples. The existing discourses attempt to frame the new constructions in particular ways, and are in turn influenced by the manner in which individuals negotiate position within them. These processes of negotiating new space among and between individual and institutional discourses are endemic to systemic operational design.

Feminist theory in particular has sought to balance the disaggregating of the self as a means to examine the structures of discourse with the ability to place the individual in social context and explore the ways in which they establish their positions relative to these structures. These theories see this as a potential way forward to account for both institutions and individuals within discourse.

The progression of discourse theory has shown several distinct facets. Much of the modern basis for this theory is grounded in the work of Michel Foucault, and the large body of work situated in a Marxist perspective. It has been subsequently challenged and modified to account for individual agency in the social context, as well as in attempts to articulate and explore theory within the context of social research tools. Examples of this modification include developments in feminist theory, post-structural debate on colonialism, and developments in critical discourse analysis.

CONCLUSIONS AND FURTHER RESEARCH

The monograph asked the research question:

What are alternative ways of thinking about discourse relative to the theory of Systemic Operational Design?

In response, it proposed the following thesis:

A more comprehensive understanding of discourse in systemic operational design is achieved when discourse is considered from the perspectives of agency, narrative and artifact structure, and socio-cultural relationships.

This paper has shown that discourse involves multiple levels of practical and abstract issues concerning how ideas and relationships form within the context of systemic operational design. Scoping this macro-level focus of discourse onto the topic at hand, discourse in operations, there is a need to examine the U.S. military's culture from these perspectives. This need is grounded in the idea that design can only be effectively articulated through greater understanding of the discourse that forms this culture. Movement in this direction is occurring. The growth in command emphasis on foreign cultural awareness and establishing cultural studies components within the military education system show an emerging acknowledgement of its importance. The necessary and complementary component is a deeper awareness of the U.S. military's own culture. Critical to this awareness is the willingness to apply the knowledge during design, and the willingness to examine the meanings of these relationships, regardless of implication.

Specific, but by no means exhaustive, areas for further research could include:

The effects of competing moral philosophies on design development

The ways moral perspective informs intelligence interpretation

The effects political discourse has on interpreting enemy logic

The role cultural discourse plays in interpreting enemy logic

Gender and generational discourse effects on design development

The effects of religious philosophy on interpreting enemy logic

It is acknowledged that these topics, and countless others, require institutional tolerance of varying levels of discomfort. They require acceptance of political and social difficulties that may grow out of the results and interpretations of such investigations. In spite of these

possibilities, however seemingly untenable, there is also the promise of a deeper institutional self-awareness that can lead to more effective, successful operations, with more positive outcomes at all levels of operations.

The literature of systemic operational design has offered the beginnings of description of the role discourse plays in how design is applied to military operations. In general, grounding in particular theories of discourse have been avoided in favor of treating discourse as synonymous with conversation. This in turn influences a concern with discourse as a process, with emphasis on group dynamics and the “how to” of managing and interacting in group settings.

These overriding concerns with process, particularly in the development of doctrine, are acting as a brake on broader and deeper investigation of discourse in the military context. The security posture of the U.S. military in the security environment following the attacks against the United States in September of 2001 has increased the military’s interest in social and cultural factors. Institutionally, this interest has tended to translate into a factors-oriented processing of culture into analysis for intelligence collection and planning purposes.

As the concept of design is integrated into commander and staff functions, the paradigm of layering cultural information onto the temporal and spatial battlefield template is insufficient for attempting a fuller understanding of the current operating environment. These facts take on significance and meaning only when a full attempt is made to understand them in the context of the military’s own social, political and cultural systems. From the perspective of design, this means having an awareness of the existence of these discourses, and understanding of their implications, and more pointedly, the willingness to acknowledge their existence. These discourses inform the development of understanding the enemy system’s logic, which in turn allows the commander to achieve greater efficacy in his actions.

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