

Decision Making, Value Propositioning, and Project Failures - Reality and Responsibility

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Abstract

This paper outlines reasons for project failures and ties them to value proposition failures. It defines a value proposition as including both the proposed project deliverable values as well as the implementation processes that will assure value is delivered. It shows that an effective value proposition is not so much about the technology being proposed as it is about the problem and value perceptions of the Decision Makers who will sponsor a project; and that it is the project Champion's responsibility to learn the perceptions of decisions makers, and to carefully guide their education of problem issues and solution values...continuously. To this end the bulk of this paper presents two models of how Decision Makers form perceptions from value propositions. One model represents the psychological behavior of individuals as Decision Makers, and the other of group decision making behavior. Both draw from Nobel Prize winning research and show how misperception is the general rule, illuminating the issues that the Champion must address.

Introduction

Project failure can be defined under two basic categories:

1. A project that consumes resources but fails to deliver an acceptable ROI
 - the project is terminated before completion
 - needs cease to exist - the world changed unpredictably
 - necessary resources become insufficient or unavailable
 - decision makers have a change of heart or are replaced by one's who don't care
 - the project was ill defined so resources were inefficiently applied as it developed definition
 - the project was incorrectly defined, resulting in user rejection or insufficient value
2. A project that consumes resources but fails to deliver as proposed
 - the project exceeds budget
 - the project exceeds time
 - the project doesn't meet spec

Some may consider the second category as overly harsh, for in many such cases a completed project does materialize and deliver an acceptable ROI. Unfortunately, budgets and schedules that are exceeded impose costly consequences in other areas often unassociated with the project. Budget and time are scarce resources for any organization. What one project takes in excess resources postpones or cancels another, as a minimum. As a maximum, there is no limit to the damage that a late, overspent, or underperforming project can cause an organization.

Failure is in the eye of the beholder. A defense contractor that works for years on a cost-plus project may not consider it a failure just because the results are never put into service. Consultants that make studies and then recommendations may not consider it a failure just because the advice is ignored. An ERP provider that licenses software may not consider it a failure just because expected benefits do not materialize on time and on budget. After all, these activities did generate a successful income stream for the supplier. We will not dwell on these situations, other than to recognize that there are those who will redefine failure by ignoring responsibility.

We do recognize that some projects are knowingly speculative, with their outcomes unsure. Here the ROI has a strong component of learning and/or contingency. Whether they delivery results that are put into service or not, we consider them valuable.

On the surface, projects fail for a variety of reasons. In reality, all but the first in category one can be traced to bad decision making. In general, most bad decisions can be traced to a failure of value propositioning. Value propositioning is an interaction between Decision Maker and Project Champion. The Champion wields a value proposition in competition for approval, much like the Knight wields a sword defending a Lady's honor. In the Knight's competition,

the quality of the sword and the quality of the competitor are two independent factors. So it is with the Champion's competition.

The thing a Champion must accomplish is to win approval from those who control organizational priorities and strategy, those who commit funds and resources. This may mean an engineering project manager winning approval for an internal development project, an account manager seeking selection as an external supplier of products or services, or a business manager seeking budget, capital, or strategy approval. In all cases the process is fundamentally the same. They are all successful only to the extent that they can be effective Champions of the projects and services they want Decision Makers to value and select.

Where technology projects are concerned, there is too often no acceptance of responsibility for crafting effective value propositions. In some cases there seems instead a belief that technology stands naked for all to see and evaluate, needing only a guided tour of features and obvious benefits; and that an inappropriate evaluation is a fault of the evaluator and not of the Champion. In other cases, there seems instead a belief that simply meeting an RFQ's requirements is sufficient, even though they be inadequate or incomplete.

I will show that an effective value proposition is not so much about the technology being proposed, as it is about the problem and value perceptions of the decision makers who will choose a solution; and that it is the Champion's responsibility to learn the perceptions of decisions makers, and to carefully guide their education of problem issues and solution values...continuously.

Classic theory models decision making in optimal terms, maximizing utility with perfect information, objective evaluation, and computational omnipotence. In reality decisions are made by mere mortals, who are computationally challenged, confused by technology and ROI, and strongly influenced by personal interests, biased perceptions, and limited attention. We will review how decision makers in organizations actually make decisions, as opposed to how they ought to, or how we wish they would.

To this end the bulk of this paper presents two models of how Decision Makers form perceptions from value propositions. One model represents the psychological behavior of individuals as Decision Makers, and the other of group decision making behavior. Both show how misperception is the general rule, and illuminate the issues that the would-be effective Champion must address.

A word about the graphic models that are presented later is in order. Decision making behavior models are summarized with a graphic called a *concept map*. This is a particularly useful and clear representation of knowledge that Joseph Novak (see references section) developed and trademarked. Concept maps visually summarize the central ideas and their relationships in each section. They have a surprising ability to clarify the densest information-packed text, and to show in one illustration what takes many pages to explain in words. They don't usually convey full meaning, however, until after the text is first read, as they are somewhat like an outline. Concept maps follow simple rules: they are hierarchical, in that concepts lower in the diagram are refinements of concepts higher in the diagram; relationships are directed downward along connecting lines, as befits a hierarchy, unless an arrowhead is present to show differently; and one should be able to clearly read a meaningful thought when traversing connected concepts.

Value Propositioning

Value propositioning happens in all conversations that attempt to obtain a favorable decision among alternatives. Sometimes it is done by the Decision Champion who seeks the decision. Sometimes it is done by the Decision Maker who seeks an understanding. Regardless of whether one or both do it, three factors get in the way: human, decision-making, behavior. Decisions are always made in favor of the choice with the best value...*as perceived by the Decision Maker*. Perception is everything; but perceptions are formed independent of truth, accuracy, and the best intentions of all parties.

The process of value propositioning by a project Champion cannot begin until a problem is perceived by a Decision Maker, and does not result in approval until that Decision Maker perceives a sufficiently superior value to direct a choice. Thus, we see that the value propositioning process is enabled by the Decision Maker.

The Champion has only one channel for influence, and that is the value proposition. The Champion constructs the value proposition using skills applied to knowledge. This knowledge is the Champion's personal interpretation of information about the problem, the Decision Maker's context, the competition, and the solution being championed; and, most importantly, personal imagination of how information and competitive value propositioning is affecting the evolution of Decision Maker perceptions.

The Decision Maker's initial perceptions are personal interpretations of the problem and the decision making context. The process of value propositioning then adds perceptions of values, risk, and trust associated with perceptions of solution candidates, and augments the initial perception of the problem. All of this occurs as the Decision Maker interprets the value propositions offered by each of the competitors.

From this it is clear that a Champion's value proposition does not speak for itself, anymore than the Champion's solution speaks for itself. The Champion's solution, as perceived by the Decision Maker, is an interpretation of an interpretation, both constrained and filtered sequentially by the knowledge and ability of the interpreter. A value proposition does not speak for itself either, because the perceptions it hopes to cause evolve continuously as competitive value propositions cause new interpretations.

Value propositioning is not a discrete event, but rather a dynamic process that is anticipated and managed by the effective Champion, and must continue even after a favorable decision is obtained.

Individual Behavior in Decision Making

Gaining a favorable decision requires an interaction with Decision Makers that results in them having a favorable set of perceptions. This is a direct result of the Decision Maker's interpretation of the value proposition. The value proposition is a communication. As a communication, it is subject to miscommunication, possibly due to poor communication on the Champion's part, and definitely due to inherent human nature that filters and biases the perceptions obtained from the communication.

Later we will explore the behavior of groups as Decisions Makers. Now we look at the behavior of individuals as Decision Makers. These are not independent perspectives, however, as individuals in groups bring their decision making behavior with them.

How individuals make choices when offered alternatives has been shown to differ considerably from objective, optimal reasoning. Theories attempting to model what really happens abound, but one stands above all others in acceptance, principally for its coherence and its ability to predict actual behavior. *Prospect Theory*, as it is known, was developed by Daniel Kahneman, who shared the 2002 Nobel prize in economics for his effort.

This discussion of individual decision making is my adaptation of Kahneman's work, principally based on the research he and Amos Tversky report on in their impressive collection of papers published as *Choices, Values, and Frames* [1].

Value propositions generally attempt to show multiple benefits, each stemming from some feature inherent in the solution, and each promising to deliver some desirable value. Decision Makers, especially experienced ones, perceive value propositions as legitimate attempts on the part of a Champion to persuade, and so they hear each promised benefit with a bit of healthy skepticism. Subjectively they associate with each claimed benefit some uncertainty, or probability, of the likelihood that it will deliver as promised. Not because they disbelieve the Champion, but rather because they know from experience that honest claims assume ideal conditions of implementation, transfer, and acceptance. Such conditions are rarely itemized, and are unlikely to exist in any event. This historical record results in a Decision Maker assessing each claim with some subjective probability of likelihood.

The discussion will now explore ten behavioral results that stem from five psychological mechanisms which influence how Decision Makers arrive at valuation. Four of these behavioral results are associated with the weighting of probabilities, where the Decision Maker deviates plus or minus from some neutral assumption of the probability that a claim will be realized.

Valuation is knowledge dependant. A Decision Maker knowledgeable in the area of a benefit claim is likely to overweight the probability that it can deliver as promised, assuming that the knowledge is in agreement with the claim. Conversely, when little or no knowledge is present, the claim is likely to be underweighted.

Valuation is simplified. Various kinds of simplification are actively employed to reduce the complexity of evaluation and decision making. One standard procedure is to eliminate any claims deemed insignificant from further consideration. A claim may be deemed insignificant because its ability to deliver is considered highly unlikely; perhaps because it appears culturally or politically incompatible. A claim may also be considered insignificant because it simply is not appreciated as something to be desired; often for good reason, but sometimes due to an insufficient understanding. Another typical simplification is the chunking of probabilities. A subjective assumption of the probability that a claim will deliver is unlikely to be fine grained. It is more likely that round numbers like 90% or 75% or 50% would be the assumption than 87.2%, for instance.

Valuation is relative. The status quo typically establishes the neutral point for measuring value. Thus, a cost-reduction benefit is generally valued for the amount saved, independent of the total amount of cost, unless the amount is dismissed as insignificant. Likewise, new capability, increased productivity, faster response, better quality, and other such benefits are measured relative to a reference point.

The reference point is not, however, always the status quo, nor always a fixed point throughout a decision making process. Sometimes the reference point is based on expectations, hopes, or what is believed possible. A Decision Maker seeking a specific performance objective will not value something that gets halfway there, even though it is twice as good as the status quo provides. Decision Makers seeking a reduction in some undesired quality, such as security risk,

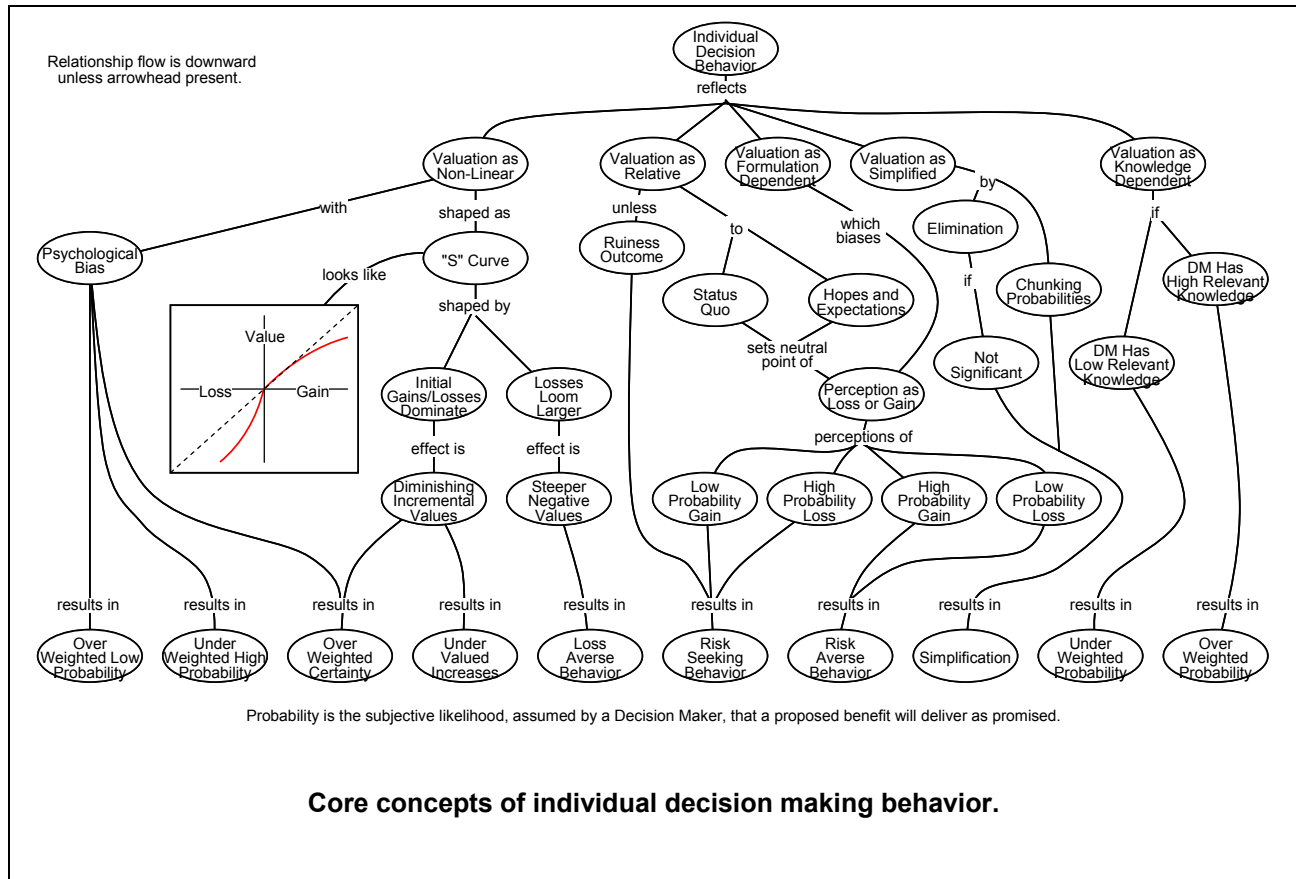
will recognize relative value for any solution that accomplishes that, until they learn it is possible to eliminate the risk completely.

Typically a candidate solution is measured against multiple objectives, and the valuation for each is rolled up into a representative total Value. Frequently a solution cannot offer positive gains on all objectives. One solution may offer gains in ease of use and speed of response, but with a loss of a familiar but marginally necessary capability present in the status quo. Another may offer twice the performance of the reference point but cost twice as much as well. These valuation measurements are all viewed as gains and losses relative to the reference point.

Decision Makers are not, strictly by nature, either risk averse or risk seeking, as is often believed, but change behavior depending upon the options that face them. For example: A company that has decided to choose an integrated ERP system to replace a collection of poorly integrated independent applications is likely to find that it must give up some previously valued functionality. Quite possibly all candidate solutions will be unable to meet some specific capability satisfactorily. Under these circumstances Decision Makers are more likely to consider otherwise marginal solutions that will provide the desired capability, even though there may be some higher risk associated with such a choice. This is the case where a high probability of loss creates a tendency for risk seeking behavior. Risk seeking behavior also surfaces when the situation shows low probability of gains, as when all solution candidates for an ERP system agree to develop custom code for a missing desired feature, but all have a track record for failing to deliver custom code on time. Risky solutions are also more acceptable when a problem has terminal implications, such as operating costs that will guarantee bankruptcy or product costs that spell market loss.

Conversely, risk averse behavior is exhibited when a low probability loss is perceived, such as when an engineering project cannot guarantee that it will meet some specific performance mark, but the likelihood of missing it is fairly low. Under these conditions Decision Makers are not going to take a risk on some otherwise wild alternative just because it looks solid on that one desire. Risk averse behavior is also seen with high probability gains, as in why take a risk if it looks pretty safe that desires will be met by going down the safer path?

Valuation is formulation dependant. Describing the same claim in different words and concepts can change the perception of loss or gain. Decision research shows that couching loss-mitigating expenses as insurance can turn a loss



perception into a gain perception. That there are differing perceptions of loss and gain is evident when a value proposition features the elimination of jobs, which may be viewed by some Decision Makers as a gain and by others as a loss. Formulation effects are also evident in the order of presentation. Decision research shows the when concepts which establish a certain perspective are presented in series, one or a few that follow a strong one can ride the established psychological context.

Valuation is non-linear. Initial increments of gain are valued higher than subsequent increments. People value the addition of \$100 to a wallet with \$100 already in it more so than the addition of \$100 to a wallet already containing \$1000. We value a 100% gain more than we value a 10% gain, even though the increment is identical, and generally we will pay more for the one than the other. Losses reflect the same diminishing return shape. Losing \$100 from a \$1000 wallet is not felt nearly as badly as losing \$100 from a \$200 wallet. This diminishing of value results in undervaluing incremental increases of gain. Reducing an uncertainty or risk from 10% to zero is a lot more valuable than reducing it from 25% to 15%. People value the elimination of uncertainty over simply reducing it, even when the amounts are equal. This is called the certainty effect, which appears to have an even stronger push from underlying psychology than just from the diminishing returns of the loss-value function.

Diminishing losses are not symmetric with diminishing gains. "Losses loom larger than gains", the decision researchers affirm for us. One implication of this important distinction is that a gain and loss of equal value are not perceived as offsetting. Unless under mandate to reduce headcount, losing 12 people because technology can save their salaries is not typically considered an even deal by many real Decision Makers, in my observation. Another implication: Things we own appear to have higher value than we are willing to pay to re-acquire them. This is called the endowment effect, and its classic example is the person unwilling to part with a special bottle of fine wine when offered \$200 for it, but equally unwilling to buy the same bottle for \$100. This faster decline of loss value, as compared to increase of gain value, accounts for the generally observed loss averse behavior people exhibit.

Group Behavior in Decision Making

Herb Simon was awarded a Nobel prize in Economic Sciences in 1978 for his work that founded the field of behavioral economics. His concepts of "bounded rationality" broke from the classical notion that business decisions are made under optimal conditions and strive for optimal results. These concepts are described in his book *Administrative Behavior* [2], which the Nobel committee called epoch-making, and form the basis for both Kahneman and Tversky's work on individual decision-making behavior just discussed, and for the "important work", according to Simon, of Richard Cyert and James March, published as *A Behavioral Theory of the Firm* [3].

Cyert and March offer that "...the firm is, in fact, a coalition of participants with disparate demands, changing foci of attention, and limited ability to attend to all organizational problems simultaneously." They note that coalitions have inherent conflicts which remain unresolved, power politics and positions that often exert disproportionate influence, goals that might be ambiguously stated purposely to restrict knowledge of true intent, and other group-induced behavior that force departure from optimized, objective decision making. A coalition is of course a group of individuals, each of which brings to the party the misperception mechanisms and biased individual behaviors already discussed.

Three processes are of interest: objective setting, perception creation, and choice. In all three the nature of the problem perception plays an important foundation role. Before looking at these three processes, we will review six embedded concepts that deserve separate note: candidate solution search, organizational slack, acceptable level rules, unresolved conflict, attention focus, and "satisficing". The behavioral model presented here is my adaptation of Simon's, and Cyert and March's work to the subject of value propositioning.

Satisficing, in Simon's words, is the essence of what he calls bounded rationality: "Administrative theory is peculiarly the theory of intended and bounded rationality - the behavior of human beings who *satisfice* because they have not the wits to *maximize*." Under ideal conditions in an ideal world Decision Makers are supposed to find and examine all possible solutions, maximizing the value obtained by selecting the best from among all those available. In reality, where time and attention are scarce resources, and complexity rules, the Decision Maker "...looks for a course of action that is satisfactory, or 'good enough'....Because administrators *satisfice* rather than *maximize*, they can choose without first examining all possible alternatives and without ascertaining that these *are* in fact all the alternatives. Because they treat the world as rather empty and ignore the interrelatedness of all things (so stupefying to thought and action), they can make their decisions with relatively simple rules of thumb that do not make impossible demands upon their capacity for thought. Simplification may lead to error, but there is no realistic alternative in the face of the limits on human knowledge and reasoning."

Attention focus is limited for Decision Makers. Generally all have other ongoing duties with daily deadlines and surprises which compete for attention. On top of this is the shear complexity and impossibility of trying to anticipate all of the unintended consequences that will ensue from any decision. When limited available attention is directed at the

decision making process, it is focused where personal urgency is felt. This gives priority to a manageable subset of issues.

Unresolved conflict is a natural artifact of modern organizations. The separation of responsibilities and objectives in a hierarchical structure pits different sub-groups in competition for resources and strategic focus. Conflict is mitigated in coalitions through a variety of means, some natural and some imposed. Natural means are principally the result of limited attention focus. Some participants have immediate interests so sharp that longer term conflicts are ignored or unseen. Imposed means have two forms of interest to us. First, objectives that may conflict across functions are prioritized in sequence. For instance, a production objective may require satisfaction before a marketing objective is given priority, or even considered in the evaluation process. Second, the organization requires that decisions made by the coalition observe acceptable level rules, discussed next.

Acceptable level rules, Cyert and March tell us, circumvent conflicts that would otherwise deadlock a coalition or disenfranchise some participants. Basically they "...require that local decisions satisfying local demands made by a series of independent decision centers result in a joint solution that satisfies all demands." They observe that one impact of this rule is the lowest common denominator effect. Satisfying *all* demands is possible, as they note that if no solution alternative can accomplish this, then either the coalition will find some more candidates to consider, or they will relax or eliminate demands to find a common acceptable level for all participants.

Organizational slack refers to the operating efficiency, or leanness, of an organization at a specific point in time. When times are bad and downsizing has run its course, for instance, slack is at a minimum or non-existent. Under these conditions decision mistakes that waste time or squander resources can be very costly, perhaps unrecoverable. Decision Makers are very wary and highly risk averse, and more inclined to search harder for strong solutions. In good times when cash is not a scarce resource, when general market growth is strong, or when competitive advantage enjoys strong market acceptance, organizational slack increases. Under these conditions risks with interesting reward potential can be viewed favorably, and satisficing is quicker to settle for acceptable solutions.

Search is the activity that identifies and selects candidate solutions for consideration. Satisficing behavior tends to limit search activity initially to a small number of candidates. Search is influenced by three factors: the current amount of organizational slack, who is in charge of the search, and, importantly, a tendency to look for candidates that are similar in nature to the existing unsatisfactory solution or to the perception of the problem. Thus, when an existing product becomes inadequate for the market, a company will tend to look purposely for projects that promise a superior featured version rather than something completely different that would obsolete the product concept. There is an inclination to stay inside the box unless adequate solutions cannot be found. Unless, of course, the person in charge of the search process is an out-of-box thinker by nature, or for some other reason feels a more radical approach has compelling value. In any event, the person or sub-group in charge of the search has a dominant influence on which candidates will be considered. The final influence is organizational slack. When high, there are excess resources available to spend more time looking for more candidates. Satisficing will often counter this effect. Since high slack reduces the pressure to find an optimal fit, search may end when the first candidate is found that appears to meet all of the objectives.

The *objective setting process* typically begins in advance of solution search activity. It is not an isolated event in sequence, however, and evolves as perception creation evolves, and as membership in the coalition changes. Objective setting, in the sense of what must be addressed by a solution, has two parts: identifying the nature of individual objectives and establishing the performance level for each.

The list of objectives is principally influenced by two factors: the Decision Makers in the coalition, and their individual objectives. Individual coalition members exert personal preference in setting objectives. If coalition membership changes before a final choice is made, it is quite possible that objectives can change as well.

The performance targets set for each goal are influenced principally by three things: past objectives, performance attained on those past objectives, and performance attained by other organizations on similar objectives. The roots of performance targets are sunk in the organizational learning that occurs from prior shared experience and observation, and is often unspoken context that the skilled Champion will seek.

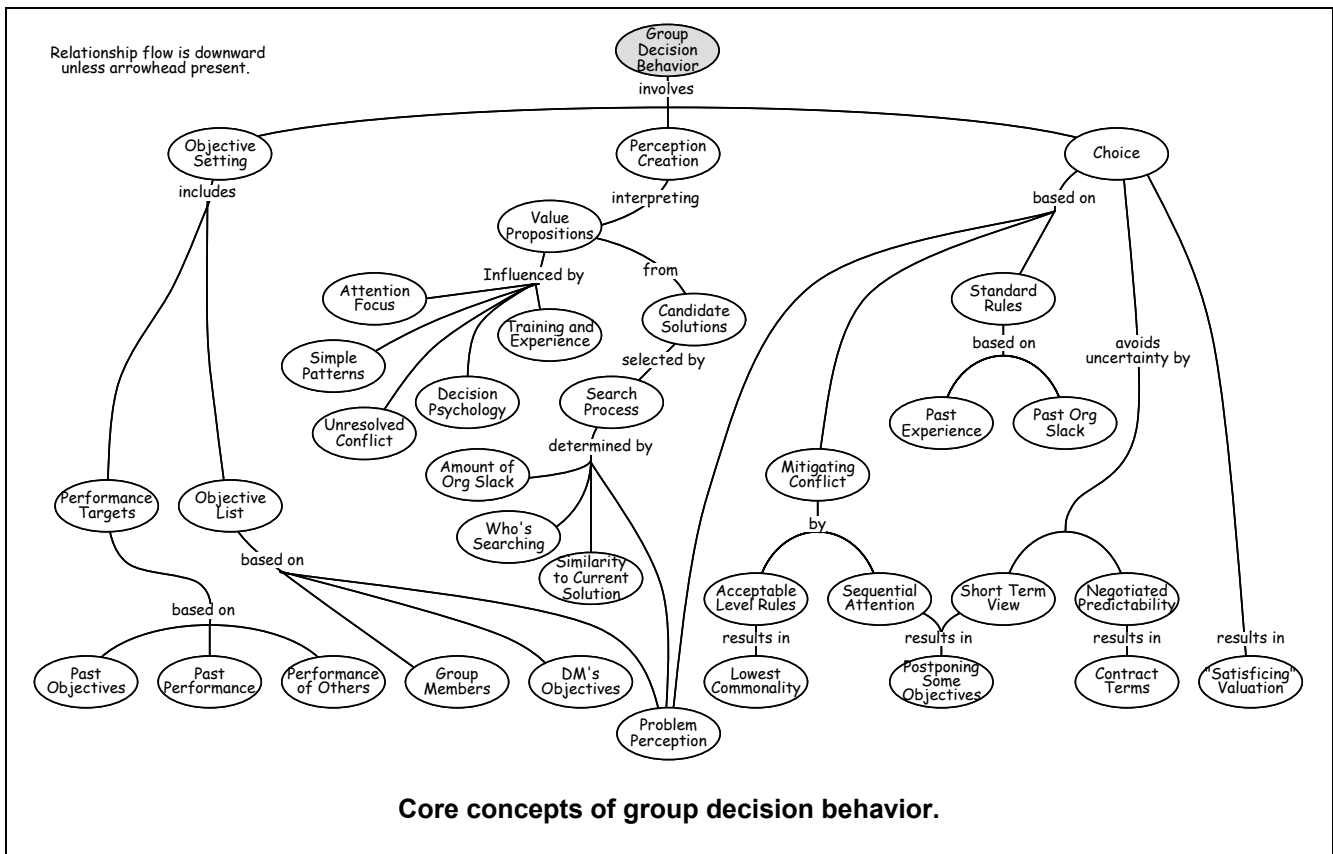
The perception creation process, as seen previously, is an interpretation of value propositions. These value propositions are related to a specific pool of solution candidates generated from the search activity discussed above, and are influenced by five sources of bias worth noting: prior training-and-experience, unresolved conflict, attention focus, decision psychology, and simple patterns. We've discussed the nature and effects of attention focus and unresolved conflict above. Decision psychology was the subject of individual decision making behavior discussed previously. That leaves simple patterns and training-and-experience remaining for discussion.

Simple patterns for developing valuation are the general rule, for two reasons. Firstly, accurate ROI comparisons are difficult to compute and subject to disagreement, so simply being affordable and clearly addressing the problem with improvement appear to be stronger influences. Secondly, though some argue that all things can be translated into costs, accomplishing this for all criteria is awkward and subject to disagreement, so settling on a small number (six plus or minus) of mainly independent objectives is frequently observed.

Training and experience, of course, form the initial knowledge base that any Decision Maker starts with. Perceptions build upon this foundation only when new information is closely related to what is already known, facilitating incremental knowledge growth. Someone from finance participating in a decision for a CRM (Customer Relationship Management) system, for instance, is likely to understand a sales-cost analysis much more readily than the features that improve personal interactions between customer and salesperson.

The choice process is the group's mechanism for selecting the final choice among alternatives. Typically this follows rules standardized by the organization. These standard rules determine how candidates are scored against objectives addressing the problem perception. They are based on the organization's past experience in scoring decision alternatives, and consequently often reflect the organizational slack in the past when the rules were established. If they were established when slack was high, they are likely to be less risk sensitive than otherwise. If not, uncertainty may play a dominant role. In any event, organizational choice prefers to avoid uncertainty rather than carry it into the scoring process, when possible.

Uncertainty is avoided either by negotiating predictability with the winner, or by recasting the objectives for a shorter term solution that has sufficient predictability. If the decision choice involves an outside party, such as a product vendor, predictability is typically obtained with contract terms that guarantee results or extract a compensating penalty.



If the decision involves inside projects, other funded projects may be required to compensate, if necessary. Where uncertainty is caused by an inability to see far enough into the future, objectives will likely be scaled back to fit within a shorter period of time.

Choice requires that the unresolved conflict inherent to decision-making groups be mitigated. As we saw earlier, this can also modify objectives, where compromise is made until all Decision Makers find acceptable common ground. Of course in any such group there are politics at work, and there are some Decision Makers with more say than others, and some who dominantly influence others.

Through it all, satisficing reigns. The group will search for an acceptable solution and be happy to make a decision once one is found. Faced with multiple acceptable solutions, the best among them will be desired, but not necessarily discovered. Instead, simplification will be employed to make the decision process manageable. In a strong satisficing situation, the order that candidates are considered will have a major effect on outcome, for the first one that meets acceptable criteria is quite likely to trigger a decision and end the process.

Conclusion

On the surface this paper speaks directly to Decision Champions, as opposed to Decision Makers. A Decision Champion is that person seeking a favorable decision, and therefore responsible for making an effective value proposition. I cast the Champion as the active party and the Decision Maker as the passive party. Not because this always is, or should be, the case; but rather that the Champion is typically in competition to show better value than all other acceptable alternatives. I am tempted to say that the Champion therefore has more to lose if value is not perceived in its best light. But of course this is not true - all parties have a lot to lose.

Nevertheless, the effective Champion must address and influence the perceptions of all Decision Makers, from the time of proposal through to final project completion. Decision Makers forget why they made a decision, new Decision Makers enter the process and old ones leave, new developments and priorities dominate thought and cloud old decisions, and sometimes a dominant Decision Maker receives initial acquiescence from others who simply wait for his departure.

A complete value proposition addresses delivered value, not potential or wishful value. As such, it addresses both the project deliverables as well as the processes and commitments that assure delivery, and continues as an ongoing activity until the project is completed.

Projects fail because value propositions are incomplete, incorrect, miscommunicated, misperceived, misdirected, or become obsolete. With the exception of the later, the former are all the responsibility of the Champion, and rely principally on skills of learning and educating, exercised with diligence and persistence.

Learning skills are required to understand completeness and correctness as entry level knowledge necessary to play the role of effective Champion. Continuous learning in real-time, throughout the entire process of value propositioning, is necessary to sense a Decision Maker's perception evolution, and to sense the entry of new Decision Makers during the process.

Education skills are required to avoid miscommunication, correct misperception, and effectively develop correct perception. Learning theory has much to say about effective means for incrementally developing perception at both ends of the educating-learning vector, but a complete discussion is beyond the scope of this paper. The interested reader is directed to the work of Daniel Ausubel [4,5] and Joseph Novak [6,7], and to my book [8] that places all of this in the context of value propositioning.

Rote learning is something most of us are familiar with from early schooling, when we memorized multiplication tables, dates of historical events, or poetry of no personal interest. Unless one is gifted with a photographic memory, this type of learning generally relies on dull repetition. In contrast, what Ausubel calls *meaningful learning*, relies on associating some new piece of knowledge with something already known. The closer the association to what is already known, the more effective the learning. It is this association that provides meaningful linkage between new knowledge and prior knowledge.

Ausubel notes: "If I had to reduce all of educational psychology to just one principle, I would say this: The most important single factor influencing learning is what the learner already knows. Ascertain this and teach him accordingly." In addition to closely related prior knowledge, he also believes two other factors are necessary for meaningful learning: the learner must believe that learning the material will provide some value, and the learner must want to learn the material. These three conditions are not automatically present when a Champion addresses a Decision Maker. From my experience, one or all of these necessary conditions is missing far more often than not. If that means the Champion must rely on rote learning to have the many points of the value proposition remembered at valuation time, repetition repetition repetition would seem in order. Unfortunately this is not an option, as rote learning in this case is not a substitute for meaningful learning. Though the Decision Maker may well remember the irritating insistence

of certain claims, if these claims are not tied into related prior personal knowledge they float unsupported with no basis for belief.

To explain the mechanisms of learning Ausubel relies on a cognitive model of how knowledge is structured internally in our minds. It is suggested that our ability to know things arises from an ability to represent concepts in neural structures, and to relate these concepts to each other in some meaningful association. For instance, at an early age we develop a concept of living things and another for non-living things. At some point we develop a concept for pets, like the family dog and cat, which is different than the concept we have for people. But we associate both people and pets to the concept of living things rather than to the concept of non-living things. The first association we develop between living things and people may be simply that they interact with us, whereas the non-living play toy in the crib does not. This association and the two concepts it connects is meaningful because it can be acted upon. Either concept may exist without any association to another, but they are meaningless in isolation. As life progresses we develop large structures of concepts and associations that model the world as we know it. Assimilating new knowledge occurs when a new concept is associated with some concept we already possess, such as the concept of a crying noise associated with people as attention-getting. New knowledge also develops when new associations are made between existing concepts, such as additional variations on attention-getting, like hunger is alleviated by people when a crying noise is made. Hunger is likely one of the many initial hard wired concepts that form the seed foundation for all subsequent associations to new concepts.

Novak has made this concept-association model of knowledge explicit, with an external visual representation he calls *concept maps*, a term he has trade marked. His purpose was to provide a tool that can help people skillfully improve the learning process, either in others when they engage in teaching, or in themselves when they engage in learning. Both are pivotal skills for the effective Champion.

Two concept maps have been used in this paper to visually summarize the central ideas. Partly this is done because it is known that many people are better as visual learners than as verbal or textual learners; partly because otherwise dense textual information becomes transparent in graphic form; partly because it is a succinct way to summarize the key points; and partly, hopefully, because their usefulness as tools for both learning and educating has been self-discovered and appreciated.

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Author Bio

Rick Dove is a recognized thought leader and change agent for agile enterprise and agile systems of all kinds. He co-led the seminal effort that defined agility in the early nineties as the survival need of the new millennium. He subsequently organized and led the Agility Forum's industry-collaborative work that identified and defined concepts and principles for achieving agility in all aspects of enterprise. He's developed and managed deployment of agile enterprise business processes and IT infrastructure. He is a prolific writer and frequent speaker on the subject, and the author of Response Ability: The Language, Structure, and Culture of The Agile Enterprise (Wiley 2001) and Value Propositioning - Perception and Misperception in Decision Making (Icen Books 2005).