Sloppy goals and objectives: Lethal to Strategy Implementation

Victor Tang
victang@alum.mit.edu

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Abstract
The core idea of strategy is to do something. The doing is implementation. Our hypotheses are that properly framed goals and objectives significantly enable the effectiveness of doing. And that conversely, sloppy goals and objectives dramatically exacerbate the strategy-to-implementation gap. Therefore, the central theme of this article is how to systematically specify clear goals and objectives, to avoid fomenting implementation gaps. To that end, we present a systematic process to specify clear goals and objectives. We also specify normative principles that inform decision-makers of the sociotechnical context, variables and conditions of strategy and implementation. We discuss these principles and argue their importance to sense-making [1], [2] strategy, and associated sociotechnical operations.
Introduction

I was reading Alice in Wonderland to my grandkids last week. The passage below was part of the story. Alice asks the Cheshire Cat which road to take:

“That depends a good deal on where you want to get to,” said the Cat.
“I don’t much care where—” said Alice.
“Then it doesn’t matter which way you go,” said the Cat.
“–so long as I get SOMEWHERE,” Alice added as an explanation.
“Oh, you’re sure to do that,” said the Cat, “if you only walk long enough.”

My grandkids giggled and thought this was a very amusing conversation between Alice and the Cat. However, the story is much deeper than meets the eye. The moral of this story is a very appropriate theme for this article.

The conversation between Alice and the Cat is immeasurably more profound than a children’s story. It is a metaphor about strategy and implementation. Namely, where you want to go must be specified as a destination. The destination identifies the goal of the journey; it is the \textit{sine qua non} part of the journey. Similarly, every strategy must specify a goal. While widely acknowledged that goals are needed; much less understood is how to systematically frame and specify them. This is a fatal mistake because poorly framed goals aggravate the gap between strategy and implementation. Moreover, the pervasive habit of conflating the terms, of goals and objectives, worsens this gap.

What is a goal and how to frame goals?

A goal is a declaration of intent, an assertion of where and what we want to be after exerting energy and effort. Most importantly, a goal is something that is desirable; that which we want more of. And that, we do not want less of. Hence, a goal is a “thing for which an effort is made” [3]. It is something desired, which cannot be instantaneously gratified. Something that takes resources, competency, determination, effort, and time. “Goals are long-term aims you want to accomplish” [4]. At an ontological level, a goal is also “an overarching principle that guides decision making” [5]. Goals, as sociotechnical instruments, are “boundary objects” that communicate intent and commitment [6]. Simply stated in the vernacular, a goal is a \textit{what}, i.e. what we want, what we desire. At this specific level of analysis and abstraction, a goal is superordinate [7]. Examples of goals are: become a cultured person, become a profitable enterprise, remain the leader in a chosen domain, have highest share in a selected market segment, expand market share, reduce waste to improve profit, and so on. All these are declarations of explicit aspirations.

The goal specified by President Franklin Delano Roosevelt in 1941, in anticipation of a world war, is a brilliant example of a clear declaration of goals. As the leader of the “arsenal of the free world”, there is no ambiguity or vagueness of what he intends to do or how he will do it. There are very few things, in the world, that demand a more firm determination and resolute commitment of blood and treasure than warfare. Therefore, reflecting on Roosevelt’s example offers us a unique perspective into the structure and meaning of goals and objectives. Moreover, we have history to authenticate and reflect on the strengths and weakness of our reasoning. Roosevelt’s strategy for military victory was documented as: “1. Defeat Germany, then Japan. 2. ... by airpower alone, failing that prepare the way for a land invasion of the Continent (then Japan). 3. Prepare the way for an invasion of the Continent; then defeat Germany through airland [sic] operations against the enemy army (with similar operations to follow in the Pacific) [8].” While acknowledging and requiring that: “1. Be popular with the public, 2. Inexpensive, 3. Have a low profile, 4. Low casualties, 5. Quick victory with minimum effort.”

First, consider the syntactic structure of Roosevelt’s goal statement. We parse it using our variation of Crawley’s et al. canonical form for specifying goals [9], [10]. The canonical form is:
Canonical form for Goals and Objectives

to  declaration of intent, of an aspiration. This is a **what**.
by  statement of means. These are the **how’s**.
using assets that are brought to bear. These are the **with’s**.
subject to constraints/assumptions. These are the unremovable **must’s**.

Therefore, Roosevelt’s goal can be framed as follows:

**FDR’s Goals and Objectives**

to  defeat Germany, then Japan
by  by airpower alone, and failing that ... 
using invasion of the Continent and Japan, and airland [sic] operations
subject to maintaining public popularity, inexpensive, low profile, 
low casualties, quick victory with minimum effort.

We note that specificity increases from **to** downwards, while simultaneously, abstraction attenuates. The objectives are embedded in the **by** declaration. We note also that this canonical-form is the sociotechnical analog of the Operations Research constrained optimization formulation.

**What are objectives?**

Whereas a goal is a **what**, an objective is a **how**. And whereas a goal is superordinate, an objective is subordinate. The objectives answer the question of “how?”. “Objectives are specific, actionable subordinate steps that are taken to meet the goal” [1]. The **how** is specifically identified in the specification using nouns. Objectives are also defined as “concrete attainments that can be achieved by following a certain number of steps” [2].

Therefore, the relationship between goal and objectives is as shown below:

goals \(\rightarrow\) **how?** \(\rightarrow\) objectives.

In Roosevelt’s example of the canonical form, the **what** is “defeat Germany, then Japan”. The **how** is “by airpower alone”. Simultaneously, in the reverse direction; the question, of “why?” is answered by its antecedent goal. We can derive the goals from objectives, by asking “why?”, i.e.

goals \(\leftrightarrow\) **why?** \(\leftrightarrow\) objectives.

The logic of causal relationship is bi-directional, i.e.

Vagueness, ambiguity, and lack of clarity, of the cause, effect, and its linkages, are major contributing factors of sloppy statements of goals and objectives. For obvious reasons, this causal bi-directional sequence is known as the **means-ends chain**. Which is why General George C. Marshall, the architect of WW2 victory, famously said:

“If you get the objectives right, a lieutenant can write the strategy”.

Meaning that, the clarity of the objectives must be so lucid that the implementer, not only knows **what** needs to be done, but also knows precisely **why** it must be done. This kind of clarity can meaningfully eliminate the **gap** between strategy and implementation. This level of **reciprocal** clarity significantly reduces the **impedance** between strategy and implementation.

**Real world example from G.E.**
This example comes from a superb article by Hsu and Krauss titled “G.E. Says It Will Slash Jobs Over Shift in Energy Market”. It appeared in the New York Times on 7 December 2017. The article reports the goals and objectives “to turn G.E. around”. We will parse and summarize the article in our canonical form (table below). Then we will discuss fundamental normative-principles for systematically specifying correct goals and objectives. All the text below, in italics, is taken directly from the article. We only changed the verbs from the infinitive to gerunds, to improve readability. Finally, we eschew the obligatory quotation marks to reduce visual clutter.

GE’s goals and objects for a turnaround

<table>
<thead>
<tr>
<th>situational context</th>
<th>goal to remake the company ... eliminate boat</th>
</tr>
</thead>
<tbody>
<tr>
<td>stock has plunged than 40% decline this year [2017]</td>
<td>by focusing on energy, health care, aviation</td>
</tr>
<tr>
<td>steep decline in profit for the third quarter</td>
<td>by carving out a space in renewable energy</td>
</tr>
<tr>
<td>misjudged the market</td>
<td>by shedding $20B in assets</td>
</tr>
<tr>
<td>significant price pressure</td>
<td>by cutting expenditures</td>
</tr>
<tr>
<td>pile of excess inventory</td>
<td>using wind turbines</td>
</tr>
<tr>
<td></td>
<td>using light bulbs, locomotives, Baker Hughes, &amp; underperforming [units]</td>
</tr>
<tr>
<td></td>
<td>using less capital</td>
</tr>
<tr>
<td></td>
<td>using cuts in dividends</td>
</tr>
<tr>
<td>subject to cutting 12000 jobs</td>
<td>subject to departing from past empire building</td>
</tr>
<tr>
<td></td>
<td>subject to more financial discipline</td>
</tr>
</tbody>
</table>

We note the appearance of the “situational context” specification in the table. The situational context specifies the sociotechnical setting of the goal statement. This is critical to sense making [1], [2]. The situational conditions implicitly identify and renders explicit the unit of analysis. The situational setting is crucially important to understand the sociotechnical context and the boundaries, within which the goal and the problem/opportunity are situated. To obtain the situational context one simply has to pose the “why?” question and move up the means-end chain. Clearly, we can climb to the next higher level and ask Why? once more. The answer to that question is necessarily more abstract. Domain knowledge suggests that the answer to this higher-level “why?” is reasonably something like “make G.E. profitable again”.

Appropriate understanding, of situational setting, is important to properly frame goals. Accurate decoding of the situational context is fundamental to establishing the correct conditions and meaning of the goals. In sociotechnical terms, this is what Weick [1] [2] calls sense-making. The context of the strategy must make sense to the stakeholders and problem solvers. Incorrect sense-making virtually guarantees failure to achieve goals and objectives. Weick describes a tragic fire-fighting situation, in which flawed sense-making led to tragic losses of life. Fundamentally, inaccurate sense-making results in solving the wrong problem and formulating inappropriate goals and objectives. In these cases, the strategy-to-implementation gaps are self-generated and self-imposed disasters.

Sloppy goals and objectives
Strategy goals and objectives are embodied in a boundary object [6], [8] that transmit information and knowledge across organizational boundaries. Unfortunately, they are frequently sloppy. They are sloppy because they fail required syntactic, semantic, and pragmatic criteria of meaningful boundary objects. Most lethal is that poorly and unthoughtfully formed goals and objectives foment the strategy-to-implementation gap.

The to-by-using-subject.to canonical form specifies syntax. The most common syntactic error is to only specify the to clause and leave the remainder of the specification unstated. This kind of sloppiness leaves too much unstated; thus, creating opportunities for the creation and expansions of the implementation gap. A second source of sloppiness are semantic errors in the specification. Namely, although the syntax may follow the canonical form, the meaning of the goals and objectives do not make sense. For example, “The flea is solving a differential equation” is syntactically correct, but absurd. It makes no sense. Though this example is extreme, it illustrates a semantic error. Semantic carelessness are precursors to unintended and erroneous interpretations and misunderstandings, of goals and objectives, that introduce strategy-to-implementation gaps. This is what Weick’s analysis, of the tragic Mann Gulch disaster, called flawed sense-making. Another example is Tang’s et al. example of Honda’s interior design [7]. Honda’s engineers followed exactly the design syntax specified by the engineering group, but failed to understand the system and usability contexts of the specifications. The engineering specification did not improve the driving experience. Honda did the wrong thing very well. A third contributor to sloppiness is pragmatic errors. In this case the goals and objectives, combined with the organizational knowledge and processes, are collectively insufficient to jointly transform what they know and resources they have into effective implementations.

Sloppy goals and objectives are clear indicators of sloppy and careless thinking. Finally, a fourth contributor to sloppiness are failures to adhere to fundamental normative principles of goals and objectives. Normative principles are what we discuss next.

**Principle of excluded-reductionism**

“Top managers cannot possess all the knowledge that the various individuals in and organization have about their task environment. It is more effective to specify goals and selection criteria and allow lower-level employees to find the best solution to their particular task.” [11]

At any unit of analysis, goals and objectives are set by the leaders of an organization who are responsible and accountable to produce intended outcomes. To that end, they have also been delegated the power and resources to achieve specified goals and objectives. But, organizational leaders cannot personally perform all the required tasks to meet the specified goals. They must depend on designated organizations to implement and execute. Each of these organizational units is an action system, an operational system, of specialized skills such that the sociotechnical ensemble can achieve the specified goals in the context of the situational setting. For complex sociotechnical problems, Simon [12], [13] first articulated the principle of near-decomposability, which states that problems can be decomposed into a collection of nearly-linear interacting subproblems. This explains the widely used hierarchical organizational structure in the military, business, and other enterprises large and small. Consistent with Simon’s principle, the normative-principle of excluded reductionism, of Ropohl [14], states that objectives should be distributed among the manager’s direct reports to implement. This principle ensures that goals and objectives are actionable, without any gaps, by sociotechnical units designated to execute and produce results.

**Principle of hereditary-propagation**

Goals and objectives are meaningless unless they propagate effectively downwards throughout the organizations responsible for implementation. Goals and objectives are inherited by the lower
implementation units under the person that is responsible for attainment of goals and objectives. Inheritance must not omit any goals and objectives in the process. For sociotechnical systems, the efficacy of this inheritance is not automatic. For sociotechnical systems, no equivalent of the laws of physics exists that ensures complete propagation. Any physics-like properties, such as predictable consistency, must be achieved by sociotechnical intent and design. Sociotechnical achievements are not automatic like magnets attracting iron. *Au contraire*, they are only obtained by organizational design and organizational processes.

Goals and objectives are necessarily contextually positioned in an organizational structure. That level can be as high as the CEO of a business enterprise, a junior executive, or a first-line manager. That person, $M$, is the one responsible and accountable for the achievement of goals and objectives. Say that $M$ has prescribed:

the strategy goals by the set $\{g_1, g_2\}$, and the objectives to attain these goals by $\{o_1, o_2, o_3, o_4, o_5, o_6\}$.

And let us assume, without loss of generality, that the senior manager has three direct reports, $X$, $Y$, and $Z$. And that $Y$ has two direct reports $Y_1$ and $Y_2$.

Applying the management principle of *excluded reductionism* of complex organizational structures, say that the objectives are partitioned to managers $X$, $Y$, and $Z$. The objectives $\{o_1, o_2\}$ are delegated as goals to $X$, the objective $\{o_3\}$ is delegated to $Y$, and $\{o_4, o_5, o_6\}$ are delegated to $Z$. Note that the objectives at the level of $M$ become the goals at the level of $X$, $Y$, and $Z$. And the objectives at the level of $Y$, become the goals at the level of $Y_1$ and $Y_2$. This is the *hereditary principle* of goals and objectives, equation (1), i.e.

$$\text{goals \mid (level \, i+1) } \supseteq \bigcup_n \text{objectives \mid (level \, i+1)} \quad \Rightarrow \text{ indicates "derive" (1)}$$

$$\bigcup_i \text{objectives \mid (level \, i)} \supseteq \bigcup_m \text{goals \mid (level \, i+1)} \quad \supseteq \text{ indicates "span" (2)}$$

Moreover, proper application of the hereditary principle requires that the objectives at the next lower level span the objectives of its parent, equation (2). Namely they are able to satisfy [12], [13] the goals and objectives of its parent, and by implication, its antecedents. We call this the *completeness* criterion. This criterion is a necessary requirement of the hereditary normative principle. Absence of completeness leaves gaps in how to satisfy goals, which exacerbate the strategy-to-implementation gap. Hereditary completeness makes, correct usage of our canonical form, recursive, i.e. an objective at one level of the organization becomes the goal at the next level of the organization. By the principle of *excluded reductionism*, manager $Y$ delegates its objectives
downwards to managers $Y_1$ and $Y_2$. Heredity and the completeness criterion make the goals and objectives recursively complete.

**Principle of synthesis**

While adherence to the above principles is necessary, they do not address the operational dynamics that emerge from the sociotechnical system. An analogy from physics illustrates the concept of the principle of synthesis. The operating units of managers $X$, $Y$, and $Z$ will naturally have **centrifugal forces** acting on them as result of inertia. Left unattended, and under extreme conditions, the result is organizational chaos - the left hand does not know what the right hand is doing. What is needed is “adult supervision”, executive control and guidance, to exert a **centripetal force** that pulls them toward the center, viz. in $M$'s direction. As we know, this is not automatic, but demands the managerial **design** of organizational processes. Design is synthesis. Synthesis is the process of disciplined and creative arrangement of pieces so that the ensemble behaves the way we want it to. Synthesis is much more than lumping things together. **It is integrating specialized elemental subunits into a functioning whole according to working principles.** A BMW engine is not a bunch of metal, screws, and electronics thrown together. It is the result of intellectual and creative effort - synthesis. The principle of synthesis concentrates on the operational cohesion and directional consistency of the operational units. No manager will argue that this operational integration is both desirable and necessary. Strategy is synthesis of means-ends, implementation is synthesis of sociotechnical systems and process. The strategy-to-implementation gap is the result of poor synthesis; in the same way that a poor performing engine is the result of poor design. Hence the principle of sociotechnical synthesis.

To address synthesis, what is an organizational design that research and managerial praxis have shown to be effective? A proven approach is picking a small group of experts as a staff function that reports directly to $M$. The members are hand-picked for their cross-functional and multi-disciplinary experience. Additional requirements are having the right temperament and strong social skills. The group’s leader is a seasoned manager or a high-potential manager being groomed for promotion. We identify this person as $S$, for staff. $S$’s job is to monitor, advise, and counsel $X$, $Y$, and $Z$. As such $S$ has a dotted-line relationship relative to $X$, $Y$, and $Z$ that is formalized. $S$ also has the discretionary power of escalation, i.e. to turn in these managers to $M$, if the situation demands it. $S$ may also be responsible for sensitive assignments and studies initiated by $M$. In IBM these positions are used to confirm or groom future leaders. In the military, these positions are called Chief of Staff and they exist at many levels. In the military, Eisenhower, Marshall, Moltke, Berthier standout as exemplars. For small groups like $Y$, the manager itself can take on the role of staff.

Scholars and experts recommend the practice of the organizational synthesis principle because it is effective in linking together different operating units [15]. Implementation of strategy demands thoughtful adherence to the synthesis principle.

**Principle of feasible actionability.**

All these normative principles, notwithstanding, are meaningless and useless, unless the goals and objectives are **feasible and actionable**. Feasibility is a critical test that must be met [16]. Hence, it is presented as a principle. Feasibility seeks to answer the critical question: “Given the physical and non-physical sociotechnical resources of the organization, can the strategy be implemented and are its goals and objectives achievable? Why or why not?” Actionability means that we can present a recipe that an organization can reproduce with repeatable results. Clearly, the possibility, of strategy-to-implementation gaps, motivate this principle. The extant literature reflects a bias of scholars and practitioners. Namely, they prefer the approach which seeks to demonstrate that a strategy can achieve its goals and objectives - by market, by product, by technology, by manufacturing, by financial resources, by supply chain, by distribution, by
service, by human resources, and so on, and so on, e.g. [16]. This process is almost like being cano
nized by the Pope. The process is motivated to guarantee a perfect and immaculate strategy. It is a
labor intensive, costly, and protracted, albeit excruciatingly thorough.

Instead of thinking how the strategy, goals and objectives can be achieved perfectly, we propose
to think about the reasons why the strategy, goals and objectives cannot be achieved. This turns
the focus on finding the causes of why a strategy cannot achieve its intended outcomes. The
logic is similar to that in medicine. Instead of lectures, on perfect health to a very sick patient, focus
instead on finding why a patient is sick. Our approach places variables and conditions that drive
failure and their linkages to the strategy-to-implementation gaps, at the core of feasibility. These
variables and conditions we call the impedance; obviously because they impede the efficiency and
efficacy of strategy-to-implementation efforts. We call these two orthogonal approaches — the can
and the cannot approaches to feasibility. As in diagnosing a sick patient, we concentrate on the
causes of the sickness. We have confidence that our approach on focusing on the disease of the
strategy will shed new insight into the strategy-to-implementation gap. For example, a perfect
strategy will fail if led by a wishy-washy executive. The overwhelming majority of can-approaches
assume the existence of decisive executives. Our experience is that many managers are risk averse,
and undecided. To disguise their indecisiveness, they will demand more time, more analysis,
additional data, more reviews, broader participation to share blame, focus on tradition and
precedents, and so on. In these cases, the strategy-to-implementation gap is self-imposed and self-
generated from the onset.

Therefore, concentrating on the diagnosis of unfeasibility, why a strategy, cannot succeed is a
useful way to gain insight to the root-causes of the strategy-to-implementation gap.

Summary

- Sloppy specification, of goals and objectives, cannot be tolerated. Unclear goals and objectives
  are time bombs planted in the sociotechnical implementation system. Therefore, sloppy goals,
  from the onset of the strategy effort, are creating strategy-to-implementation gaps.
- In the vernacular, a goal is “what” we want. An objective is “how” to get what we want.
- The to-by-using-subject.to canonical form is a rigorous and practical syntactic framework. It
  provides a systematic way to declare goals and objectives.
- Syntactic rigor is necessary, but not sufficient. Semantic and pragmatic normative principles are
  also needed. One is the complete hereditary-propagation principle, which safeguards against
gaps in the delegation of strategy-to-implementation tasks.
  Another principle is that of near-decomposability and excluded reductionism to ensure
  systematic decomposition of goals and objectives throughout the organization. The synthesis
  principle ensures that operational units remain aligned in the same direction.
- Finally, all these principles, notwithstanding, are meaningless unless the strategy, its goals and
  objectives are not feasible and actionable. Hence, the feasibility principle.
- We depart from the conventional wisdom, which seeks to specify a perfect strategy that is then
  confirmed that it can achieve its goals and objectives. We prefer to focus on the reasons and
  conditions why the strategy, goals and objectives cannot be achieved. This turns the focus to
  why a strategy can be defeated. This approach places variables and conditions that drive the
  formation of strategy-to-implementation gaps, at the core of feasibility. We call these variables
  and conditions the impedances of strategy-to-implementation.
- Graphical summary is the ideas in this article are presented below.
Finally, the Cheshire Cat could simply have answered Alice as follows:

$$\text{goals}_{(\text{level } i+1)} \cup \text{objectives}_{(\text{level } i+1)} \supseteq \text{objectives}_{(\text{level } i)} \cup \text{goals}_{(\text{level } i+1)}$$

References


[5] https://www.google.com/search?safe=active&source=hp&ei=BT3xWdPBljVmAGf8Y_ACg&q=definition+goals+and+objectives&oq=&gs_l=psy-ab.1.2.35i39k1j6.0.0.0.6297.2.1.0.0.0.0.0.0.0.0.0.0.0.0.0.0..0.64.psy-ab..1.1.149.6...149.-qUNedbmAQA


