Cultural Fit of Assessments to Detect Curiosity for Weak Signals Among Employees

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Abstract

To remain competitive, organizations must make sense of antecedent weak signals that might yield information on opportunities or threats. However, perceiving those signals requires psychological capabilities which are not evenly distributed over their workforce. Identifying who might effectively sense weak antecedent signals is the necessary first step in the staff selection and management process. To this effect, Human Resources Management processes at organizations rely on assessments. However, this study suggests that some self-assessments might be too context-sensitive to fit their purpose across cultures. In particular, the CEI-II evaluation applied to a small and convenience sample of Brazilian executives did not satisfy Brazilian respondents' selection for curiosity. The authors briefly discuss how the Brazilian context may differ, not least because of a considerably lower generalized trust level, and suggest relying alternatively on projective instruments.

Keywords: Curiosity; Human Resource Management; Assessments; TAT; Brazil.

1 Context

This study seeks to help choose the instruments that will allow organizations to identify who is best equipped to detect weak signs of future trends. We would later suggest how to strengthen those capabilities to help corporations extend their competitive advantages.

Oriented to compete, organizations would want to anticipate threats and opportunities in good time. However, organizations are strong on routines and formed by people who catch trends, filter them and share with their leaders who prune the information in an optics oriented to the immediate. Ansoff (1975) argued that human beings have barriers to signals. These filters prevent relevance to the selected fact and make the signal presented not necessarily a priority. There are different power levels in the companies, and the filters overlap. However, it is in organizations' interests to identify the individuals most oriented to capture and make sense of the weak signals as antecedents.

What led Google and Amazon to their current success? After all, they were too new to rank among the American magazine Fortune's largest companies in the late nineties (Fortune, 2020). What did Google and Amazon do differently when compared to Blockbuster and Kodak? The latter were innovative companies but failed to notice the weak signs of new trends and went bankrupt?

Kodak is an American company that opened in 1880 and was responsible for taking photography to people's homes. Kodak developed disruptive technologies for the time, and in 1976 it had an 85% market share in cameras and 90% in films. The popularisation of cell phones, with digital cameras, eroded Kodak's revenue in photos and prints, and Kodak filed for bankruptcy in 2012.

Blockbuster is an example of a similar failure. Founded in 1985, Blockbuster focused on renting VHS films. However, Netflix innovated in 2007 by launching the streaming platform to watch videos from their computer. In 2010, while Netflix had 16 million subscribers and $ 2 billion in revenue, Blockbuster declared bankruptcy. At the end of 2020, Netflix reached 200 million paid subscribers worldwide (Marques, 2021).

Organizations like Kodak and Blockbuster were caught wrong-footed because their leaders did not notice or misjudged new trends. A former Kodak vice president explained that Kodak opted to defer its launch of digital cameras for fear of cannibalizing its lead on film products (Usborne, 2012). Business leaders' filters and interests directed efforts against the signals, trying to muffle them. (Schoemaker and Day, 2009).

Strategic planning and monitoring of various markets are frequent in companies that wish to anticipate trends. These anticipation practices are called Corporate Foresight. Companies use them to take different paths than the current ones and potentially change the industry. (Schwarz, Rohrbeck, and Wach, 2020). However, most companies with Foresight practices follow obvious indicators, such as the number of consumers and existing competitors. While that is useful, they should also focus on the peripheral vision that includes remote markets, new competitors, emerging technologies, new business models, etc. (Hiltunen, 2010).

Companies find it difficult to project in the future, so they continue to do more than grow them. As happened with Kodak and Blockbuster's leaders, we read several examples of leaders who did not notice the daily press' weak signals. Leaders and organizations tend to see the world in only a certain way..

2   What are weak signals?

According to Hiltunen (2010), weak signals represent the most initial form of information predicting the future. Weak signals that do not fit are dismissed or ignored, leaving the companies exposed. (Schoemaker and Day, 2009) This is because human beings are not aware of their preconceptions. They are much less aware that this may hinder the interpretation of weak signals ((Ansoff H. I. 1984); (Schoemaker and Day, 2009); (Hiltunen, 2010)).

Weak signals are different from strong signals or late warnings. We say signals are weak or tenuous because they are less visible. Being antecedent, they have a greater distance from their likely impact. Usually, the first weak signal appears well before the first strong signal. As time goes by, companies and leaders connect the messages received and then the early weak signal becomes strong (Mendonça, Cardoso, and Caraça, 2012). Strong signals are always accompanied by substantial evidence that was often a set of related weak signals.

For Hiltunen (2010) the strength of a signal can be measured by its visibility and quantity. The weak signals can be defined as "Pieces of information apparently disconnected or random that initially seem like background noise, but which can be recognized as part of a larger trend when analyzed by a different frame or connected with other pieces of information". (Shoemaker, Day, Snyder, 2013)

There is no strategically relevant isolated signal. The interpretation of a signal depends on the context, the organization and the environment where it is being received. Weak signals represent hypotheses of changes that can become a competitive advantage if the company knows how to

mine this information and turn it into valuable insights. Creating that environment becomes a development objective for organizations. (Mendonça, Cardoso, and Caraça, 2012).

3 Who perceives weak signals?

Mendonca, Cardoso, and Caraça (2012) and Hiltunen (2009) agree on some items that help us to distinguish a weak signal from confusing background noise: a given trend runs out; a new trend matures well ahead of expectations; experts strongly disagree on a given topic; laypeople strongly disagree with the experts' optimism/pessimism; promising system or technology fails unexpectedly, and exceptions start to accumulate.

Hiltunen (2010) believes that for the organization to benefit from weak signals, interaction, openness and discussion between teams are necessary. People in the organization need to be sensitive to change, show creativity, responsiveness, intuition and a curious mind to perceive weak signals. This aspect is in line with the vision of Schoemaker and Day (2009). They reinforced the importance of leadership connecting with experts with the front line because the front line team can be a great source of weak signals for the organization if stimulated.

Yet, Schoemaker and Day (2009) argued that less than 20% of global companies can map, interpret and act on the weak signs of trends that can become threats or opportunities. Moreover, those authors stressed that senior executives ignore weak signals because they are drawn to plunge into the most convenient, plausible and immediate.

Suppose the analysis of weak signals is not done in a positive environment for future planning. In that case, decision-makers are less likely to understand the urgency of specific actions. To absorb the weak signals, one needs a combination of analytical and social skills to execute modern and innovative strategies (Mendonça, Cardoso, and Caraça, 2012).

4 Role of curiosity in detecting weak signals

Curiosity increases the perception of stimuli (Berlyne, 1954). It also makes people more open and exploratory. Curious people are more likely to perceive weak signals (Kashdan, Rose, and Fincham, 2004).

To identify weak signals, organizations need to have teams composed of individuals who have the sensitivity to perceive them. Studies led by Kashdan et al. (2004) have shown that the primary function of curiosity is to seek, explore and immerse someone in situations with the potential for new information and experiences. According to the authors, constant curious behaviour serves to expand knowledge, build creative and intellectual capacity, and strengthen social relationships in the long run. In another study, Kashdan et al. (2013) reinforced that curious people are more open to the uncertain, more aware of themselves and more open to internal and external stimuli, whether positive or negative.

Daniel Berlyne (1954) proposed a comprehensive model for curiosity analysis, presenting concepts of curiosity that are still the foundation of most studies on curiosity. To this author, curiosity "is the emotional state that stimulates the exploration behaviour".

Hamilton (2019) reinforces Berlyne's proposal (1954) and defines curiosity as "the desire to discover new information and experiences that motivate behaviour". She replaced Berlyne's "emotional state" with "a desire to discover new things and experiences". This new look by Hamilton (2019) is in line with the studies by Kashdan et al. (2004) that define curiosity as "a positive emotional-motivational system associated with the recognition, the search for new and challenging opportunities. Curiosity activates proactive and intentional behaviour in response

to properties: novelty, complexity, uncertainty and conflict." Kashdan et al. (2004) agree with Hamilton (2019) that curiosity reinforces the intentional aspect of discovering the new. See table 1.

Kashdan et al. (2004) conducted studies with young English-speaking university students aged between 20 and 25 and living in America. According to these authors, curiosity can be defined as a yearning to know more and live new experiences (Exploration and Stretching). According to Kashdan, in the first study (Kashdan, Rose, and Fincham, 2004), it was possible to map a desire for deepening and investigation, called absorption, compared to FLOW (Csikszentmihalyi, 2008). However, when revising the instrument in 2009, the same authors replaced absorption with issues that mapped the involvement, a desire to embrace the new and the uncertain as fundamental characteristics of the "curious".

The authors compared FLOW (Csikszentmihalyi, 2008) to Berlyne's specific curiosity (1954). In FLOW, the person remains intensely focused on his goal and control.

Table 1. CEI- I and CEI- II - Main concepts

Kashdan et al., 2004		Kashdan et al., 2009	
Exploration	Absorption	Stretching	Embracing
Involves a tendency to seek more information and experiences. It means scanning, recognizing, pursuing, and allocating people resources to new and challenging situations, regardless of source.	Engagement in well-defined situations. Exploration and results in FLOW-type conditions, where absorption and research behaviours result in discoveries, pleasure, and knowledge use.	Involves an active search for opportunities for new information and experiences.	Implies in the willingness to embrace the new, uncertain and unpredictable in the course of everyday life.

In the work environment, people's views and ideas are the most essential characteristics. While some are defensive and do not want to learn from their perspectives, the socially curious person is open to a diversity of opinion and wants to learn more in-depth. For a person to be curious, she needs to believe that the novelty has potential and can deal with it. (Kashdan, Rose, and Fincham, 2004)

Organizations that maintain environments that stimulate creativity are more agile, deal better with changes and innovation. They also significantly focus on discovering opportunities and pursuing them and are more tolerant of everyday stress ((Kashdan, Rose, and Fincham, 2004), (Kashdan T. B., 2009), (Kashdan T. B., 2013)). However, they also need to be aware that fear, preconceptions, technology and the environment are the main curiosity inhibitors. Hamilton (2019) validated that technology and fear are the great villains.

Curiosity, a psychological force, is precious for the rapid learning needed to manage workplace trends. The curious person responds readily to organizational changes, is more intrigued than frustrated when trying to understand, appreciate and extract value from colleagues and technologies. Also, curious people are more flexible to adapt to strategies and plans unfamiliar to their culture in sophisticated global markets. (Kashdan T. B., 2013).

Those with a more generous streak of curiosity are more likely to actively seek to take advantage of varied opportunities to generate a good day and a meaningful life. The use of learned knowledge increases pleasure and competence, reinforcing the more significant involvement in activities that require expertise and the desire for more learning. The highly curious, inquisitive individual is someone with the propensity to more readily recognize, seek and become absorbed in new and

challenging experiences. (Kashdan, Rose, and Fincham, 2004).

5   Methodology

To map the characteristics of professionals who perceive weak signals, we initially considered using a questionnaire to identify the most curious people. We would then have analyzed focus groups with those who have the highest scores in this questionnaire. The objective was to identify common attitudes and elaborate a proposal for organizations to strengthen curiosity in a cohort of their employees.

Questionnaires to identify curiosity were successfully applied by Litman and Spielberger (2003), Kasdhan et ta. (2004; 2009; 2013) and Hamilton (2019). Even Kashdan et al. (2013), in their studies with university students at the University of California, validated that people close to the respondents had a high correlation with the respondents' self-perception.

The first version of the questionnaire used in this pre-test in Brazil included all the questions Kashdan et al. (2004) used in CEI I regarding Exploration and all CEI-II questions regarding the Stretching component (Kashdan T. B., 2009). Some Yarar (2015) questions were added to the groupings: skills to balance knowledge and challenges, search for challenges, and persistence, consistent with the CEI II Involvement. We also included five questions to address the characteristics of those who perceive weak signals. The 7-point Likert scale, used by the authors in their original studies, was maintained for all questions.

Our Brazilian pilot questionnaire had 17 questions, in addition to demographic questions. Our questionnaire was sent by WhatsApp to 39 professionals selected for convenience from the corporate world in São Paulo, Brazil's largest city. We collected their responses to an electronic questionnaire during the second half of January 2021. We received replies from seventeen respondents, representing 43.6% adherence.

The instrument's purpose was to separate respondents with the highest scores, in theory, the most curious. However, in Brazil, the tool proved unsatisfactory to discriminate respondents by their level of curiosity. Our respondents tended to cluster as being very curious: 94% of respondents agreed with the questions extracted from the CEI questionnaire (I and II) to measure the orientation to Exploration. Besides, 100% of respondents said they gave their best in all situations and sought as much information as possible in a new case. See Table 2.

Brazilians' scores to the pre-test questions were at least 50% larger than the population of the study by Kashdan et al. (2009), reaching almost double the CEI-II score for question 7.

The questions used that were inspired by the Yarar (2015) autotelic personality mapping questionnaire, related to the search for experimentation, "out of the box" ideas, challenges and persistence also had a high agreement: 81%. The only exception was to the point of enjoying uncertainties, with a 44% agreement.

6   Results and an alternative

Inventories validated mostly for young English-speaking university undergraduate audiences were not as useful to select the most curious Brazilian corporate world employees with an average age of 40. Kashdan et al. (2020) are more recently expanding validation efforts. Nonetheless, to date, those are still bound to the Germanic linguistic family, where higher levels of generalized trust are still prevalent (Behrens, 2020).

Brazil is one of the countries with the lowest generalized trust. Along with many other collectivist cultures, Brazilians trust more people they have known for a long time (Behrens, 2020).

Table 2. Comparison of mean CEI I and II scores with pre-test

Questions	Avg CEI-I	Avg CEI-II	Avg scores pre-test, São Paulo, Brazil	Per cent difference to CEI-II
1. I would describe myself as someone who actively seeks as much information as I can in a new situation **Exploration Q1/Stretching Q1**	5.28	3.69	5.59	151%
2. I am at my best when doing something that is complex or challenging. **Stretching Q3**	-	3.51	6.41	183%
3. I view challenging situations as an opportunity to grow and learn. **Stretching Q5**	-	3.59	6.18	172%
6. Everywhere I go, I am out looking for new things or experiences. **Exploration Q7/Stretching Q4**	4.45	3.31	5.65	171%
7. I frequently find myself looking for new opportunities to grow as a person (e.g., information, people, resource). **ExplorationQ3 /Stretching Q9**	4.93	3.16	6.06	192%
8. I am not the type of person who probes deeply into new situations or things. **Exploration Q4**	3.09		3.06	--

Source: Created by the authors using: CEI I (Kashdan, Rose, and Fincham, 2004) page 4 and CEI II (Kashdan T. B., 2009) page 7.

On the other hand, prevalent human resources management procedures prioritize teambuilding by competencies rather than affinities. This frequently leads to corporations grouping together people who do not trust each other much. This practice also turns team members suspicious of human resource management instruments. While responding to assessments, Brazilians might tend to game the tools by replying to questions in ways they believe might harm them the least. This interpretation would have important implications for similar assessments in other low trust cultures.

We also wondered what other reasons might be for instruments validated in other countries to obtain different pre-test results with employees from the Brazilian corporate world?

Self-selection could have led the most curious Brazilian sample to answer the questionnaire. But, this could have happened in the case of the initial validation of the questionnaires used. It could also be that in Brazil, respondents were more mature and immersed in a more competitive environment. Besides, they replied during the Covid-19 pandemic-induced deep recession, when they would be more afraid of losing their jobs and therefore inclined to portray themselves in a kinder light.

There may be other reasons for the disparity that is worth considering. It is known that any instrument must consider social, cultural and historical variables. Bastos and Behrens (2019) pointed out that when questioning Brazilians about racial or gender discrimination. In general, everyone denied being prejudiced, even if their attitudes and beliefs were discriminatory.

Companies operating in Brazil and elsewhere usually use questionnaires and assessments

validated abroad to assess contracts, promotions, and staff allocations in projects. Yet, as already mentioned, respondents might answer questionnaires with the information they believe most closely aligns with the company's expectations. This might lead to respondents gaming their self-assessment for fear of being passed over. When asking an employee from the corporate world to self-evaluate themselves, we think they might seek to avoid any financial loss or loss of opportunity.

Suppose the above interpretations were correct among Brazilians. In that case, one might achieve better results proceeding with greater stealth, avoiding the possibility of respondents determining what is being assessed and why. Projective tests may offer an alternative. In these tests, respondents are shown an ambiguous image and asked to give a quick response to it. Key is the ambiguity of the stimulus and the speed; the latter avoids the interference of rationality.

The Thematic Apperception Test (TAT) is an example of projective tests. It was created by Murray and Morgan in 1935. Parada and Barbieri (2011) presented this useful psychometric instrument to reveal impulses, emotions, and feelings that the person cannot admit because he is not aware of them. As described by the authors, TAT is a helpful tool for studying personality and interpreting behaviours, which can be very useful to measure curiosity, given that curiosity is an emotional state (Berlyne, 1954).

Projective tests have also been used in professional assessments, helping professionals in self-knowledge and supporting professional development and growth plans. It is believed that it can be used in situations where the respondent is really looking for, even in their own subconscious. In this instrument, images are presented, and the participant responds based on the knowledge she has. With that, it is possible to evaluate the unique characteristics of how the individual sees the world and the relationships (Parada and Barbieri, 2011).

It might be best to approach corporate respondents stealthily like Behrens and Bastos (2029) did, through at TAT assessment (2019) Adjusting the methodology, we believe that it is possible to identify who is curious.

For Kashdan et al. (2013), curious people have several adaptive attributes that include: an appreciation of beauty, like complex and abstract thinking, have the strong intellectual capacity, a little humour and joy, comfort with uncertainty and anxiety, lack of shyness it is a tendency to avoid judgment, criticism and blame other people. These characteristics are perceived by the people they live with and other traits such as context-sensitivity, liberal attitudes, unconventional thinking, and rebellion.

We propose not to ask whether respondents are curious, which rendered a dead end. Instead, to use a projective test approach. Based on images, works of art, and everyday scenes, allowing respondents to show their ability to appreciate the beauty, the complex, the abstract, comfort with uncertainty, and absence of judgments as mapped Kashdan et al. (2013).

7 References

Ansoff, H. I. (1975). Managing strategic surprise by response to weak signals. *M California management review,*, 21-33.

Ansoff, H. I. (1984). *Implanting strategic management.* London: Prentice-Hall.

Behrens, A. (2020). Tribal ethos favours self-transcendence, within the Tribe. *Journal of Innovation Management*, 8(1), 6-12.

Bastos, P., & Behrens, A. (2019). Magic mirror on the wall, who is the fairest of them all in top

corporate positions in Brazil? Thunderbird International *Business Review*, 61(2), 119-122.

Berlyne, D. E. (1954). An experimental study of human curiosity. *British Journal of Psychology, 45(4*, 256.

Csikszentmihalyi, M. (2008). *Creativity: Flow and the psychology of discovery and invention.* Harper Collins e-books.

Fortune. (2020) Fortune Media IP Limited). *fortune.com/global500/1997/.* Fortune : https://fortune.com/global500/1997/

Hamilton, D. (2019). Developing and testing inhibitors of curiosity in the workplace with the Curiosity Code Index (CCI). *Heliyon, v. 5, n. 1*, p. e01185.

Hiltunen, E. (2010). Weak signal in organizational future learnings. ISSN 1237-556X, e-version ISBN 978-952-60-1039-7.: Aalto University School of Economics.

Kashdan, T. B. (2009). The curiosity and exploration inventory-II: Development, factor structure, and psychometrics. *Journal of research in personality, v. 43, n. 6*, p. 987-998,.

Kashdan, T. B. (2013). How are curious people viewed and how do they behave in social situations? From the perspectives of self, friends, parents, and unacquainted observers. *Journal of personality, v. 81, n. 2*, p. 142-154,.

Kashdan, T. B., Rose, P., & Fincham, F. D. (2004). Curiosity and Exploration: Facilitating positive subjective experiences and personal growth opportunities. *Journal of personality assessment, v. 82, n. 3,*, p. 291-305.

Kashdan, T.B, Goodman, F.R. Disabato, D.J., McKnight, P.E. Kelso, K., Naughton, C. (2020). Curiosity has comprehensive benefits in the workplace: Developing and validating a multidimensional workplace curiosity scale in United States and German employees. *Personality and Individual Differences*, Volume 155, 2020, 109717. https://doi.org/10.1016/j.paid.2019.109717.

Litman, J. A., & Spielberger, C. D. (2003). Measuring epistemic curiosity and its diversive and specific components. *Journal of personality assessment, v. 80, n. 1*, p. 75-86.

Marques, A. (19 de 01 de 2021). Netflix ultrapassa 200 milhões de assinantes no mundo. Fonte: Tecnoblog: https://tecnoblog.net/403850/netflix-ultrapassa-200-milhoes-de-assinantes-no-mundo/

Mendonça, S., Cardoso, G., & Caraça, J. .. (2012). The strategic strength of weak signal analysis. *Futures 44*, 218–228.

Parada, A. P., & Barbieri, V. (2011). Reflexões sobre o uso clínico do TAT na contemporaneidade. *Psico-USF, v. 16, n. 1*, p. 117-125,.

Schoemaker, P. L., & Day, G. S. (2009). How to make sense of weak signals. *MIT Sloan Management review. VOL 50 N.3 Spring*.

Schoemaker, P. L., & Day, G. S. (2016). Adapting to Fast-changing Markets and Technologies. *California Management Review, Vol. 58, No. 4*, pp. 59-77.

Schoemaker, P., Day, G. S., & Snyder, S. A. (2013). Integrating organizational networks, weak signals, strategic radars, and scenario planning. *Technological Forecasting & Social Change 80*, pg: 815–824.

Schwarz, J. O., Rohrbeck, R. 2., & Wach, B. (2020). Corporate foresight as a microfoundation of

dynamic capabilities. *Futures Foresight Sci. 2:e28.*

Usborne, D. (20 de January de 2012). The moment all went wrong for Kodak. *Independent.*

Yarar, O. F. (2015). Autotelic personality: links with flow propensity, personal strengths, and psychopathology. A thesis submitted to the Graduate School of Social Sciences of THE MIDDLE EAST TECHNICAL UNIVERSITY, Ankara, Turkey, for the degree of Doctor of Philosophy.

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