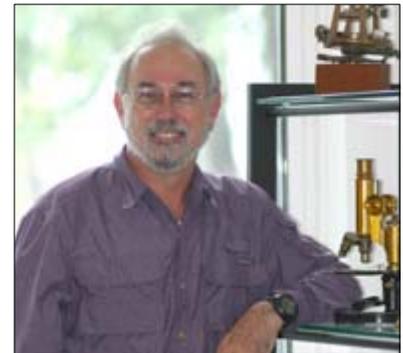


THE APPLICATION OF THE THEORY OF SPIRAL DYNAMICS TO VALUE ENGINEERING

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Robert Prager's experience in water resources engineering spans roughly 35 years and much of North America. He has worked as a designer, owner's representative and project reviewer. Robert co-founded Intuition & Logic, a river restoration firm, 15 years ago and began bringing his experience in river mechanics, hydraulics, flood protection and restoration to Value Engineering projects as well. After many studies as a team member, Robert became a CVS in 2008 and leads teams for Strategic Value Solutions, Inc.



ABSTRACT:

Spiral Dynamics is a theory describing the development and interactions between individuals, cultures, organizations and cultures. Its origins parallel those of Value Methodology and the founders of both methodologies met regularly and exchanged ideas. One methodology addresses the process of innovation (VM) while the other examines how people and organizations respond to the notion of innovation (SD). By exploring how people and their organizations respond to the challenges posed by the Value Methodology process, Spiral Dynamics offers insight into more successful team building and reducing the barriers to accepting recommendations.

Spiral Dynamics is a theory of how individuals, groups, organizations and countries develop. Spiral Dynamics was first introduced by Professor Clare Graves in the sixties and since has been developed by Don Beck and Chris Cowan. Beck and Cowan first published *Spiral Dynamics, mastering values, leadership, and change* (2006) in 1996 with a second edition in 2006. Also, it turns out that Larry Miles, the developer of Value Analysis, met regularly with the industrial psychologist, Clare Graves who developed the theory that evolved into Spiral Dynamics. Jerry Kaufman and Roy Woodhead in *Stimulating Innovation in Products and Services with Function Analysis and Mapping* (2006) remark that "It is worth noting that these two disciplines, value analysis and spiral dynamics, coevolved from lunchtime conversations between two men in Schenectady. What is interesting is that one of them looks at how to innovate and the other at how various culture types respond to the notion of innovation; they look at different parts of the same innovation agenda."

By reuniting the parts of the innovation agenda a team leader may have higher acceptance of proposed ideas. The theory presents a framework for understanding the dynamic forces at work in human affairs; business, personal lives, education and even geopolitics. Each entity develops through the same stages in response to a series of life conditions. Each life condition results in a corresponding way of thinking. The theory emphasizes that no one way of thinking is superior. Each is appropriate for the life conditions that trigger the thought paradigm. The theory also points out the difficulties and misunderstandings that arise as a result of two or more individuals or groups interacting with different thought paradigms. In Spiral Dynamic theory each thought paradigm is referred to as a ^vMEME. The v is for value to distinguish the term from meme. Dr. Richard Dawkins introduced the term meme in his book, *The Selfish Gene* (1989). A meme consists of any unit of cultural information, such as a practice or idea, that gets transmitted verbally or by repeated action from one mind to another. A "^vMEME reflects a world view, a valuing system, a level of psychological existence, a belief structure, an organizing principle, a way of thinking or a mode of adjustment"(Beck and Cowan, 2006).

The theory presents a classification system of ^vMEMEs that allows a user to evaluate an individual or group. By understanding the ^vMEMEs that are active for participants in a Value Analysis workshop a team leader can better guide the process resulting in a higher acceptance of ideas by the stakeholders. The theory is equally valid for interacting with all of the stakeholders throughout the process. The team leader needs to reevaluate the active ^vMEMEs throughout the process. As life conditions change so can the ^vMEME. In our practice, we have all noticed how group interactions can change because a senior manager has entered the room. Some ideas are championed, others are dropped and an individual that was not engaged suddenly has a lot to say.

The basic premise of Spiral Dynamics is that there are six first tier ^vMEMEs and so far two identified second tier ^vMEMEs. Individuals, groups and organizations evolve through each of the stages as the external or, in theory terms, Life Conditions change. Changes in Life Conditions result in a movement along the spiral, either up or down to a different ^vMEME. However, if an individual or organization has not experienced a higher ^vMEME it is difficult to move up without assistance. It is important for the team leader to realize this limitation. It may be best to work with team members and stakeholders within their ^vMEME. Like any classification system an individual

or organization may be on the cusp between two ^vMEMEs. The six fundamental ^vMEMEs are survival, safety, power, truth, prosperity and communitarian. The second tier ^vMEMEs are systemic and holistic. In an effort to remove stigma from the terms for the ^vMEMEs, Beck and Cowan assigned a color to each ^vMEME. Each ^vMEME will be discussed in more detail later.

<u>^vMEME</u>	<u>Color</u>
Survival	Beige
Safety	Purple
Power	Red
Truth	Blue
Prosperity	Orange
Communitarian	Green
Systemic	Yellow
Holistic	Turquoise

Each ^vMEME also exists in an open, arrested or closed condition. As the names imply, an open ^vMEME has potential for more complex levels of functioning with the most possibility for adjustment and therefore acceptance of new ideas. An arrested ^vMEME is caught by barriers that are either self imposed or imposed by conditions. Individuals or organizations in an arrested state may lack the insight that explains what is happening and change is only possible if barriers are overcome. In this ^vMEME excuses and rationalizations are used to maintain the *status quo*. In an arrested ^vMEME, the team leader may need to deal with more dissonance to create the spark for change. A closed ^vMEME is obviously the most difficult situation and hopefully applies to an individual or department rather than an organization. In a closed ^vMEME, barriers are not recognized much less overcome. Historic traumas may have triggered the closure. Members in a closed ^vMEME are threatened by change and fight to stay put. People or organizations in a closed state do not recognize alternatives. The theory presents methods for estimating the potential for change and dealing with the conditions of each ^vMEME.

This paper will not address the first two ^vMEMEs of the first tier since they generally will not be encountered in the VA arena. Beige and Purple are working at subsistence for survival and enchantment to express the mystery of life level, respectively. The rare Turquoise level of the second tier also will not be discussed since it is highly unlikely to be encountered in a VA and if encountered would function without assistance from the team leader.

A very important point in the theory of Spiral Dynamics is that none of us sees the world entirely through one ^vMEME. We may be Orange at work, Green in our family life and Blue in our civic or political life. An abbreviated description of these ^vMEMEs follows.

The Red ^vMEME, POWER:

The Red ^vMEME is unconstrained, and attention seeking. In this ^vMEME, might makes right and there are only winners and dead losers. Raw power displays and seeking of immediate pleasures characterize this ^vMEME. Individuals are unconstrained by guilt but can be colorful and creative.

Other disciplines or outside team members are adversaries; turf wars and vendettas are rife. The VE leader's authority will be immediately tested and if the leader fails to establish control over the process, a Red team member will try to dominate or bully other team members or the leader. Conversely, Red team members can be lively, creative members of teams where the CVS is clearly in control of the proceedings and shows respect for the team members' talents.

The Blue ^vMEME, TRUTH:

In the Blue ^vMEME, there is great respect for established procedure and protocol. The strong commitment to organization and mission is unmistakable as is the reluctance to challenge established ways of doing business. Blue organizations have established hierarchies – a place for everyone and everyone in their place. Team members reflecting the Blue ^vMEME work hard but may believe there is *only one* right way to accomplish a task. Creative idea generation can be a challenge here. The CVS may need to take particular care to make sure such a team member is able to contribute freely without fear of contradicting a superior or appearing to “betray” the approved methodologies of the organization.

The Orange ^vMEME, PROSPERITY:

The Orange ^vMEME is highly competitive; goal oriented and seeks short-term reward. This ^vMEME recognizes that there must be change in order to progress. Team members reflecting the Orange ^vMEME are analytical, entrepreneurial and eager to test new approaches but look for clear evidence that an idea is superior before adopting it. This team member or organization is bottom-line oriented. Individualistic Orange team members may be prone to “showboating” in front of the client. In the worst case, such a team member may submarine another team member or organization to demonstrate superior skill in hopes of taking some part of the project away from other organizations. The challenge for the CVS is to harness the analytical and creative power of this ^vMEME while preventing any hijacking of the process.

The Green ^vMEME, COMMUNITARIAN:

The Green ^vMEME works hard (sometimes too hard) to smooth troubled waters. The Green ^vMEME accepts input without judgment and seeks collaboration to reach consensus. A team member reflecting this ^vMEME may counterbalance more aggressive team members. The Green team member may excel at coaxing important information from recalcitrant project sponsors and turf-protecting team members. However, this ^vMEME may have trouble making rapid judgments when it is necessary and is often hesitant to separate the suggestion wheat from chaff.

The Yellow ^vMEME, SYSTEMIC:

The Yellow ^vMEME is intrigued by process and is rarely fearful of new situations. They expect competence in other team members, the client and their consultants. The Yellow ^vMEME embraces big picture views and naturalness in chaos. This ^vMEME likes doing more with less.

The Yellow ^vMEME is comfortable with a non-rigid structure and becomes self-directed. Because the Yellow ^vMEME is unencumbered by protocol or concerns about status, this otherwise valuable team member is less likely to toe the line during a study than some others. If the study appears to lose focus or seems unlikely to produce a valuable result the team member reflecting the Yellow ^vMEME may disengage figuratively or literally by seeking a more meaningful task. In Spiral Dynamic theory a small part of our population has this ^vMEME.

The Blue, Orange and Green ^vMEMEs are the most likely to be encountered either as organizations or individuals participating in a VA study. Understanding the ^vMEME of the client and other stakeholder organizations enhances the success of the team leader. The team leader also needs to understand the ^vMEME of participating departments and individuals that may be different from that of the parent organization. For example, the engineering department may be Blue, the environmental department may be Green and the construction management department may be Orange all residing in a Blue organization. Further, the practitioner of Spiral Dynamics will evaluate if these ^vMEMEs are open, arrested or closed.

Just as people adopt different ^vMEMEs at different times or in different aspects of their lives, a team leader may find it helpful to highlight different ^vMEMEs through the course of a VA study. It is appropriate to establish different ^vMEMEs for the VA team during different parts of the job plan. During the Information phase the Team might be Orange and experiment to win by asking probing questions. Alternatively, the team leader may shift to Red to be unrestrained by guilt and ask tough questions of a reluctant consultant. In the Analysis phase the team leader may want the team to be on the cusp of ORANGE Green. A team strong in the Orange ^vMEME will be analytical and drive for bottom line results but shifting to Green allows for team building and mutual trust. Similarly the team leader may want the team to shift to ORANGE Green in the Creative phase to experiment to win while being open to other team members' ideas.

For a different project in the Creative phase a non-judgmental Green ^vMEME may be the best platform to get team members willing to go out on a limb with novel ideas. On the other hand, a team with strong egos and no reluctance to speak up might brainstorm better in a "let-er-rip", ignore the rules Red ^vMEME.

In the Judgment phase the team needs to be Orange GREEN to reach consensus while testing the options for best results. The Development phase may be one of the most challenging for the team leader using Spiral Dynamics Theory. For selecting ideas and for developing recommendations, the disciplined, analytical Orange ^vMEME probably works best. The powerful drive for rationality and quantitative analysis develops convincing recommendations.

To effectively apply Spiral Dynamic Theory to VA, a team leader must be well versed in the theory and its processes. Beck and Cowan present many techniques and methodologies for testing for and dealing with open, arrested and closed ^vMEMEs and for working within the spiral.

Most individuals and organizations exist in the first tier of ^vMEMEs. The ideal team leader can access the second tier. Being second tier, the leader can identify, recognize and value all of the

first tier ^vMEMEs and can adopt the appropriate first tier ^vMEME for the current circumstances. The Yellow ^vMEME merges hard sources and hunches. This ^vMEME has the ability to connect data across fields for a holistic view.

To demonstrate how a leader applies the Spiral Dynamics Theory for organizations and team members in the Red ^vMEME, the team leader establishes that the leader is straight talking and has the power. The leader will present many victories and successes in VA. The legendary potential of VA will be presented. The leader is to the point, unambiguous and strong.

Consider the consulting project manager who is convinced his project does not need value analysis. The VA team leader is regarded as a direct competitor and a potential threat to his client relationship. He is convinced the study is a waste of his time and diverts money from his budget that could be better used detailing his solution. He has solved the problem and told his designers what to do. He had personally value engineered the work adding value and cutting waste. The project manager is the Power leader of this Red ^vMEME design team. It is obvious during the Information phase that the designer's team is not prepared to answer without permission. At each question they looked to the design manager to let him answer or for guidance on how much to answer. The consultant may go so far as to withhold vital information at this phase only to reveal it to the client during the Presentation phase. The VA team leader recognizes the Red ^vMEME. He must be prepared to win a turf war in the Red ^vMEME or shift the designers to Blue ^vMEME. The shift will be discussed as the next example. In the Red ^vMEME he confronts the project manager and informs him that the VA will happen with or without the consultant's cooperation. The VA team is experienced and will document the manager's lack of cooperation and any information that is withheld. The VA Team leader presents his success not only in VA but in performing VA's for this client and asserts he will have a successful VA on this project.

For the Blue ^vMEME, the leader establishes rightful proper authority. The leader is a Certified Value Specialist. The leader explains that VA is a well-established process with a well-known methodology and rules. The leader appeals to tradition and established norms by presenting the history of VA.

Continuing the example above, rather than confronting the design manager in the Red ^vMEME, the VA team leader chooses to shift the design team to the Blue ^vMEME. This makes sense to the VA team leader. He will be performing additional VA's for this client and does not need vendettas. The team leader recognizes that he must appeal to duty and honor and also reconfirm the client's long history of VA and how it is the established way the client performs a project. He explains how the VA team and the design team are really only one team with the same mission and a strong commitment to make this the best project. After all, this is why we all got into engineering in the first place. Fully supporting the VA is the right thing to do and the client will select the consultant to do many more projects if this project goes well. In this approach the team leader appeals to the design manager's sense of duty to both employer and client.

For the Orange ^vMEME, the leader is the expert in the application of VA and is a credible professional. The leader demonstrates the increased value that the process reaps. Here the leader appeals to the competitiveness of the ^vMEME to make the project better.

For the Green ^vMEME, the leader must stress the outcome of participation and recognize consensual community norms. The leader must be sensitive to human issues and care for others. To build trust and openness the leader must use gentle language.

By recognizing the dominant ^vMEMEs operational in the client organization and in team members, the team leader has the opportunity to draw out the most productive aspects of each while avoiding roadblocks to performance. With minor modifications in style and language, a good team leader can reflect any of several ^vMEMEs. This may help lower the barriers to both the development of and acceptance of successful recommendations.

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