Self Disruption: Seizing the High Ground of Systemic Operational Design (SOD)

Ofra Graicer, Ph.D.

Figure 1: From Design to Self-Disruption - Evolution of SOD from 1995 to 2017

*Op Art	SOD	SDI	SIOM
Theme	Design	Cosmology	Mediation
Concept	Framing	Drift	Tensions
Pedagogy	Preach	Teach	Disrupt
	Indigenous	*Imperialist*	*Nomadic*

Twenty years into its making, Systemic Operational Design (SOD) has gained a foothold in almost every self respecting military institution around the globe. What began as an intellectual journey of one man into the root causes of the Israeli Defense Forces' (IDF) degradation post 1973, had turned into a novel approach to the praxis of Operations, an alternative that questioned the core of the organization and the esteemed

traditions of its entire domain. At the core lay the realization that in order to be relevant for future wars rather than the past ones, the military must go 'Beyond Doctrine'. And, potentially, SOD could be the organization's *War Machine*[1], its mechanism of self-disruption.

Deleuze and Guattari's philosophical language proposed dialectic relations between two opposing models of thought, taking after the cultural engagement between sedentary communities and nomad tribes, from which evolved the metaphor of a conflict between State Apparati and War Machines. The Tree model of the State Apparatus stands for all forms of generalized order, totality, hierarchy and unity of thought. The Rhizome model of the War Machine stands for creativity and becoming, and is anti-traditional and anti-conformist in character. It seeks to free itself of all roots, bonds and identity. In other words, it reinvents itself through experimenting with emergences. However, these two models can only exist in mixture of coexistence and competition. Therefore, each institution must create an avenue of self-disruption: If Doctrine stands for the *State Apparatus (*or institutional interiority), SOD could be its *War Machine* (or explorer of institutional exteriority).

Initially the brainchild of BG (Ret') Dr. Shimon Naveh that nestled in the embrace of Soviet Operational Art and Architecture, SOD matured in the close quarters of Israeli Defense Forces and steadily gained momentum elsewhere. At the risk of being too graphic, imagine Shimon Naveh having generously donated his SOD sperm, until at some point it went rogue; whereby the publishing of Design Manuals was to be the sign of its reduction a*d absurdum*, until its own father could not recognize it.

One must not conclude that the three constituting components of SOD - Systems thinking, Operational Art and Design praxis - have outrun their course. On the contrary, the course has multiplied, diversified and became open-ended.

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[1] See: Gilles Deleuze and Felix Guattari, *A Thousand Plateaux* (Minneapolis: University of Minnesota Press, 1997).

At the same time, despite growing popularity of the military use of 'design', we have yet to attribute success (and failure) of enough military operations to this novel praxis to reflect on it empirically.[2] Which begs the following questions:

Is the problem with SOD that we understand it but misuse it?

Is the problem with SOD that we do not understand it, yet use it nevertheless?

Is the problem with SOD that we understand it, but have trouble teaching it in our military schools?

Is the problem with SOD that we misplace it in irrelevant command arrangements?

Is the problem with SOD that we fail in marketing its unique product to our decision-makers?

Is the problem with SOD that we understand it, use it correctly, but fail to complete the circle of accountability between idea creation and idea implementation? That is, we cannot 'prove' its efficacy?

My take on SOD is far from innocent and I will attempt to answer some of these questions. I encountered SOD by a twist of fate in the late 1990s, when Shimon Naveh was dividing his time between the university and the military. Soon I became part of the original, exclusive avant-guard that explored SOD praxis and taught it in the IDF. We were on our high horses for some time, which made the fall of our disbandment under a new Chief of General Staff even more painful.

However, the journey went on. What I am offering here is a retrospective of SOD's forming stages from the viewpoint of an instructor in the highest command course on earth and cognitive operator of Systemic Design Inquiries. Yet, my position is *sui-generic*: I am not a general, I am not in uniform, and I am a woman in a field heavily dominated

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[2] With the exception of two IDF Operations: (1) 'Defensive Shield' in 2002 to topple Yasser Arafat as the Head of the Palestinian Authority strategically, and reshape CENTCOM's environment operationally, commanded by MG Itzik Eitan (CENTCOM's Commanders adopted SOD early on and utilized it to Design, Plan and Implement that Operation); and, (2) the Disengagement from Gaza in 2005 under MG Gershon Hacohen's command, which was brilliant and controversial all at once, having been directed against the settlers, rather than the Palestinian Authority.

by men. In that sense, I am both an insider and an outsider (a natural red-teamer), which facilitates my thinking systemically on the matter.

The first evolution of SOD (1995-2005) I would coin as its *Indigenous* phase; the second evolution of SOD, its *Imperialist* phase (SDI, Systemic Design Inquiry, 2006-2012); and, the third evolution of SOD its *Nomadic* phase (SIOM, Systemic Inquiry in Operational Mediation, 2013 - present). Each of these phases is characterized by a unique theme, orbiting round a dominant concept, and is communicated through a different philosophy.

Indigenous Phase (1995-2005)

In 1995, the IDF regarded the aging Syrian Military its major threat reference. Peace agreements with Egypt and Jordan were solid, the Second Oslo Accord with the Palestinian Liberation Organization (PLO) was on the verge of signing, and the Gulf States were warming up towards the Jewish State. The US was invested heavily in the region, and everything seemed pretty much in control, other than Iranian backed Hizbollah's presence in Southern Lebanon. Strategy was left to the politicians, just how the General Staff liked it (as in "you will give us a Directive, and we will deliver").

BG (Ret') Shimon Naveh had just completed his Ph.D. at Kings' College on the evolution of operational art, sponsored by the IDF and Tel Aviv University. His mind exploded with new theories and new operational concepts, a mix of Russian and Anglo-Saxon influences that enhanced his life-long intuitions. Upon his return, he was expected to boost the MA Security Studies program academically, and boost the IDF Senior Command echelons practically.

The beginning was modest**;** one that could pass as a harmless initiative of a veteran soldier philosopher with his mates. As already noted, the IDF at the time was not hearing drums of war and world attention laid elsewhere. Hence, 'private armies' could run loose.

Naveh assembled a few trusted ex-BGs, to test his novel approach and aid in its marketing (several years later, as the Chief of General Staff upgraded the think-tank status to that of an Operational Theory Research Institute, OTRI, they were augmented

by a couple of younger, interdisciplinary civilians, myself included). They focused attention on potential scenarios whereby westernized militaries of Middle East regimes - primarily Syria, Iraq, and Egypt - may regard Israel a threat again in some plausible future, accustomed themselves to exotic writing that was non-military to say the least, and experimented with alternative maneuvering concepts.

Seasoned veterans of Israel's major wars knew from experience that the IDF was tactically strong but operationally weak, in three ways:

(1) the absence of linkage between a unique strategic context and generic tactical molds;

(2) the absence of systemic form of operations, preventing potential for jointness or advanced maneuver & fire compositions, based on space-time-mass-movement-event-effect manipulation; and,

(3) the absence of systemic form of knowledge creation that would enable (1) and (2).

Hence, the compact think-tank developed a system of theory and a system of practice for IDF generals, to go beyond planning (beyond the evident). That is where architectural design as metaphor aided in clarifying the difference between each sphere of functioning (entrepreneur/ strategist, architect/operator, engineer/tactician). From that faculty we borrowed the dialectics of logic and form, multi-level awareness and spatial sensitivities.

SOD was, thus, a form of inquiry aimed at transforming abstract notions into concrete understandings, through a sequence of discourses that generated cognitive frames. Frames were either constructed or de-constructed, depending on the phase of praxis. Borrowing from Donald Schön, every frame was to be reframed eventually, as operations unfolded over time. There were issues of bordering, perspectives, and depth of field. Every question was tackled through conflicting concepts that created a space of dialectic deliberation. Every round ended with synthesis that correlated to a higher level of understanding - or a new cognitive frame. As the inquiry progressed, the scope narrowed, until an operational concept was crystallized. In other words, Design was the art of critical movement between cognitive frames.

The Advanced Operational Command Course (AOCC) - the first SOD course ever - run a total of six times during that period. A group of heavy duty Generals assembled for eighteen consecutive weeks, between posts, to 'get their heads straight'. The first part of the course was dedicated to zealous philosophical lectures on the fundamentals of Systemic Operational Design. We either convinced them or hammered it in… We didn't spare them any neo-post texts that inspired us, in the hope it would also inspire them.[3]

For the remainder of the course participants ran a series of experiments on imagined scenarios, during which they could practice that form of inquiry. Each scenario was based on a particular geography and centered on a particular form of advanced maneuver, that we also contributed (deep operations, operational raids, strategic engagements etc.).

One could categorize AOCC graduates according to the following criteria: 'natural born' generals, 'converts', 'fence sitters', 'play along' parrots, or 'back stabbers'. The first three embraced SOD in their next appointments and effectively became a community of practice; But it was the last two who eventually accelerated the demise of OTRI. In a way, the trendier operational design became, the gap between the organization's gate-keepers and SOD founders widened, to a point they could no longer stomach each other: In 2004 LTG Ya'alon, then Chief of General Staff, published the first IDF Operational Concept, dedicating an entire chapter to Design as a new Command approach. In 2006, two months prior to the outbreak of the Second Lebanon War, OTRI was shut down by the new CGS, LTG Halutz. No one ever gave the real reason for that brutal act, although it was obvious OTRI/SOD was interfering with something somehow. To Halutz' credit, it interfered with his own vision for IDF operations and management style.

During January 2007, in one of his final acts prior to resigning, Halutz ordered the 'shelving' of Operational Concept 2004 that allegedly caused the calamity during the war (to 'burn the books' so to speak) when in fact is was not a question of confused language, but of confused command direction. Coupled with aerial nepotism, the ground forces

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[3] Our officers struggled with texts by: Hakim Bey, David Bohm, Fernand Braudel, Fritjof Capra, Manuel DeLanda, Gilles Deleuze and Felix Guattari, James Der Derian, Michel Foucault, Buckminster Fuller, Francois Jullien, Jean Francois Lyotard, Humberto Maturana and Francisco Varela, Friedrich Nietzsche (Naveh's favorite), Bernard Tschumi, or Paul Virilio and Escher's drawings; to name a few…

stood no chance. [4] His replacement, LTG Ashkenazi, shackled with the mission to rehabilitate the IDF to its original fighting standards, was no stranger to SOD and a great supporter of OTRI at the time. Yet, Ashkenazi's message to the IDF was clear: it was to 'go back to basics', with no systems, operations, or design.

Imperialistic Phase (2006-2012)

However, *God* moves in mysterious ways. Naveh's voluntary exile brought about the unintended colonization of leading foreign militaries with SOD ideology. It was founded on former OTRI collaborations with fellow military institutions in the US, Britain, Australia, Germany, Sweden, Singapore, and others. In the US for example, Naveh's close relations with top figures in SAMS, TRADOC, JFCOM, IDA/ JAWP, the USMC and Andrew Marshall (who was particularly fond of his work), opened the doors to exponential exposure and further expansion of SOD outside the IDF perimeter.

SAMS incorporated Operational Design into its advanced program since 2004; [5] Army components in Regional Combatant Commands commissioned SOD workshops for their Command and Planning Staffs (CENTCOM, PACOM, AFRICOM); and similar events took place over the years in strategic oriented Commands such as JFCOM, SOCOM and STRATCOM. One indication of the new *Elan* was the incorporation of an experimental group of SAMS students in the annual war games Unified Quest 2005-2006, that conducted SOD Inquiries parallel to traditional gaming methodology as sort of a Red Team.

Yet colonization affects both sides. With SOD going global, and the *Empires* becoming more and more intrigued, two matters were becoming obvious: (1) Regular armies do not endure private armies for long and spend much energy to tame them; and,

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[4] See Ofra Graicer, "Between Teaching and Learning – IDF Doctine and the Unfolding of the Second Lebanon War" for a full critique (Paper presented at RUSI Conference, The Second Lebanon War - Lessons for Modern Militaries, London, June 2008), accessed 1st January 2017. http://angloisraelassociation.com/events/conference-at-royal-united-services-institute-rusi-the-second-lebanon-war-lessons-for-modern-militaries
and full text in https://media.wix.com/ugd/91aa26_04d09934de694c90a963188c9abced50.pdf
[5] Stemming from Naveh's close relations with James Schneider, Bruce Menning and Huba Wass de Czege, the fathers of Operational Art in SAMS.

(2) systemic design could not curtail itself to *operations*. Unlike the IDF anti-strategic stance (some would argue Israel's anti-strategic stance), strategic considerations were an integral part of *empires'* routine, and so *strategy* had to be integrated into the process of inquiry and the teaching of design.

As a private contractor for Booz Allen Hamilton Kansas Office, Naveh taught multiple SOD workshops alongside BAH permanent personnel, who had to acquaint themselves with the world of SOD no less than their customers. That with the exception of Dr. James Schneider, one of the pioneers of Soviet operational art research, a close friend and colleague of Shimon for many years, who became a meaningful partner to Shimon in that second SOD iteration and was a class of his own. In 2007, the new SAMS Commander, Steve Bannach, decided to put SOD (theory) into doctrine (manual). Later on, other J7s followed suit. That attempt to xerox a handcrafted, boutique product for the masses, took the toxin out of SOD so everyone could touch it, but what was to become of the Cobra?

The second matter had a more favorable outcome. Instead of trying to reroute SOD, it was taken to the next level - Naveh sought a systemic view of the world and found inspiration in the writings of Pre-Socratic philosophers and the ancient Chinese[6]. A modern day expression of their ideas could be found for example in Buckminster Fuller's *Operating Manual for Spaceship Earth;* and, John Boyd's *Destruction and Creation .* That is when a cosmological view of strategy emerged, based on five fundamentals:

Everything flows (Heraclitus' *Panta Rhey).* To paraphrase on Shakespeare's 'the world is my oyster', the world is my teacher… it does not threaten me, it teaches me, in two dimensions: Flow (the *Logos*) and *Variety* (what it signifies as *Potential*). The world is innocent; it is my awareness that orders it in a particular manner. For a strategist, flow and variety provide an opportunity to reinterpret the order of things, how I operate within that order, and how to change it. That is why in ecological terms strategy is always constantly changing and context dependent. In other words, strategy is first and foremost the potential to transform, in four dimensions - your way of thought, your understanding of the world, your organization, and only then - the world itself.

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[6] Taking after Francois Jullien's critical account of Western thinking through the lens of prominent Chinese military classics. Andrew Marshall, who was one of the chief sponsors of SOD in the US military, pointed our attention to Jullien in the first place.

Strategy is a medium of thought, not of action. Exploring relations between ontology (the world) and epistemology (our understanding of it). It is a theory about theory, not a theory about content. A strategist always thrives to reach a higher understanding of the world through action. Action is mediated through operations and it is the business of a different sphere of functioning (Tactics). Here comes a different use of design - the *freedom* to change the conditions and/or the theory of learning. In that sense, generals should view theory as their weapon this is a take on Jose Merquior's paraphrase on Michel Foucault's view of the power of intellectuals, "Theory is not like a pair of glasses; it is rather like a pair of guns; it does not enable one to see better but to fight better."[7] Degrees of Freedom thus become a qualitative measure of one's design enterprise, and an indicative of potential in a given inquiry.

Thus generals (or those agents functioning in the operational domain), create new patterns of understanding and acting in the world, and then concern themselves with their correlation. *Operations* are the mechanism of mediation between them and parallel spheres of function (strategy and tactics, corresponding to the dialectics of logic and form).

Herein is the paradox - the more you know of the world, you know that you do not know. In the words of Maturana and Varela, "The knowledge of knowledge compels. It compels us to adopt an attitude of permanent vigilance against the temptation of certainty. It compels us to recognize that certainty is not a proof of truth. It compels us to realize that the world everyone sees is not the world but a world which we bring forth with others."[8] All strategists aspire to be Odysseus, but find themselves more of a Sisyphus… The search for strategic understanding and operational efficacy never ceases, and we must find a way to transform our institutions into perpetual learning systems that welcomes both.

If we follow that logic, a *drift* is inevitable. Even the best Strategy will at some point lose relevance - that is - a gap will form between our perception of the world, and the

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[7] J. G. Merquior, *Foucault* (Berkeley and Los Angeles: University of California Press, 1985), p. 83.
[8] Humberto Maturana and Francisco Varela, *The Tree of Knowledge - The Biological Roots of Human Understanding* (Boston: Shambala, 1988), p. 26.

world itself.[9] The drift will occur whether we want it or not. It will occur if we intervene or not. In fact, force application consciously accelerates the flow and thus, invites the next drift. So, the challenge is not to try to prevent the drift but to accept it - to be positioned for it in such a way we can explain what is happening and why (in relation to our working frame or governing paradigm of the hour) and to do it faster than our opponents. Only then could we appreciate potential of the new emergence and form a new, alternative coupling of strategy-operation. This is the systemic cycle of generals' praxis.

Nomadic Phase (2013-present)

In 2013, Naveh was approached by the Commandant of the IDF Colleges, MG Baidatz, to develop an educational program for Generals, following the directive of then Chief of General Staff, LTG Gantz. Both Gantz and Baidatz had former acquaintance with Naveh, SOD and OTRI baggage. Neither was too enthusiastic about recommissioning him. But there seemed to be no one else who could fill a decade of operational vacuum other than the source itself. The stakes were high and suspicion ran both ways. So the Cobra shed his skin, again.

In fact, this is our fourth evolution (in the Navy SEAL training sense), beginning with: (1) the Advanced Operational Command Course in the 1990s; expanding in (2) Introduction to Design Workshops across the US military from 2005 to 2008;[10] (3) maintaining continuity in SOCOM Design Clinics[11] under the J5, Joe Miller, leadership between 2009-2012; and, (4) arriving at the home stretch.

For the past three years, we have been running the radically transformed IDF course for generals. Those terms are somewhat misleading though, as this is not a course and it is not we who run it, but the generals themselves. It is the most senior group of

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[9] In that sense that reality is a coupling of perception and events. See: David Bohm, *Wholeness and Implicate Order* (New York: Routledge, 1980), Ch.3.

[10] Telling accounts of which could be found in the following texts of Ryan, Zweibelson, Pettit & Toczek and Martin, who were exposed to Military application of Design in these events. All other contributors to this special issue are in essence a second or third degree of separation from the source (Naveh).

[11] After Michel Foucalt's elaboration of the archeology of medical perception in *The Birth of the Clinic* (London: Pantheon: 1973); and Frank Lloyd Wright's Fellowship as depicted in *The Fellowship: The Untold Story of Frank Lloyd Wright and the Taliesin Fellowship* (New York: Regan/Harper Collins, 2006).

people to be systematically exposed to our approach, and as such it is beyond education. At least not in the traditional manner. Thus, we have shifted their attention from Red to Blue. As already mentioned, we view strategy as conditional transformation (our mind state, our understanding, our organization, reality itself) so the majority of transformation is internal. We become our own Red Team to a great extent, and we do it intentionally.

Our influence ranges from explicit instruction to implicit disruption. *Disruption* is commonly viewed as an interruption to the regular flow or sequence of something, disabling its normally continued progress. In the business world, disruption is used to describe the phenomenon when startups or new companies/ entrepreneurs manage to steal market share from legacy companies. Disruptive innovation is viewed as such that creates a new market and new value network that eventually disrupts the existing market and value network, while displacing established leading firms, products and alliances. There are four commonalities to successful startups (see Neil Patel, INC[12]): (1) They have to be one-of-a-kind; (2) There is a market for their product; (3) They make affordable things; (4) They are led by delusional, disagreeable optimists, who are crazy enough to think they can change the world.

Making the analogy between startups and operations along these four traits, generals must also be crazy enough to think they can change the world.[13]

Just recently, results of US elections brought political commentators to speak of "the chaos theory of Donald Trump, sowing confusions through tweets;"[14] Bob Gates

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[12] Accessed 1 January 2017. http://www.inc.com/neil-patel/4-disruption-concepts-to-help-your-pivot-your-startup.html

[13] Orde Wingate, the famous WW2 British General, was both accused and applauded for being genius and mad at the same time, and by making people around him incapable of distinguishing between the feasible and the fantastic. See the full text in Ofra Graicer, *Two Steps Ahead* (Tel Aviv, 2009) at www.ofragraicer.com

[14] Accessed January 1st 2017. https://www.washingtonpost.com/politics/the-chaos-theory-of-donald-trump-sowing-confusion-through-tweets/2016/12/23/11e1315c-c928-11e6-85b5-76616a33048d_story.html?wpisrc=nl_p1wemost-partner-1&wpmm=1

offered, "There is some value in Trump's 'disruptive approach' - in the U.S. not being so reliably passive."[15]

However, we want our generals to go one step further. In what sounds like an oxymoron, we want them to disrupt themselves, to become their self-innovating mechanism. We want them to disrupt *their* modes of thinking, we want them to disrupt their understandings, we want them to disrupt their organization, and eventually we want them to disrupt the world. Moreover, we want them to be able to do it autonomously, without sages, mentors, consultants or advisors, to whisper in their ears.

Assuming at least most of them have gotten that far in the ranks out of merit, it is our job to turn their intuition into constitution,[16] and create a learning environment that allows them to showcase their (hidden) best. Self criticism leads to self education; self education leads to self organization; which culminates in self creation. This is how we define the desired outcome of our new generals course.

Disruption plays on exploiting *tensions* in the observed system that alter it and create a new one. Tensions are another expression of chaos and lie at the heart of Chinese philosophy - an interplay of complementary opposites like yin and yang.

In that sense, strategy exploits or leverages tensions; tactics oppresses tensions; and operations mediate it into a system. We should think of the operation as a domain that mediates tensions, leaving the command system a flexible space to deliberate, interpret, experiment, and make mistakes.

The world is not tense. While we struggle to get to the bottom of our discontent we realize some phenomena appear contradictory to each other, and others tend to polarity shift over time. What appears at some point a binary strategic stance or understanding, may curb potential in a different space-time-logic convergence. Thus, we find it more useful to define strategy as a system of tensions that is echoed by space of

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[15] Accessed January 1st 2017. https://www.washingtonpost.com/opinions/robert-gates-theres-value-in-trumps-disruptive-approach/2016/12/22/a2697708-c891-11e6-bf4b-2c064d32a4bf_story.html?tid=hybrid_experimentrandom_1_na&utm_term=.2e1fc98625c2

[16] In a lecture given at the Generals' Course on the praxis of architects, Dr. Eran Neuman, former Head of Tel Aviv University School of Architecture, defended intuition's 'honor' as the sum of experience inhabiting our subconscious, that with some processing, may turn into reasoning and awareness dictating our rationale.

potentials. In other words, instead of pushing our Generals and Statespersons into a corner, we allow them the dynamic equilibrium of understanding and of operating through mediation of tensions.

However, "there can only be one."[17] At the end of systemic inquiry there could only be one strategy that correlates to one operational option, as they are each other's mirror. Yielding multiple courses of action entail some tensions or trends were inhibited and left out of the equation. It reflects the inquirer's inability to provide a theory that systemizes all identified tensions, both red and blue. Thus, providing decision makers optional operational concepts will fail them eventually. For a product of mediation is inherently a product of compromise. Strategy as a map of tensions reflects both gains and risks, within a certain trend and between trends. Any form of calculation must synthesize all of them.

One of the starkest examples of that sort of baffling was demonstrated in General Wesley's Clark incapability to explain why Slobodan Milosevic surrendered to NATO in 1999 to end the War on Kosovo: "Asked by a reporter why Milosevic folded if the bombing had not defeated him militarily, Clark, who knew the Serb dictator well from previous negotiating encounters, replied: "You'll have to ask Milosevic, and he'll never tell you."[18]

The IDF underwent similar perplexing with the outcome of the Second Lebanon War 2006. Originally considered a disaster, several years' later, both political and military senior leadership changed tune, claiming Israel's northern border has been quiet since. Nevertheless, you can rewrite history, but it does not excuse you from explaining why that Operation was successful.

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[17] As in Connor MacLeud's character's famous motto from the movie Highlander (1986).

[18] See Benjamin Lambeth, *Nato's Air War for Kosovo: A Strategic and Operational Assessment*, accessed January 1st 2017.
https://www.rand.org/content/dam/rand/pubs/monograph_reports/MR1365/MR1365.ch4.pdf, p. 68

Figure 2: SOD Third Evolution - the 'Z' Pattern[19]
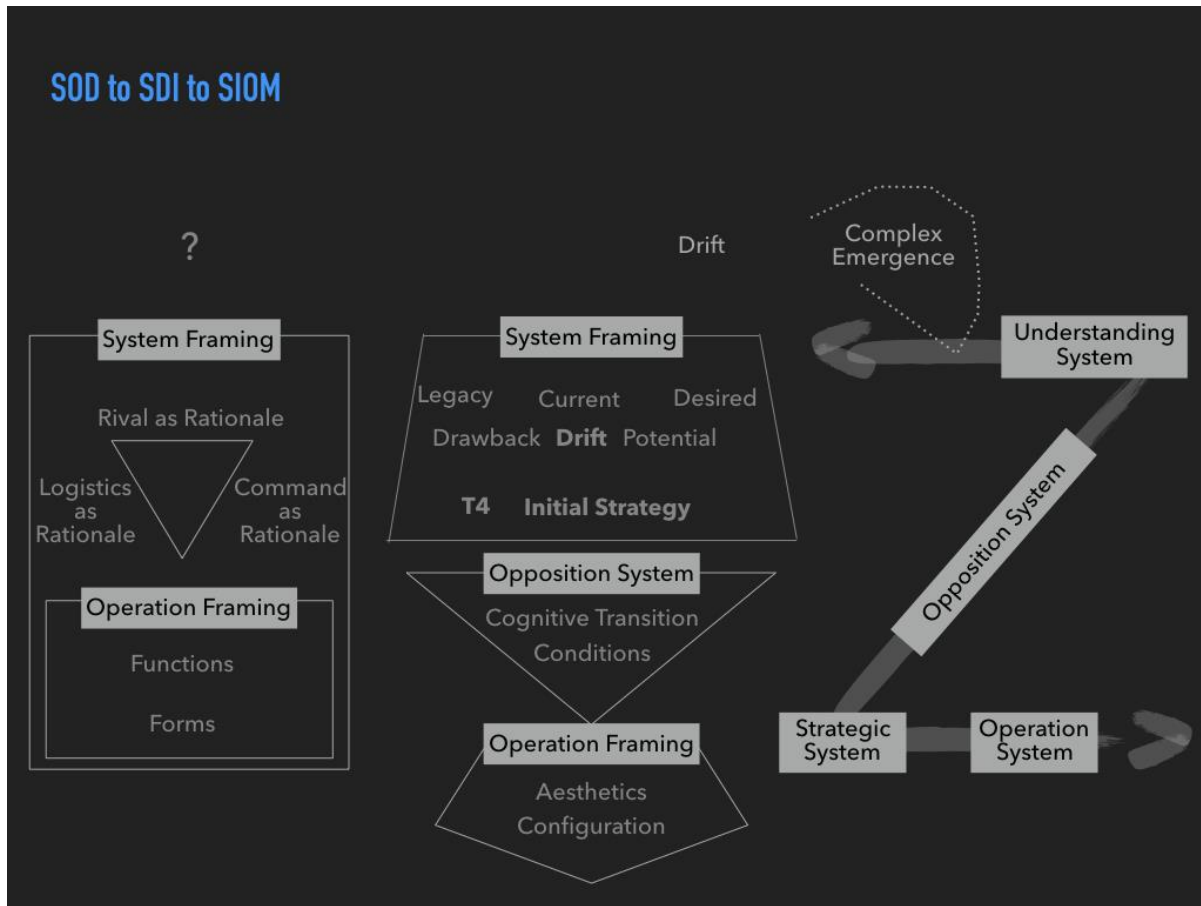
Conclusion: Efficacious Design is measured by the Degrees of Freedom it Creates

So, is there such thing as design efficacy? Can we measure it? To what purpose are we designing in the first place? As already offered, design begins when doctrine ends. That is, it is not for everyone and should not be exercised at all command echelons. Only when doctrine fails at explaining occurrences and acting within them, should design be brought in. However, design can only work in the right atmosphere.

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[19] As could be seen by comparison of the phased evolution of logic and form of Design Inquiry, the indigenous phase of SOD was leaning heavily towards Operations, the imperialist phase of SOD focused on Strategy, whereby the current, nomadic phase of SOD, mediates the two in the Z pattern.

Design should be a liberating experience. Systemic inquiry should be a liberating experience. However, it comes with a price. Liberation is War,[20] surfacing confrontation that most institutions cannot stomach. Not all people want to be liberated. Some rather take the blue pill and remain prisoners of their own mind (or doctrine). Those who do, condemn themselves to a life of frustration, hunger, and discontent.

In order to be able to escape that prison, designers must cognitively exercise three levels of awareness: (I) Theory about the world (knowledge of content); (II) Theory about how to develop theory (knowledge structures); and (III) Tensions between the two (point of paradigm shift). When we build our systemic understanding of an emergence, the first level of awareness consumes most time and is the cause of many heated arguments. However, it is the most basic one of the three. The second level of awareness has the potential of liberation that may lead us to recognize the drift and make sense of something new.

In the words of John Boyd, famous more for his OODA Loop concept and less for his ground breaking article *Destruction and Creation*, Boyd insists Designers/Generals iterate between cycles of destruction (of the irrelevant) and creation (of relevance), to which they are both responsible.[21]

That is why Systemic Design Inquiry is measured by the degrees of freedom it creates! SDI aims at getting our designers on the path of self liberation - far beyond what they know, beyond their experience, value systems, beliefs, prejudices. Beyond doctrine. In order to achieve desired degrees of freedom one must first identify his/her biases, prejudices and axioms carved in institutional 'stone'. These are the borders they must transgress in order to be liberated. This is why I coined that phase - the *nomadic* one. For nomadic people have no baggage, no shackles that tie them to their place, no doctrines or dogmas to adhere to, no fortresses to defend but their own individual freedoms: of

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[20] This is a place where Francis Clermont and I diverge philosophically - during the workshop, Francis advocated designers moral and ethical responsibility to better the world by acts of design. Although I wholly agree that the design process should serve the common good, getting there is by no means peaceful, and will encounter stark resistance.

[21] John Boyd, "Destruction and Creation" (unpublished paper) accessed January 1st 2017. http://www.goalsys.com/books/documents/DESTRUCTION_AND_CREATION.pdf) Originally dated September 3, 1976. See also Francis Clermont's following paper in this issue, offering "one must die to himself to forget what is known".

movement, of thought, of identity. Nomads have no ego. Such approach put the course instructors at the backstage of that unfolding play being written by the best of our generals, begin given the opportunity to reinvent themselves.

Operational Mediation is a state of mind. The world is always moving, and we constantly try to evaluate change as a point of bifurcation. If we identify the problem, our existing knowledge structures suffice to rationalize it, situation assessment is enough and planning is the path. If not, our initial challenge is to identify it. As Albert Einstein said: "We cannot solve our problems with the same thinking we used when we created them."[22] From that follows, "If I had an hour to solve a problem I'd spend 55 minutes thinking about the problem and 5 minutes thinking about solutions." Asking the right questions will be the driving force of an inquiry, and vice versa - not having a good enough explanation as to why we initiated an inquiry, deprives us of primary orientation for the direction of inquiry. We may end up lost rather than found.

How do we know we are on the right track? Systemic Design Inquiries usually swing between epiphanies and hangovers, turning the team of inquirers into a manic-depressive bunch. Inquiry means navigating uncharted territories that produces a new (cognitive) map. Thus, a product of inquiry must comprise both structure and content - so that one could retrace, unlike General Clark, the logical evolution of thought that brought about that particular outcome.

There could be all sorts of triggers for SDIs. However, what is common to all of them is that unsettling notion something does not add up. It is because there is a growing discrepancy, between one's understandings (strategy, paradigm) and unfolding reality. Those who trigger the inquiry sense it, but cannot quite put their finger on it. They need to extract it from the implicit to the explicit in order to change it. In fact the deeper the confusion, the better positioning for a meaningful inquiry.

From that derives, if an SDI team assembles to untangle a complex emergence and goes through that grueling process - but ends up validating existing knowledge (current strategy, current operations, current paradigm) - it had not experienced a design event. SDI teams must be self-reliant in being their own Red Teams. Various measures could be employed to maintain the quality of critical thinking (on top of framing and multi-

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[22] Albert Einstein, *The World as I See It* (New York: Philosophical Library, 1949).

awareness). For example, composing heterogenous teams, using external references, constructing an opposition system, discoursing with planners or running experiments. As long as design teams do not advance the inquiry on auto-mode, they stand a better chance at not going back to square one.

Not all inquiries are geared at producing concepts for military Operations. The product of inquiry is to be decided by its sponsor. In addition, different functionaries will reach different design moments in the same inquiry: Generals may come up with a new strategy, soldiers may come up with new forms of warfare, mentors and cognitive operators may understand something new about the theory of SDI. However, if you entered an inquiry setting and exited unscathed, you did not 'do' design.

Yet, there is that inevitable question of 'What if?' Since there can only be one, how can we be sure we got it right? When the stakes are so high? The honest answer is we cannot. At least until we complete the circle of command praxis and execute our strategy. Force application is the final measure of self-criticism and operations is the ultimate experiment of our new theory.

However, we are not delusional. Systemic Operational Design is about gaining control of our understanding - The world we cannot control. When we are aware of this differentiation, we are also aware of the fragility and relativity of our theories. That is why we must continue to change them over time. In other words, Design is both a means of controlling understanding and undermining it. Over and over again. It is our way of turning uncertainties into risk management that our politicians can accept. We should be able to show the linkage between our strategic logic and our actions. We should be able to visualize the outcome of something that had no precedence and we should be able to rationalize both our successes and failures. To that Abraham Lincoln said: "The best way to predict the future is to invent it".