

Straws that Tell the Wind. Top-manager perception of distant signals of the future.  
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Abstract:

If top-managers perceive weak signals early enough and interpret them accurately, they can increase the resilience of their company. If they don't, their companies run high risks. In the case of the great recession, the correct perceiving top-managers betted against mortgage-backed securities, and the rest had to take drastic measures to survive a double-dip recession. Whether or not having insights into the effective perception of weak signals can make or break companies.

In this dissertation, weakness refers to the distance of new information to the frame of reference of the perceiver. A large distance means that new information is not comparable to information already in the frame, which makes it difficult to detect and interpret. A very short distance refers to strong signals, of which much is already known, thus inside the frame. The same information can be weak in the eyes of one manager and strong in the other, depending on their prior knowledge. Hence, weakness was seen as a perception, not an inherent, objective trait of information.

Literature described the signal perception process in stages separated by perceptual filters. Weak and strong signals process flowed differently through the stages and filters. A strong signal flowed seamlessly and swiftly through the perceptual filters into action. Weak signals ran the risk of rejection at each of the filters. A weak signal that made it into the interpretation stage required extensive interpretation before its meaning became clear. This suggested a positive relationship between the level of weakness and the extent of interpretation: the weaker the signals, the more extensive the interpretation. Furthermore, literature did not explain why some experts interpreted signals accurately and others did not.

The dissertation's field research found three striking process adjustments that top-managers used to compensate for undesired reducing effects of the filters. Top-managers stipulated that (1) search had to focus on distant information; (2) that a distinct, wide range of sources had to be consulted; (3) and that interpretation must be deferred until multiple viewpoints on the signal had been gathered. Secondly, a negative correlation was found between the level of weakness and the extent of interpretation. Finally, variance in expertise types may explain the variance in expert interpretations. The results indicated that the expertise types had different effects on the perceptual filters. General expertise seemed to widen filters and to reduce the difficulty of detecting very weak signals. Years in the current industry enabled the application of signals to the company's situation and thus seemed to contribute to the development of alternatives. Task expertise seemed to support general expertise in increasing the depth of perceptual filters.

The dissertation delivered substantial theoretical contributions. Firstly, the negative correlation between perceived weakness and the extent of interpretation explains why weak signals are so hard to detect and interpret. In addition, weakness as distance to the frame enables the use of distance as a parameter for decision-making and as an index for decision alternatives. Secondly, the findings on expertise types and frames suggest that the absence of cognitive diversity can explain missed and misinterpreted signals. Its presence can explain higher process effectivity. The dissertation's scientific value is also expressed in a set of tools to add to the foresight field's toolbox. The development of the method in which scenarios trigger rateable articulations of weak signals (STRAWS) contributes to the validation of findings for distinct levels of perceived weakness. Finally, top-managers who plan to or already manage a foresight process will benefit from the suggested process adjustments and the insights in distance and cognitive diversity.