GROUP DECISION MAKING: DRAWING OUT AND RECONCILING DIFFERENCES

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ABSTRACT

Why is group decision making so important today? In our increasingly complex environment, decision making becomes more and more challenging for leaders and practitioners. Working in groups appears to be the norm because the alignment of visions and actions are critical for an organization. A leader or a group facilitator needs a supporting system to make collective thinking effective. The book, *Group Decision Making: Drawing out and Reconciling Differences*, written by Thomas Saaty and myself shows that the AHP is the scientific approach for supporting group processes in the current and future complex environment (Saaty & Peniwati, 2008).

Keyword: AHP; group decision making; facilitating decisions

1. Introduction

Globalization breaks down geographical and cultural human-made boundaries which creates opportunities as well as risks for those affected. Global Challenges for Humanity expresses these challenged when it asks the question, "How can decision making be enhanced by integrating improved global foresight during unprecedented accelerating change?" Under these conditions of global complexity and interdependence, it is almost impossible for decision makers to gather and understand the information required to make and implement coherent policy. At the same time, the consequences of incoherent policies are so serious. Dealing with the uncertainty, unpredictability, ambiguity and surprise in the environment, together with the need to synthesize collective knowledge and ideas, it is quite challenging even for competent leaders or group facilitators. They need a simple support system that works.

2. General remarks

Complex problem solving remains the most important of the top 10 skills for the future as reported by the Montreal Gazette, which also lists critical thinking, creativity, coordinating with others, and judgment and decision making among the top 7(Montreal Gazette, 2016). Creativity, which implies learning competence, emerges as a new item in the top 10 list of future skills. Edward de Bono, the world's leading authority in conceptual thinking, maintains that other than the judgment type of thinking to answer

the usual question of 'what is', we also need the design type of 'what is possible' questions (de Bono, 1990).

Design thinking with a positive mindset appears to be increasingly needed in this new millennium. It is the creative decision-making process that focuses more on an organization's strengths to capture opportunity offered by the environment. In business, it is the attempt to match people's needs with what is technologically feasible, and how a viable business strategy can convert into customer value and market opportunity. AHP shows such a capability, for example, in its unique forward-backward planning approach. It enables us to use our knowledge and technology to design better ways forward.

AHP/ANP is arguably the only scientifically based decision making approach that has been widely applied by organizations and companies around the world. For example, IBM Rochester used the AHP for benchmarking with other best-of-breed companies, leading to its winning the Malcolm Baldridge Award (The Silverlake Project, 1992; Eyrich, 1991). Martin Marietta Air Traffic Systems used the AHP to evaluate alternative architectures for a communication system for the Federal Aviation Administration (FAA), involving 30 experts representing many divisions and regions of the organization (The Silverlake Project, 1992; Eyrich, 1991). The Cooperative Fish and Wildlife Research Unit of the Alaska Department of Fish and Game applied the AHP to the management of the recreational fishery, being complicated by the conflicting objectives of multiple stakeholders (Bristol Bay, 2005).

The role of the AHP can be increasingly significant in the future. The AHP's new fundamental scale removes the general impossibility of rational ordinal aggregation of Arrow in his Nobel winning theory (Arrow, 1951). The new scale also makes AHP applicable to problems with a high level of complexity. AHP structures represent either a tacit understanding of a problem, or are the outcome of design thinking such as in strategy formulation or architectural design. The analytical planning of the AHP offers a unique approach to integrate looking forward (projecting the future) and looking backward (designing strategy). In a choice problem, the creative identification of new alternatives can make the difference between a mediocre and an excellent decision.

The body of AHP knowledge includes requirements and suggestions for eliciting and synthesizing diverse collective knowledge and ideas. It requires mastery in group facilitating. For example, it requires knowledge of the selection of group members and knowing whether or not smaller groups need to be formed and assigned different parts of the AHP structure. It is important to make a distinction between high-level decision makers that will judge the relative importance of criteria and experts that will evaluate and judge relative preference for alternatives with respect to the criteria. A group judgment can be meaningful only if it is an aggregation of homogeneous judgments, hence significant differences would need to be discussed by the group and brought into alignment first. Here, AHP's compatibility measure that can be used to determine how far apart two priority vectors are would be useful. The challenge in applying AHP in group decision making is striving for group coherence, making a group think like an individual and dealing with complacency as well. Fortunately, AHP does not need total perfection to produce a reasonably valid outcome; it simply asks for an acceptable level of accuracy and consistency. A group, in working to align the thinking of its members

with AHP, could improve everyone's cognitive flexibility, which is one of the top ten future skills needed (Montreal Gazette, 2016). Facilitating a group to get them to think together is an important skill to have because organizations need to mobilize their members to carry out the coordinated actions that will be necessary to make their common larger vision a reality. The AHP/ANP offers an approach that can help a group facilitator design and systematically apply a set of techniques to stimulate an effective group process.

The AHP/ANP is a paradigm shifting theory because of its approach to measuring priority. Its use by people who master the AHP/ANP and have group facilitating skills would enable them to strive for highly contextual global policies. Academics could design prototype AHP studies to inspire, promote, and support leaders and practitioners to implement them in their own real situations.

3. Summary

The book, *Group Decision Making: Drawing out and Reconciling Differences*, offers an overall reference to use for AHP/ANP and for group decision making in general. Writing it grew my interest in growing my competence in designing and facilitating collective thinking processes for a variety of contexts and purposes. It inspired me to broaden and enrich my personal knowledge and mastery. I see AHP as the trigger and the means for my personal growth.

Key contents of the book:

1. It explains the need for AHP, with its structured approach, to be able to deal with complexities (both external and internal) as well as interdependence of factors which is often underestimated in decision making. It suggests how to introduce AHP to an organization, and how to ensure a valid and useful outcome.
2. The AHP concepts are covered in depth including its fundamental breakthrough idea of a new kind of scale, an absolute relative ratio scale, it's use in making tacit comparisons (with validation examples), and its consistency measure for determining the coherence of the individual decision makers. Explanations of key issues such as rank preservation and reversal as well as dispersion of individual judgments in a group are covered. The generalization from AHP to ANP and from discrete to continuous functions are explained. There is an explanation about what the consistency index indicates, showing that seven elements is the best cut off for the number of elements to be compared to ensure that the answer will be sensitive enough to ferret out which are the inconsistent judgments. It is assumed that the readers are familiar with the axioms of the AHP and their implications when applying it.
3. There are examples of a wide range of AHP applications from simple to complex problems, including its sophisticated approach for conflict resolution and the use of the Benefits-Opportunities-Costs-Risks (BOCR) framework. One AHP application that deserves a book of its own to explain is the unique approach of Analytical Planning (forward-backward planning).The Silverlake Project, a sophisticated application by IBM, shows how a series of interdependent AHP models was constructed then used to allocate resources for the thousands of items needed for its

new AS400 computer, which went on to become one of the most acclaimed computers of its day.

4. There are comprehensive ideas and recommendations for applying AHP in group decision making, not only about how to prevent number crunching by aggregating judgments the right way, but also about how to organize individuals in a group to ensure a satisfactory group outcome. Specifically, the formal approach for aggregating individual judgments into a representative group judgment is explained in detail along with tips on how to use the inconsistency measures as the indicator to find and reconcile differences among the members of the group.

REFERENCES

Arrow, K. J. (1951). *Social choice and individual values*. New York: John Wiley & Sons. Doi: https://doi.org/10.1007/978-3-531-90400-9_6

Bristol Bay Chignik Planning Workgroup, (2005). Strategic plan for the subsistence fisheries resource monitoring program, Southwest Region, Bristol Bay and Chignik areas, Office of Subsistence Management, Fisheries Information Services Division, Anchorage, Alaska.

De Bono, E. (1990). *New thinking for the new millennium*. UK: Penguin Books, Limited. Doi: https://doi.org/10.1016/S0024-6301(99)00110-7

Eyrich, H.G., (1994). Benchmarking to become the best of breed, *Manufacturing Systems, 9(4),* 40-47.

Montreal Gazette, (2016, Jan. 20). The top 10 job skills for the future, 2020 to be exact. *Montreal Gazette* Retrieved from http://montrealgazette.com/storyline/the-top-10-job-skills-for-the-future-2020-to-be-exact

Saaty, T. L., & Peniwati, K. (2008). Group decision making: drawing out and reconciling differences. Pittsburgh, PA: RWS Publications.

The Silverlake Project - Transformation at IBM, (1992). New York, NY: Oxford University Press.

Book available as an ebook from:
https://www.amazon.com/s/ref=nb_sb_noss/131-6172906-3394917?url=search-alias%3Daps&field-keywords=Group+Decision+Making%3A+Drawing+out+and+reconcilinig+differences