The Wisdom to Apply Knowledge . . .

That Surpasses Understanding

By: Nevin "Mustang" Taylor

"Strategy without tactics is the slowest route to victory.
Tactics without strategy is the noise before defeat."
Sun Tzu

A Strategic Approach to Transforming our Environment

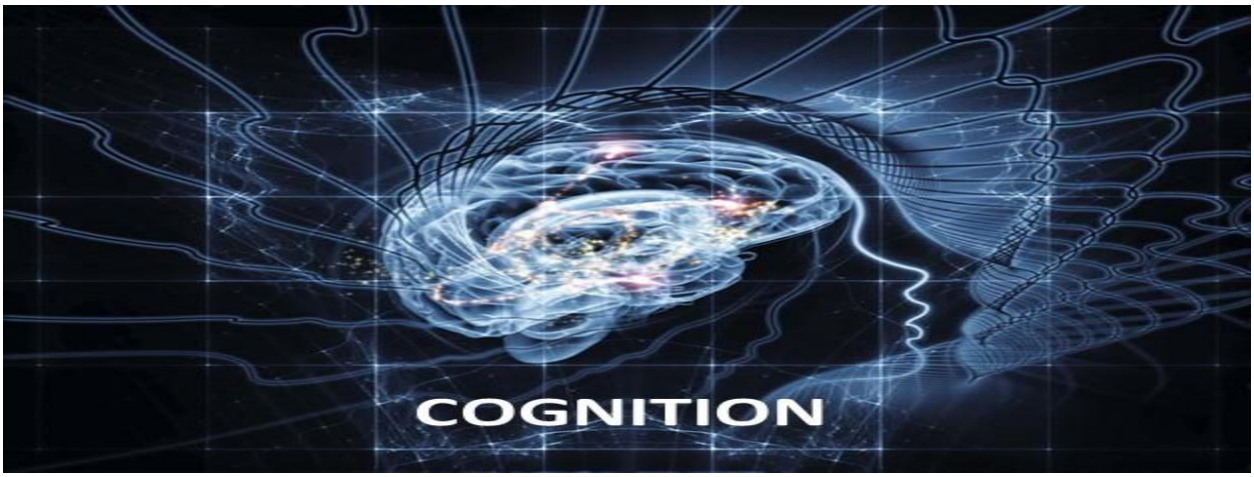
During our transition into the information society and given the constantly changing global environment, a host of technological tools must be used to manage massive amounts of data and the complexities that result from their dynamics. Accordingly, we can gain and maintain our competitive edge by making sound assessments of actions taken, given the desired results. Such analyses will yield a comprehensive understanding of the associated second- and third-order effects of actions taken to achieve results, to preclude unintended consequences.

Given the confluence of diverse perspectives, expectations, and perceptions, and to ensure we are prepared to overcome threats or challenges to our vital national interests, we must be mindful of the predisposition of our actions through an enlightened understanding of current conditions and causality of our influences upon future expectations of today's inherently open system. It is critical, therefore, that we understand and agree not only on the makeup of essential objectives but also on the requisite awareness and knowledge we must have to achieve them.

Formalized programs must be introduced to collect data, catalog and correlate information, characterize and contextualize, determine costs and benefits, and facilitate coordination and collaboration to communicate our desired ends and ways and means effectively. Accordingly, to advance our understanding and align our efforts to achieve the desired outcomes, we must begin with the end in mind as we undertake the actions necessary to achieve the primary objectives that serve our vital national interests.

To tackle the complex strategic problems that will affect us now and into the future, and to obtain a complete understanding of their second and third-order effects, it is first necessary to institute a standard structure that makes data visible, accessible, understandable, linked, and trustworthy (*VAULT*). This uniform approach gives strategic leaders the means to assimilate data, enabling them to make sound strategic decisions that support U.S. national interests, for it is this constructive and thoughtful approach that clarifies the conceptual framework for making informed and effective decisions.

Ultimately, through this structured methodology, the resulting contextualized knowledge will yield a common, actionable understanding used during the decision-making process. Stated otherwise, the process will help mature and refine understanding, ensuring that sound, informed decisions can be made. As mentioned above, we can thus apply cognitive skills to assess the effects of actions taken relative to the results achieved. By employing this form of temporal (also known as *predictive*) analysis, we can forecast with some degree of certainty what the future will hold.



COGNITIVE ENLIGHTENMENT

"The General that wins the battle makes many calculations in his template before the battle is fought. The General that loses makes but a few." - *Sun Tzu*

Information is so critical to the decision-making process. Merriam-Webster defines data as "information output by a sensing device or organ that includes both practical and irrelevant or redundant information and must be processed to be meaningful. By properly organizing and validating data, reliable information can be obtained. By extension, Merriam-Webster defines information as a signal or character that represents data. In a learned and layered approach, the cognitive process begins to develop this information into knowledge, which Merriam-Webster defines as: Hence, circumstantial experiences shape the way one interprets and uses information, which in turn influences their actions and reactions.

To be conscious and conscientious individuals, therefore, we must first recognize the need to develop cognitive enlightenment. Cognition is defined as the mental process of knowing, including aspects such as awareness, perception, reasoning and judgment. Bloom's Taxonomy presents a framework upon which to examine and facilitate an understanding of the cognitive process. The following six levels are prerequisites to elevating intellectual acuity:

- **Knowledge** – *the capacity to recall or recognize pertinent learned information associated with terminology and facts*
- **Comprehension** – *obtaining a level of understanding through oral, written, or symbolic representation to translate, interpret or extrapolate a level of knowledge that demonstrates the assimilation of the presented concept*
- **Application** – *capability derived from the fully matured understanding of a concept*
- **Analysis** – *ability to break down information and correlate its relevance and implications to its derivative of intent*
- **Synthesis** – *formulating/organizing individual parts of information such that it collectively imparts a newly matured meaning*
- **Evaluation** – *action based on judgment influenced by cultural norms, academic teaching & personal biases*

Within this cognitive domain, knowledge and comprehension equip problem-solving skills to overcome uncertainty and ambiguity. Knowledge is thus the set of foundational skills honed by one's ability to comprehend and apply information. The use of knowledge, by recalling facts and concepts, enables the identification of trends. Thus, observable patterns are correlated through cognitive analytical analysis, which lies at the heart of comprehension. It is this synthesis of information and the perspective gained that represents the crux of the cognitive process.

Ultimately, data serves as the foundation for the formulation of information that provides the knowledge required to achieve decisive operational advantage. Therefore, by taking actions informed by the requisite knowledge that contextually enlightens understanding we realize the substantiation of actions taken to influence and effect outcomes is formulated at the cognitive level of understanding. Ultimately through this process affords the most fantastic opportunity to affect our environment at its formative stages of cognition. Thus, data's inherent value becomes apparent and is recognized as a critical asset that feeds and informs our ability to fulfill US national objectives.

To maximize the benefits of and leverage the available opportunities to garner strategic advantage and transform the environment to our desired end state, we must be mindful of the characteristics of data. For as the efforts of Big Data so adeptly identified, it must be visible, accessible, understandable, linked and trustworthy (VAULT) in order to evolve knowledge in a way that harvest its inherent strategic benefits. Through this process, we recognize that data's value is correlated to the relational context upon which it is applied.

Through the application of understanding we are afforded wise actions informed by superior understanding of what to do, where to do it and when it must be done in order to accomplish those objectives that fulfill organizational goals. To ensure the fulfillment of organizational objectives, it is critical that data is collected and categorized in a structure that facilitates searches and efficient access. Since this shared data environment cuts across all boundaries, it also influences every aspect of those principles upon which America is founded.

Moreover, this environment has international ramifications that affect diplomatic, information, military and economic concerns worldwide. Because the threat of unintended consequences is pervasive in today's diverse and rapidly evolving information environment, our ever- increasing reliance upon the rapidly evolving digital domain demands that we provide the right data, at the right time and place, to ensure effective and responsible decisions are made in fulfillment of implicit and explicit objectives. Therefore, it is critical that we focus on leveraging data as a strategic asset.