# Perception, Self-Regulation and Self-Leadership: Guiding Principles for Effective Leaders in Education

Richard Pircher

Christiane Seuhs-Schoeller

# PERCEPTION, SELF-REGULATION AND SELF-LEADERSHIP: GUIDING PRINCIPLES FOR EFFECTIVE LEADERS IN EDUCATION

## *by Richard Pircher, Christiane Seuhs-Schoeller*

**Abstract**

The ability of an organization to survive and to be successful relates to its potential to adapt to a changing environment. The competence to perceive relevant stimuli from the outside and the inside of the organization constitutes a prerequisite for organizational adaptability. Consequently, appropriate perception is a crucial factor for individuals and teams to decide and behave in a productive way.

Self-leadership may be defined as "a comprehensive self-influence perspective that concerns leading oneself toward performance of naturally motivating tasks as well as managing oneself to do work that must be done but is not naturally motivating" (Manz, 1986, p. 589). In addition to self-management, the concept of self-leadership not only addresses the "how" of self-influence. Additionally, also the "what" and "why" are covered. Through the focus on the "why" and "what" of self-influence, individual self-leaders address the underlying reasons for effort and behavior (Manz, 2014). Increased self-leadership corresponds with better affective responses and improved work performance (Stewart, Courtright & Manz, 2011).

In this paper we apply a multi-disciplinary analysis of human perception. From this basis we derive guiding principles for self-leadership in the educational context. They are expected to provide the foundation for the improved perception of relevant internal and external stimuli by the leader of an educational organization. More integrated and sustainable decision-making and realization of decisions is suggested to be a core implication.

## Empirical and Theoretical Findings on Human Perception

*"all you have is what you notice"* - Roshi Baker

Perception is the main basis for learning and behavior. For us as human beings our abilities to perceive the environment and our own bodies with our senses are very limited in quantity and quality. For instance we are not able to perceive magnetic and electric fields like some birds and fish, UV light and carbon dioxide like bees and ultrasound like bats (Chittka & Brockmann, 2005).

Perceiving starts with input signals from the senses which are being handled in a cascade of cortical brain regions (bottom-up). This flow appears to be in a constant interaction with feedback from the brain facilitation (top-down). The brain first uses rudimentary signals to derive analogies linking that input with representations in memory. Therefore we may understand perception as a mutual activity of bottom-up and top-down processes. The latter seems to build upon expectations of the most likely interpretations of the input image. The top-down process facilitates recognition by substantially limiting the relevant object representations. This provides focused predictions which facilitate perception and cognition (Bar, 2007). Recognition thus rather resembles an iterative approximation than an exact matching. It builds upon what is already known.

Limitations of our senses like the blind spot in our eyes where the nerves leave the eyeball are automatically corrected by the brain. We do not see anything missing or unusual at this point. "We do not see that we do not see" (von Foerster, 2003, p. 284).

To focus on something means to overlook almost everything else. An experiment shows that even a highly salient human in a black gorilla suit walking through the image showing off beating her breast may be invisible for viewers for this reason (Most, Scholl, Cliffort, & Simons, 2001). Also substantial changes in images are not recognized under certain circumstances by many observers, which is an effect known as change blindness. Change blindness seems to be very counterintuitive because most people firmly believe that they would notice such large changes – a kind of "change blindness blindness" (Simons & Rensink, 2005, p. 17).

We may conclude that human perception is very limited in quantity and quality, highly subjective, iterative and approximate. It is strongly influenced by our internal patterns which consist of both a legacy of evolution and a product of personal history. The limitations of our perception are easily overlooked. We do not (want to) see what we do not see.

## Automaticity and Consciousness

*"The intuitive mind is a sacred gift and the rational mind is a faithful servant. We have created a society that honors the servant and has forgotten the gift."* - Albert Einstein

People who recalled an experience of social exclusion, experience a lower room temperature than others who recalled an inclusion experience (Zhong & Leonardelli,

2008). Watching pictures of items drawn from business contexts (e.g. briefcases, boardroom tables, fountain pens, etc.) leads to a more competitive behavior than watching pictures of neutral objects like cups (Kay, Wheeler, Bargh, & Ross, 2004). These are just a few examples of many studies where the so-called priming effect takes place in a statistically significant way: A stimulus unconsciously and automatically triggers the response to a later stimulus. It is suggested that these effects increase with the degree of ambiguity (Kay et al., 2004). Hence priming seems to be an unconscious solution to fill the disturbing gap of uncertainty.

Human decision-making was found to be distorted away from rationality in many ways (Ariely, 2008). One example of many is myopia, the tendency to search for immediate gratification and to fail in long-term planning (Hardin & Looney, 2012). Regarding business plans, it was found that there is a cognitive bias to accentuate the positive aspects, which is called planning fallacy (Lovallo & Kahneman, 2003). Even if people know that biases may occur in human judgment, they tend to unconsciously ignore the possibility to be biased themselves (Pronin, Olivola & Kennedy, 2008). Thus there are many indications that we tend to favor everything which attunes us in a positive mood and adulates our ego: seemingly immaculate perception, unbiased judgment, very promising business plans, etc.

These examples show that unconscious mental processes exhibit a strong distortive influence on behavior and decision-making. However, it is very efficient and fast to process inputs automatically. Daily activities like driving a car mainly rely on automatic and unconscious processes which are believed to have high capacity and to be fast and independent of the central working memory (Evans, 2008). Novice golfers for example perform more poorly under time pressure whereas skilled golfers even benefit from reduced performance time (Beilock, Bertenthal, Hoerger, & Carr, 2008). Automatized, unconscious processes allow us to rapidly and holistically interpret our environment, to process these interpretations and to act.

Unconscious effects are ubiquitous and pervasive across the major forms of psychological phenomena: appraisal and evaluation, motivation and goal pursuit, social perception and judgment, and social behavior. This research has been impressive in demonstrating the wide scope and reach of nonconsciously instigated influences on our daily lives. (Bargh, 2006, p. 148)

They even dominate behavior according to results of empirical research:

Everyday intuitions suggest full conscious control of behavior, but evidence of unconscious causation and automaticity has sustained the contrary view that conscious thought has little or no impact on behavior. […] conscious causation is often indirect and delayed, and it depends on interplay with unconscious processes. (Baumeister, Masicampo, & Vohs, 2011, p. 331)

Consciousness was not necessary for the survival of life as such. This ability probably appeared very late during the evolution of life. Nevertheless it seems to be the key

factor for at least many of the successes of mankind: It allows us to integrate behavior across time. It enables us to benefit from past events for present and future events. Furthermore, consciousness introduces social and cultural factors. Conscious thought helps us to deal with multiple alternative and conflicting possibilities (Baumeister et al., 2011). Another powerful aspect of consciousness is self-awareness, which means becoming the object of one's own attention. To have self-awareness and to be able to experience own mental states is a logical basis for making inferences about other people´s states of mind. The theory of mind signifies "the cognitive capacity to attribute mental states to self and others" (Goldman, 2012, p. 402).

We may conclude that the unconsciousness inevitably influences our awareness without being noticed. It offers fast, comprehensive and powerful processing but is not directly manageable. Consciousness and self-awareness first of all allow us to identify inconsistencies within ourselves and with the external context. "[M]ost and possibly all human behavior emerges from a combination of conscious and unconscious processes" (Baumeister et al., 2011, p. 354).

## Homeostasis and Self-regulation

*"Between stimulus and response there is a space. In that space is our power to choose our response. In our response lies our growth and our freedom."* - Viktor E. Frankl

An organism has to maintain more or less stable internal conditions despite a changing external environment. The self-regulating process which "maintain[s] stability while adjusting to changing conditions" (Billman, 2013, p. 159) is called homeostasis. Regarding physiology like blood pressure, breath, etc., this is an unconscious automatic process.

Humans may achieve the ability to regulate themselves mentally as well. Self-control and self-regulation are crucial for the person's ability to deal with emotions. They include the ability to alter one´s own responses, e.g. to inhibit emotions, to modify one´s thoughts, feelings, and behaviors. There is strong empirical support for the assumption that these capabilities play an important role for the whole life. "Insofar as self-regulation liberates human behavior from being driven solely by external stimuli and automatic, reflexive, or instinctual responses, it contributes greatly to the diversity and flexibility of human behavior" (Muraven, Baumeister & Tice, 1999, p. 446). The presence of these abilities in childhood correlates with attributes like high socio-economic status, good health and low percentage of criminal incidents and pathology as adults. People who manage to acquire these abilities during their life-times still may profit from the positive effects (Moffitt et al., 2011).

## Using the Best of Two Worlds

*"To play a symphony you have to tune your instruments."* - Ivar Vehler

Summing up we may say that unconscious and conscious processes exhibit characteristics which represent strengths and weaknesses relevant to specific contexts and objectives. Unconscious, intuitive mental processes are automatic, effortless, associative, rapid and parallel and result in skilled action. Consciousness on the contrary is controlled, effortful, deductive, slow, serial, self-aware, and results in rule application (Kahneman & Frederick, 2002).

Being aware of strengths and weaknesses of the conscious and the unconscious worlds allows us to consciously integrate them in real life and to activate them appropriately ( Nordgren, Bos, & Dijksterhuis, 2011). Some examples are given in the rest of this section.

It is a truism that you should think before doing something. However, in most day-to-day cases we do not. Usually we just act automatically like we are used to, e.g. when brushing our teeth or driving a car. If something unexpected arises like toothache or surprising road works, we have to stop automaticity and start to think about what to do. We tend to use consciousness as rarely as possible due to its demand in energy and the limited capacity of our working memory.

We know that thinking has its merits, but thinking too much can result in drawbacks. It potentially reduces preference consistency (Nordgren et al., 2011) and decision satisfaction (Ariely & Norton, 2011), e.g. decisions that would provoke arguments lead to favoring other decisions which are easy to explain to others but are not consistent with our own feelings and preferences any more.

Another very common aspect of thinking too much is to address too many attributes and options. Basically, an increase in available information improves decision accuracy but not infinitely. In the case of a mismatch between the amount of information input and the cognitive abilities we may call it a situation of information overload. If someone has to handle too much information, accuracy decreases (see Figure 1, Eppler & Mengis, 2004, p. 326).

See Figure 1.  Attached.

Focusing perception is obviously necessary for analyzing, planning, etc. Otherwise, focusing leaves out a lot of the context which could be important. Thus non-focusing may also be advantageous. Mind-wandering for example has positive effects like making diverse perspectives visible and fostering creativity (Schooler et al., 2014). Automatic, spontaneous associations build upon the unconscious resources. They offer a potential source for new perspectives and alternative approaches.

The concept of 'sleeping over a problem' is more than just a manner of speaking. During sleep, when consciousness and focus are mainly deactivated, memory is reprocessed which appears to be an important factor for how our memories are formed and ultimately shaped (Stickgold, 2005). Sleep shapes internal structures and helps to process contents unconsciously.

For both individual and collective intentions it may be concluded that "the decision maker might be wise to ask both questions - `Am I thinking too much? Am I thinking too little?" (Ariely & Norton, 2011, p. 44).

## Deidentification from Internal Structures

*"What happens when people are … over-attached to their creation and ideas? … What is my new role in life?"* - Dan Ariely

It appears to be logical that not only planning for the future and learning from the past are crucial for private life and leadership. Also being able to become aware of the present moment is important. To perceive what is actually going on in an open-minded, comprehensive and multidimensional manner (facts, emotions, desires, fantasies, weak signals, intuitions, etc.) means detaching oneself at least partially from what has been taken for granted up to now. The abilities to be patient and to tolerate ambiguity, frustration and anxiety are not only required to identify a good point of time for action but also to avoid bustling and to send signals of calmness and firmness to other people and colleagues (Simpson & French, 2006). Practices like individual self-dialogue and mental imagery may increase mental performance, show positive effects like enthusiasm, job satisfaction, and self-efficacy and decrease negative affects like nervousness (Neck & Manz, 1996). It is also found that methods to foster mindfulness and contemplation may change brain and immune function in a positive way. By applying them it appears to be possible to enhance a sense of equanimity and clarity, and increase empathy and relational satisfaction (Kabat-Zinn, 2003; Siegel 2007).

Summing up, we may say that detachment and deidentification from present convictions and expectations fosters the perception for what is actually out there. It releases awareness of something unknown up to now. This potentially could even open a door for the self to develop further (Beck & Cowan, 1996; Cook-Greuter, 2000; Cowan & Todorovic, 2000; Graves, 1966, 1970; Loevinger, 1996; Rooke & Torbert, 2005). To watch Earth from outer space proved to be an eye opener for some astronauts as well as for observers watching it on TV. This was called the big picture or overview effect (White, 1998). Thereby individual minds tune into a global context.

## Conclusion: Guiding Principles for Self-Leadership

Based on the arguments demonstrated above, the following points for orientation show – like light-houses – the direction towards more connected and integrated self-regulation, perception and behavior. We propose these guiding principles to support internal and external balancing and to improve self-leadership capabilities:

- *Foster self-perception and self-awareness:* Train the ability to mentally step out of yourself and to become aware of inner feelings, desires, memories, tensions, weak signals, intuitions, etc. Comprehensive self-awareness is required to become the leader of yourself. Become aware of and appreciate your personal (or organizational) "*instruction manual*", the unique characteristics of your *internal structures*: What are

your strengths and weaknesses? How did your history lead to the current status? What are you able to appreciate? What is "just" a result of history? What do you want to change? How do you perceive your own body? Does it tell you something? What are your core topics and core purposes?

- *Avoid data overflow, and search for blind spots:* Keep your capacity for information-processing in mind, reduce noise, that is, data which cannot be processed anymore and confuses instead of improving orientation. Reflect the impact of quantity and quality of external stimuli on your internal status.

  Invite conflicting perceptions and perspectives, guide your ways in unusual directions every now and then, try to appreciate contradiction and to examine paradoxes instead of denying them. Open yourself up for detours and for getting touched by something unknown. Connect yourself to the bigger picture.

- *Shape your internal structures, train self-regulation, find your personal ways for internal balancing and regeneration*: Usually we do what we are used to. Therefore it is important to take care of what we get used to. Design your habits consciously. Establish your ability to consciously deal with emotions, deliberation, desires, memories, fantasies, weak signals, intuitions, etc. Maybe you decide to let them flow naturally or to direct them in order to prevent damage. Self-regulation is a precondition to avoid troublesome and devastating decisions and irreversible damage. Find your ways to come back to an appropriate level of internal tension somewhere between burden and floppiness.

- *Consciously invite your unconscious*, the powerful automatic resources: Save space for both focus and mind-wandering, for closed and open modes, try to articulate and integrate suppressed perspectives, provide space for weak signals, for perceptions of pressure and contradiction, for dreams and spontaneous associations, use sleep for unconscious processing, leave open spaces, enjoy the silence.

- *Integrate analysis and contemplation*: Complexity may be approached in two ways: first to divide it into pieces analytically and second to dissolve the ego in it without words. The first one is easily traceable and communicable. The latter allows for taking advantage of much more diverse, comprehensive, yet implicit, subjective and unconscious resources within oneself and collectives than the explicit, analytical one. Individual experiences during contemplation can partly be made explicit, individually and collectively.

- Aim at appropriate *modesty* based on limited human resources on the one hand and almost unlimited complexity on the other: As human perception and its processing are very restricted in relation to the complexity of the world, our ability to understand and control even a small fraction of the environment will always be extremely limited and iteratively influenced by developments elsewhere. The impact of narrow-minded actions may be shattering.

- Aim at appropriate *courage* based on resonance of the inside and the outside: Explore the unknown possibilities mindfully. Listen carefully whether self-perception and perception of the surrounding field resonate with each other. Listen to your inner voice and accept it as one instrument of an orchestra. There are memories, rationality, emotions, desires, phantasies and weak, unique signals from the deep. Train to distinguish those various voices. These multifaceted voices are not reality, they are not the truth, they are what they are. Accept this orchestra as it is: If it does not communicate at all, if it communicates in a gentle or vague manner, if it is very clear and strong and does not leave you in any doubt.

- Aim at *detachment* and *deidentification* from existing internal structures: "Yes, that's the way how I (we) act at the moment … Yes, that's the way how I (we) decide at the moment … Yes, that's what I (we) believe at the moment. All this *is not me* (us). What I (we) am (are) at the moment does not limit myself (ourselves). What I (we) am (are) right now does not restrict what I (we) will become to be right afterwards or in weeks, months, years, decades."

- Step into and continue your personal way to *connect yourself to the bigger picture* and support the evolvement of life as such, e.g. through interaction with the younger or elder generation or in nature. To be a leader of an educational organization probably offers plenty of options for it.

## Towards New Horizons of Organizing Education

*"Teachers open the door. You enter by yourself."* - Chinese proverb

Organizations and societies consist of individual human beings. The collective builds upon the characteristics of those individuals and additionally shows emergent systemic characteristics.

As principles like those described above become more and more integrated and embodied by individuals, the culture of collective bodies begins to shift as well. Individuals with the capability to self-reflect, who are aware of their internal structures, aim to balance the conscious and unconscious. They try to be mindful and present and to act from a place beyond their separate sense of self when getting together. They strive to act from a place of deep connectedness, compassion and insight and therefore form a totally different "We." The collective consists of the intersubjective space that exists between people in relationship. It is what lies between individuals. They feed on it, too (Merry, 2009).

With this level of consciousness in individuals, organizations become purpose-driven and self-steering systems with distributed authority. When people identify with a purpose that is greater than themselves, and engage in self-steering structures, practices and cultures, suddenly energies unfold that were previously unavailable (Laloux, 2014).

There are a number of organizations that have already transformed and represent fundamentally new structures, practices and cultures. Among those are also educational organizations like ESBZ, a publicly financed school in Berlin. It "was founded in 2007 under the guidance of Margret Rasfeld, the school's director. It has attracted international recognition for its innovative curriculum and organizational model" (Laloux, 2014, p. 58). Twenty years earlier Rasfeld was teaching eighth grade students who wanted to discuss the violence, bullying, and extortions that were taking place in their school. She agreed and invited them to discuss freely.

The teenagers were looking to her for answers; she didn't have any, but she helped them journey to find their own. In the process, she discovered a side of the children she had never seen before. She marveled at the courage, persistence, resilience, intelligence, and compassion students were finding in themselves and that the school had never evoked before. From then on, she was determined that education should do justice to children's true potential and true nature; she wanted to engage not only their minds, but their hands, hearts, and souls, too. (Laloux, 2014, p. 94)

In this experience Rasfeld obviously managed to balance the open perception of the pupils and self-awareness. She didn't stick to what she knew already. A fundamentally new insight could reach her consciousness without being suppressed by well-established convictions.

This experience deeply influenced the approach of Rasfeld which is now realized in ESBZ. Open communication, storytelling and the fact that children are given full responsibility for their learning are examples of this approach and organizational culture. The school shows an "extraordinary spirit of learning, collaboration, and maturity" (Laloux, 2014, p. 160).

# Summary

We have briefly depicted some selected findings in human perception and cognition. From this basis we derived guiding principles for individual behavior applicable to day-to-day life which promise to reduce unproductive and devastating ways of homeostasis. These guidelines allow for a more comprehensive integration of internal and external stimuli and more sustainable decision-making and behavior. Thus they foster self-regulation and self-leadership of individuals, teams and organizations. If trained and automatized in practice, they promise to change emergent collective phenomena towards increased sustainability and life-support. There are also educational organizations among those which have already transformed, and represent fundamentally new structures, practices, and cultures.

On the basis of a well-founded multi-disciplinary perspective we derived a basis for leaders in the educational context to develop a more balanced and integrated self-leadership practice.

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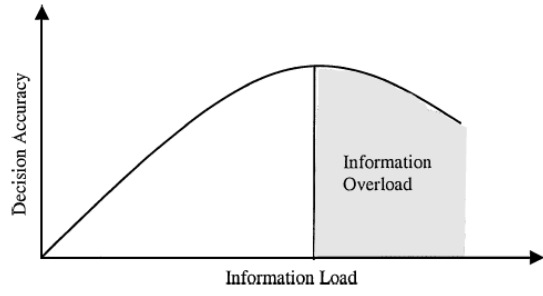
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*Figure 1.* Information overload.