Groupthink and the Ladder of Inference: Increasing Effective Decision Making

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ABSTRACT

This paper describes the historical context of how individuals form opinions or inferences, especially focusing on the ladder of inference as a theoretical framework, and as a tool for communication and effective decision making. After discussing the seminal theories that led to the development of the Ladder of Inference, the authors use the conceptual framework to illustrate how homogenous “inferences” can limit societal interaction that reinforce groupthink and leads to ineffective decision making. The authors describe the concept of “traveling on the ladder,” or intentionally linking the bottom of the ladder (data) with the upper portions of the ladder (inference), concluding that the ladder of inference can be used as a tool to increase communication, credibility, influence, and good decision making by executives and managers.

INTRODUCTION

Despite years of research and books that show that dialogue and systems thinking is good and groupthink is bad for organizational effectiveness (Senge, 1994), the opposite behaviors continue to persist. People continue to make assumptions, avoid difficult conversations, and avoid discussions with people who see things differently than they do.

This paper discusses the history and framework of opinion-forming theory and uses the framework to explain how like-minded individuals group together to make sense of their environment (Weick, 1969, 1993, 1996) and hold fast to their beliefs. One such opinion-forming theory is the ladder of inference, which is a robust framework that not only helps explain social phenomena, but can also be used as a tool to improve credibility and influence when used consciously to move between data and inference linking words and concepts to perceived meanings. Therefore, learning to “travel” the ladder effectively can result in positive individual and organizational outcomes by the clarification of meaning attributed to them and by them. The ladder itself is not a tool for communication, but what can be learned from the model about how people form opinions, can in turn be applied to improve communication and critical thinking.

History of Opinion-Forming Models

The earliest research on opinion-formation came from Charles Sanders Peirce (1839-1914), an American philosopher and mathematician who, in his 1887 article, “The Fixation of Belief,” first introduced the process by which he observed individuals coming to hold beliefs and opinions. Taylor summed up Peirce’s perspective that “what matters most are the consequences that follow from an idea, as distinguished from the idea itself” (Taylor 2002).

Similarly, S.I. Hayakawa (1941) wrote about an “abstraction ladder,” in which individuals make sense of the world by constantly abstracting ideas, and that the process of leaving out details and characteristics is an “indispensable convenience” (S.I. Hayakawa. Language in Thought and Action.
Harcourt Brace Jovahovich, Inc. New York 1941). Texas A & M’s Edward Smith built on Hayakawa’s work, positing that it is more convenient for people to think and act in generalized terms than it is for them to distinguish between specific details of data originally presented: “It is, in fact, easier to think and say ‘house’ than to drop lower on the ladder and have to distinguish between a cabin, cottage, or bungalow” (Smith, 1982).

With Peirce’s and Hayakawa’s work as forerunners, Rick Ross (Senge, et al, 1994) described a process in which beliefs are formed and action is taken. He represented this process as a visual model of a “ladder” that can also be used to guide or track that process. See Figure 1. The Ladder of Inference was made somewhat recognizable with its inclusion in Peter Senge, et al, Fifth Discipline Field Book (1994). But Ross’s ladder also graphically incorporates Chris Argyris’s (1976) notion of how individual assumptions naturally develop into beliefs and actions and establishes that, without testing those assumptions, beliefs and actions can limit opportunities for growth. This, Argyris would argue, is detrimental to organizational learning and development, eventually limiting organizations and the human potential of those individuals living and working within them. (Argyris, 1976)

![Figure 1: Ladder of Inference](image)

**Ignorance may be Bliss, but it’s also Groupthink**

Because people make meaning of data by organizing their unique observations, culture and experience into making sense of the world, the data they select serves to strengthen the binding beliefs at
the top of the ladder when perceived similarities are shared between individuals. As a result of this process, like-minded individuals sharing beliefs and actions at the top of the ladder often organize socially around those similarities in worldviews, ideologies and activities. This notion is supported by Karl Weick’s (1969, 1993, 1996) research of sensemaking as “a social pursuit that is concerned with how interdependent actors deal with ambiguity, search for meaning, settle on something that is plausible and move on” (Brown, 2008).

Individuals also engage in this process in retrospect to knit cognitive maps together, providing order and meaning to a perceived shared experience. They may travel down the ladder to verify shared assumptions and verify similar interpretations of data at the bottom of the ladder. “It is…like the drafting and redrafting of an emerging story so that it becomes more comprehensive, incorporates more of the observed data, and is more resilient in the face of criticism” (Weick et al., 2005. p. 415). However, there may not be much energy expended in verifying data with original sources or outside perspectives. In this way, individuals may organize their individual “ladders” around common beliefs or actions with others’ ladders that they perceive to interpret the world in similar ways. The end result is a collection of people sharing beliefs that reinforce both their collective interpretation of data at the bottom of the ladder and their organized actions at the top. An example was the creation in 2008 of a community in West Texas designed expressly for supporters of the politician, Ron Paul. The goal of Paulville was “to establish gated communities containing 100% Ron Paul supporters and/or people that live by the ideals of freedom and liberty” (www.paulville.org). Living in a shared community that shares common assumptions provided its residents with a sense of familiarity, safety and comfort.

Almost all social, political, religious and general interest groups are at least loosely formed around the notion of common sensemaking, worldviews, and beliefs, which provide avenues for a needed sense of similarity, safeness and fellowship. But, because these groups of similarly thinking individuals are formed around their perceived similarities at the top of their individual ladders (where the actions informed by deeply held beliefs exist), groupthink can develop, which tends to provide insulation from differing patterns of belief and opportunities for conflict with dissimilar ladder-based groups. “…even a mild preference for living with like-minded neighbors [can lead] over time to …segregation. An accountant in Texas, for example, can live anywhere she wants, so the liberal ones move to the funky bits of Austin while the more conservative ones prefer the exurbs of Dallas” (The Economist, June 20, 2008).

“There is a danger in this. Studies suggest that when a group is ideologically homogeneous, its members tend to grow more extreme. Even clever, fair-minded people are not immune. Cass Sunstein and David Schkade…found that Republican-appointed judges vote more conservatively when sitting on a panel with other Republicans than when sitting with Democrats. Democratic judges become more liberal when on the bench with fellow Democrats.” (Economist June 20,2008)

Of course, there is nothing wrong with hanging out with like-minded people or being influenced by them. There isn’t even an inherent problem with a like-minded group or team segregating itself from broader society. In fact, few people living in free societies would take issue with the “right” to live wherever it suits them or congregate with whomever they like. However, such realities have implications on the extent to which communication is engaged and “travel” on the collective ladder is routinely practiced when one groups’ happy community of cultural groupthink and self-imposed insulation comes into direct competition with differing groups, thereby impacting the quality of decisions being made.

According to Diana Mutz, professor of political science and communication at University of Pennsylvania and author of *Hearing the Other Side*, a study involving 12 countries found Americans to be least likely to talk about politics with those who disagreed with them. The fact that differences are not
talked about opens the door to misunderstanding of individual differences and escalating conflict between people and the groups to which they belong. It also leaves individual assumptions about those differences unchallenged and left to become “well-known facts” (Mutz, 2006). This block in perception and communication can distort decision making both at an individual level or in decisions requiring collaboration between dissimilar groups.

Human resource professionals come across homogeneous thinking when organizations get stuck in their “silos” or functional groupings. Sales personnel see the world according to their shared beliefs about what product options and timetables should be available to satisfy the customer, whereas production personnel see the world based on efficiency and cost effectiveness. If these differences are not openly discussed, each functional group tends to assume that their world view is the “truth.”

“Traveling on the ladder” then (see Figure 2), not only provides information about how a belief or action may have been inferred, but an opportunity to articulate the core of those inferences with other individuals and groups as well, thereby opening the door to communication and deeper understanding of differences. Learning to travel back down the ladder as a group to revisit, communicate, and compare the original data each group holds and how they perceive it is key to increasing meaningful communication between members of a group or team while simultaneously managing intra- and inter-group conflicts and increasing the likelihood of durable decisions being made. This means that individuals and groups seek to understand their own unique interpretation of original data with specific emphasis on how assumptions may have informed their beliefs on the way “up the ladder” to taking action on those beliefs. They then seek to understand the same processes other individuals or groups have engaged to reach their conclusions.

Healthy dialogue reduces groupthink and increases opportunities for groups and organizations to be responsive to new data. Disconfirming data that challenges one’s assumptions can be uncomfortable, but it is necessary for individuals and organizations to adjust to the evolving reality. For example, during the 2012 Presidential election Fox News political commentator, Karl Rove, was adamant that it was too early to call Ohio for the incumbent, Barack Obama, on the night the election (http://www.youtube.com/watch?v=9TwuR0jCavk). Rove was caught in Loop B (see Figure 1) where his bias for a Republican win caused him to note uncounted Republican votes in Ohio counties but to ignore uncounted Democratic votes. To their credit, the FOX News anchors sought clarity by seeking disconfirming data by interviewing their statisticians. The benefit of the Ladder of Inference is that the theory provides an explanation of human behavior like Rove’s in that moment. It is a valuable framework for explaining how individuals and like-minded groups select data that supports their assumptions and maintains groupthink even when it is not to the group’s advantage.

**Increasing Influence by Traveling on the Ladder**

People want to have an impact on others when they communicate. A product executive who wants to persuade the C-Suite management team to invest in her promising product or an engineer who wants to be promoted to a manager must be influential in their approaches in order to be taken seriously. Yet, they may miss opportunities to reach that goal because of flawed communication, which is based exclusively in information they are using from either the top or bottom of the ladder of inference. For example, if the executive seeking investment in the promising product speaks only of the product in glowing terms (high on the ladder), and does not address risks or provide specific data to back up her praise, she will not be taken seriously. Getting stuck at the top of the ladder happens when an individual does not know how to differentiate a statement that is high on the ladder (often confusing it with data) from lower on the ladder (facts/confirmable information). Distinguishing between facts and inference is an important skill because
it allows the person to reveal assumptions, which enhances critical thinking and consequently leads to better decisions (Facione & Facione, 2007).

Human Resource professionals reading performance reviews know all too well the experience of supervisors making statements that are high on the ladder of inference. They read reviews that include statements like, “Sam is unprofessional.” “Bobby is caring.” “Terry should be fired.” They might hear employees complain, “Management only cares about the bottom line.” “My boss is an idiot.” “We’re an unethical company.” There is nothing wrong with stating one’s opinion provided that they are followed with evidence (data), which is lower on the ladder. Unfortunately, many people act as if their opinion is a fact. They do not recognize that it is high on the ladder and therefore not necessarily based in factual data. Attend any meeting at work and listen carefully to the dialogue and it will become clear how frequently individuals make assertions that are high on the ladder, without traveling down the ladder by supporting their inferences with facts. Credibility and influence can be increased when the communicator consciously links their inferences with their reasoning, and demonstrates transparency (Kouzes & Posner, 2011). Walking someone down the ladder (traveling) by explaining how one arrived at one’s inference with clear data, helps the other person verify for themselves if they would come to the same conclusion. What one person might infer is “unprofessional” behavior, another might see as “creative genius.” By providing the evidence in which the inference was made, the other person can determine if the data supports the inference or whether it could be interpreted differently.

**HOW TO IMPROVE COMMUNICATIONS**

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HOW TO IMPROVE COMMUNICATIONS

TRAVEL!

CONNECT!

Actions

Inference

Selected Data

Raw Data

I think (inference) because of (data)

Based on (data), I think (inference)
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At times it is necessary to travel “up” the ladder. The engineer who wants to be promoted to manager must learn this skill. Some people, especially those who work closely with data, such as engineers, statisticians, and scientists can err on the side of presenting pages and pages of facts without traveling up the ladder to draw a conclusion about the facts. C-Suite executives are interested in the connection between data and the “bottom line.” The most influential and credible engineers, and the ones most likely to be promoted to management, are the ones who can explicitly explain what the data may mean for decision making (Facione & Facione, 2007). Figure 2 shows a formula for conversations to travel on the ladder of inference. The engineer might begin with data and then using linking phrases such as, “what this means” or “as a result” or “I conclude” to show his conclusion about what the data mean. The product manager might begin with why the product will be “successful” (high on the ladder), and then use linking phrases such as “supported by” or “as evidenced by” or “I reached this conclusion based on.” She would then provide the supporting data. Consciously linking data and inference is an essential skill for aspiring managers, public servants, and anyone who must convince others.

**Improving Teams with the Ladder of Inference**

As demonstrated in the famous “Abilene Paradox” (Dumville, 1999) case in which an extended family in Texas tacitly decides together to engage in a long, hot drive to partake in a sub-par cafeteria meal that none of them really wanted to do in the first place, groupthink drives ineffective decision making in teams. Teaching teams to effectively travel on the Ladder can highlight where groupthink is problematic, improving overall team performance as well as its communication behaviors. By being intentional about setting aside time to “check in” around project or team process assumptions, teams can begin to use the ladder to their advantage. Peter Senge (1990) advises individuals and groups to suspend their assumptions – as if to hold them out in front of oneself and one’s teammates for closer examination – in order to become curious observers of those assumptions, how they emerged and where they are anchored in clear data. Once teams learn to practice this suspension behavior as a group, they can then continue traveling further down the ladder by verifying their group data sources that led to their collective assumptions and can more effectively move forward on the same page and with the same foundation of understanding.

For example, a team from an aerospace company was recently working to complete a project for an MBA course in which they were engaged as students. As they discussed the parameters set forth for successful completion of the project by the professor, there was disagreement as to what was meant by the directive to “support your perspectives from the literature.” Some argued that only course texts were to be referenced while others insisted that the statement clearly meant primarily bringing in scientific journals as references. Another group visibly stressed that “literature” meant anything that had ever been published in the world in any language. Rather than determine the shared understanding by which sub-group in the team could most loudly assert their assumption, the team remembered to practice traveling on their collective ladder - examining each assumption and together tracing it to a data source. Interestingly, the sub-group advocating course texts realized they were hoping for less work. The group interpreting literature as scientific journals traced their assumptions to past experience in researching projects as a part of their jobs. The last sub-group admitted they were driven by a panicked fear of being overwhelmed in their attempts to “get it right and make an ‘A’.” Once they had together identified their assumptions and their inaccurate data sources, they concluded that verifying the meaning of “literature” with the professor was the most direct and effective way to understand specific expectations for the project, avoid potential conflicts and minimize undesirable outcomes based on differing assumptions within the team.
CONCLUSION

Most leaders and managers want to feel confident in making decisions that are based in sound data rather than simple opinions or assumptions. Individuals can improve the quality of their decision making when they consciously link clear evidence to their perspectives by holding the ladder of inference in their mind and using linking phrases and checking assumptions. In this paper, we use the ladder of inference to explain how groups of people form homogeneous groups based on shared assumptions about the world and allow groupthink to ineffectively drive decision making. Human resources and adult learning professionals can use this image to help create dialogue when it is essential that otherwise siloed groups might more effectively communicate with each other.

REFERENCES