

LANGUAGE AS CLUE

THE EFFECT OF PARADIGMS ON CREATING SYSTEMIC CHANGE IN BUSINESS



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EXECUTIVE SUMMARY

PARADIGM CHANGE IS A FREQUENT SUBJECT AMONG business practitioners, although it is often difficult to define change in terms of paradigm direction. This paper outlines four paradigms at work in the thinking of today’s business agents. Clarity comes in part from articulating the differences in language and practices that are based in different paradigms. In addition to discussion of the four paradigms in their relationship to change, this paper also examines the origin and applied use of each, along with the principles and instruments that each tends to draw upon. Examples of language that represent the metaphors of each paradigm are offered, as are practices that have developed from each and the effects of each paradigm and its set of practices on organizations, many of which are unintended and may even exacerbate the very situations that they are intended to improve. The overall intention of these comparisons is to improve discernment in an organization’s choice of practices and to facilitate shifts in paradigms and the ableness in individuals to create such shifts.

INTRODUCTION

We are fooled into thinking that language is an instrument working at our beck and call, expressing our ideas and thoughts as they arise in us. Interpretation of experience makes it seem that we choose our words and offer them up to those who listen, as if words are neutral and passive in the process. But what if it is really the other way around? What if we are tricked into using the words that seem handy to our purpose? What if we are actually blind to how they are framing our thinking and putting thoughts into our heads and mouths? What if we are slaves to our words and the instruments for them rather than their masters? This is what I postulate in this paper. The good news is that we have a choice. We can discover in language clues to our paradigms and the boundaries they impose, which will give us the power to change the paradigms we work within.

I offer business examples to illustrate the four major paradigms, presented as metaphors that are currently active in modern society. I use the metaphors and the language they evoke as a means to understand how language and paradigms affect our understanding of systems change and the working of systems. There is a short description of the sources and use of each paradigm, and what we lose when we apply inappropriate metaphors in our attempts to understand our world and bring change into it. I argue that inappropriate paradigms and their attendant metaphors are a primary source of our inability to manage climate change, ecosystem degradation, human societal health, and even business success. And yet we need paradigms, for without them our thinking processes would be fragmented and dispersed. Thus we must increase our consciousness of the effects of paradigms and metaphors on our worldview and take charge of their use.

HOW DO PARADIGMS WORK?

What we *see* and *think* is dictated by a worldview, a framing, which excludes some information and constantly interprets a scene, prior to our even “receiving the information” in our brains. In fact, we do not actually see; instead we interpret visual information based on the metaphors and paradigms we

hold. What we think of as seeing is an indirect process, although it seems direct. Eyes see! But eyes only pick up information that is then passed through our firmly held interpretations of all related subjects. We think we see an action in a person and know the intentions behind it. Science has shown us that this is not the case. We have invisible filters, or *lenses*, that govern what we see and how we make meaning of things.

If you have ever seen the work of a great photographer who used lenses to make subtle or sophisticated changes in different prints of the same image, you have experienced an example of the power of filters. They can significantly bend and rearrange how we see things even though the literal photo never changes. The place or persons photographed are constant. We frequently see this in politics, as well, where the same event can have radically different meanings, depending on which party or spokesperson is describing it. In each person's mind, one or another paradigm is working as a filter or lens.

A paradigm is a tightly knit cosmology that frames how we see everything we look at, hear, or otherwise experience. It is held together by our beliefs about the working of "REALITY," which are held as dominant agreements that bind communities of place or interest. Paradigms then become pattern generators in thinking, perception, and language, and therefore of action.

THE PARADIGM-FRAMING EFFECTS OF ENGLISH AND OTHER ALPHABET LANGUAGES

Language is one of the lenses that shape our experience. Language evokes or presents metaphors depending on the culture, and it forms in ways that are paradigm based and more or less directly correlated. English and other alphabetic languages require us to think metaphorically because they are abstract. For example, the letters D-O-G in English do not look like the object or idea that they represent. There is no animal shape in the three isolated letters. They are entirely an abstraction, designated to stand for the idea of a barking animal. We cannot make sense of them except through an intermediary process that evokes the symbolic or metaphoric idea of an entity whose name is "dog."

In contrast, the non-alphabetic Asian languages are based on ideograms, each of which is the sketch of a specific, concrete situation and its dynamics. No metaphoric translation is required. The need in English for metaphor in alphabetic languages and the requirement of a cultural filter to make sense of complexity in the world around us sets us up – if we do not develop our capacity

for reflection – to be misled into fragmented images of the world around us. On all of us, paradigms are working silently and invisibly; particularly through our languaging process.

FOUR MODERN PARADIGMS

There are four paradigms actively at work in our culture and in any business, in the twenty-first century. I call them, the "machine paradigm," "behavioural paradigm," "human potential paradigm," and "regenerative paradigm." I will describe each in turn and look at its source and patterns, including the language that defines it – and us – as we work to create systemic change.

THE MACHINE PARADIGM

Source: The machine paradigm arose in the eighteenth century with the industrial revolution, when the life-changing successes of vastly improved mechanical production made machines seem magical, even alive. At precisely the same time, Francis Bacon was proposing many scientific principles, using the mechanical metaphors he saw in the new mass production processes and improved productivity measures that resulted to describe nature and its work. Nature was a machine, a clock, or other inanimate device, made alive by the addition of the energy that was imported to run it.

Where this paradigm makes sense is in the world of machines, which includes devices as different as computers, assembly lines, rockets, and electrical systems. Its goal is the idea that, with intelligent intervention, humans can extend the life or effectiveness of a machine beyond its average or predicted use. The starting place for increasingly longer or broader extension is the understanding of each microscopic element that makes up the machine and the impact of these parts on one another. From this understanding it is possible to invent ways to improve the machine by replacing its parts or redesigning their work. For this purpose, working from the paradigm can be very useful.

Scientific Belief: The mechanical paradigm takes its direction from the laws of thermodynamics, a branch of physics concerned with energy and work appropriate to machines. Within thermodynamics, machines and the parts of machines are understood to be subject to general constraints, which are common to all materials and not the peculiar properties of particular materials. The father of this idea was the nineteenth-century French physicist Nicolas Léonard Sadi Carnot, who believed that the efficiency of combustion engines was the key that could help France win the Napoleonic Wars. His new way of thinking made machines preeminent

and thought of as ruled wholly by general physical laws, with no differentiating characteristics. All machines are the same as far as physics is concerned.

Another source for this paradigm, particularly as it is applied to humans, is system dynamics, which emerged in the 1990s. You may be aware of this adoption of the machine paradigm in its expression as systems thinking, often called “systems dynamics”, especially if you have been exposed to the work that MIT Sloan has promoted in this regard. The machine version of systems thinking is drawn from Jay Forrester’s work on artificial intelligence and the study of machines as a metaphor for the living world.

Instruments: The philosopher Sir Francis Bacon took the ideas of Carnot and used them to create a method for studying all objects, alive or not alive. He imbedded the laws of the mechanical world into the broader world via empiricism or the scientific method, which is now the basis of research in virtually all universities and laboratories. The methods of the mechanical paradigm in this context are reductionism (break a thing down to its smallest atom), problem-solving (start with a problem and then solve it), and managing all variance to bring performance back toward a posited ideal. These methods are of extraordinary use in the world of non-living objects, but they are neither accurate nor useful when transferred to the living world.

MECHANICAL PARADIGM LANGUAGE AND BUSINESS PRACTICES

Terms that are clues to the machine paradigm include *feedback, procedures, standards, alignment, supply chain, causal loops, parts, and elements.*” All of these are present literally in mechanical systems, but not in living systems, even though we have come to see them as present their by transference. For example, there are no “parts” in nature. Even though we speak of trunk, limb, and leaf as *parts* of a tree, there are no dividing lines among them, and we do not have the ability to tell where one stops and another starts. They are related to one another as a living continuum, as are the totalities of all living systems. We may speak of supply-chains as part of the business world, but chains exist only in machines, never within the living systems that we call *businesses* and *economies*. In living systems and human organizations, chains, parts, and all of the terms above are metaphors borrowed from the machine world and applied inappropriately.

However, many current business practices are drawn from these metaphors, including Peer/360° feedback and problem solving as the basis of creative pursuits that break questions and situations into parts as if they were machines. Nature does not

work from problems; its way of keeping a system healthy and evolving is an interactive dynamic.

The most toxic machine paradigm practice in businesses and other organizations is *feedback*. In machines, feedback processes employ governors to detect overload or runaway energy flows and them down. For example, a governor can shut off electrical power to an appliance in case of a surge or gas from a pump when a tank is full. The governor provides a failsafe when a substance or action moves unsafely or outside of prescribed performance limits, e.g., out of bounds or outside of standards. Feedback is the mechanism for managing or controlling for nonconforming events.

Clearly, feedback is essential for the safe and convenient operation of nonliving machinery, which cannot otherwise be self-managing. It is likely just as obvious that feedback has been inappropriately transferred to human organization and regulatory processes, where it mechanizes relationships and sends discouraging signals to individuals when they behave out of standard. In the living world, working from the mechanical metaphors limits imagination, creativity, and initiative and inevitably cuts off access to more inclusive paradigms.

EFFECTS OF APPLYING THE MACHINE PARADIGM TO LIVING SYSTEMS

Just as machines are seen as “the same,” subject to the universal natural laws that govern the physical world, the machine paradigm applied to organizations tends to invite us to *commoditize* people. It reduces the flexibility to change roles and create different ways to work, they stop expecting much from themselves. This causes a business to be less resilient in the face of change, which seems inevitable. People learn to shun change and value and expect permanence. It is often said that people “resist” or “fear” change. When they are managed as machines, with the practices of this paradigm, resistance feels accurate because standards flatten any opportunity to contribute. What is actually true it that people resist and fear “imposed change”, but imposition is the only possible approach to change in an operation conceived of as a machine, whose people are mostly identical parts.

Mechanization of work, tends to reduce or eradicating the experience of *caring*, which comes from being connected to others and to contributions associated with significance. When people are seen as just like each other and treated as cogs in a machine, it is difficult for them to feel that they are valued contributors and therefore difficult for them to care about work.

The machine paradigm teaches people not to think but to wait for and expect external direction. The

top-down managing practice, which is a primary structure of this paradigm, is extremely hierarchical. All decisions and planning are conducted from the top down. Yet, managers are surprised that people do not work independently when asked to be in teams. It takes a significant re-education and restructuring of work for self-initiative to return.

THE BEHAVIORAL PARADIGM

The second paradigm in modern culture emerged after the machine paradigm had taken solid hold, carrying over the idea formulated by thermodynamics that objects need external inputs to work (gas into a car, electricity into a radio) but shifting the input from fuel or energy sources to the manipulative management of one person or group by another. The basic premise of the behavioural paradigm is that people and groups are externally determined by the consequences of their actions and that the introduction of behaviour intercedents can give us the power to control them based on their reactivity to pleasure and pain. Managing these stimuli can produce predictable responses that are beneficial to others, although not necessarily to the person who is being manipulated. The behavioural paradigm has as its goal the prediction and control of behaviour.

Source: John B. Watson, who originated the field of behaviourism, emphasized the external behaviour of people and their reactions in given situations, rather than their internal, mental states. In his opinion, the analysis of behaviours and reactions was the only objective method for developing insight into human actions. This outlook – combined with the complementary ideas of determinism, evolutionary continuism, and empiricism – has contributed to what is now called “radical behaviourism.”

Watson’s behaviourism rejected the study of consciousness. In fact, he was convinced that it actually could not be studied, and that past attempts to do so had only hindered the advancement of psychological theories. He felt that introspection was faulty at best and rewarded researchers with nothing but infinitely more issues to be resolved. He pushed for a psychology that would no longer be considered the science of the “mind” and insisted that even the existence of a mental life is false. Thus individuals are only the sums of their behaviours.

Watson’s work became relevant to business when he made a promise and later a deal with leading industrialists, who were benefiting greatly from the industrial revolution and the marketing of goods to a newly rising middle class. Contrary to the way machines worked, human producers

were problematic. They were emotional and unpredictable, and managing them consumed energy. Watson promised that in return for funding to build a lab, he would show industrialists how to control people and their behaviours, making them as docile as the powerful machines they operated.

The industrialists bought the idea, and Watson set up his lab at Johns Hopkins University to study motivation and behaviour. His successful selling of the theory that rats and humans were interchangeable in the development of motivation theory affected the basic operation of industrial organizations and influenced hundreds of doctoral students, including B. F. Skinner. Thus, since the mid-1950s, the faulty reduction of the human mind to rat brain has been rampant in business, education and even parenting. (A footnote to this story is Watson’s experimentation on orphans and the children in his own extended family, which led to their long-term mental illness and caused Watson to lose his teaching positions.)

Use: The behavioural paradigm has as its goal the prediction and control of behaviour, with the intention to manipulate outcomes in others. The intention is to discover how to manipulate human behaviour through the study of rat behaviour. In fact, behavioural science still draws inferences about human behaviour from studies of lower-order mammals.

Scientific Direction: The behavioural paradigm’s guiding theory is that people are not self- and internally motivated, that all behaviour is the outcome of avoiding pain and seeking pleasure. Its guiding principle is to find what external stimulus produces what reactive response and, as in the physical sciences, to find a general description of how behaviour works, independent of the unique behaviours of specific individuals.

Instruments: Because the foundation of this paradigm is that there is no inner life, no human mind, its method is to detect with observation via the senses and sense-based instruments, which are considered to be reliably objective. Controlled studies, usually in a laboratory as described above, are the core instrument. Adopted from physical science, studies always start with hypotheses and attempt to disprove them, based on what is in physical existence and can be present to the senses. However, as stated in the introduction to this article, all human events are observed through filters that give them shape and meaning. Thus the major flaw in this work is the observers’ unawareness that their findings on human behaviour have been framed by a world view based almost entirely on the study of lower-order mammals trapped in cages.

BEHAVIOURAL PARADIGM LANGUAGE AND BUSINESS PRACTICES

Terms that are clues to the behavioural paradigm include *influence, incentivize, train, role model, top or bottom of class, best in class, winning, and win/win*. There are two assumptions embedded in this language. The first is the idea that there are external ideals that everyone should meet. The second is the idea that people can be manoeuvred toward ideal behaviour by external reinforcement and forces. Influence, incentives, and role models, along with rating and ranking, are based on manipulating others for our own ends, even when these are supposedly good ends.

Because the intention is to manipulate others with the use of pain and pleasure, the primary business instruments are incentives, rewards, recognition, rating, and ranking. These practices are most often applied without examination of the paradigm's assumption that lower-order animal behaviours translate directly to human behaviour. Performance Reviews are based on the promise of external control, even when others give input, and the assumption that everyone moves toward the same ideals. Modern neuroscience has confirmed this is not the case.

EFFECTS OF APPLYING THE BEHAVIOURIST PARADIGM TO LIVING SYSTEMS

This paradigm, as played out in business, promotes internal considering, which causes individuals to focus on themselves and the potential effect of every outcome on them alone. When people are internally considering, they have no thoughts about the greater good or the value of their actions for others. Everything is considered from a personal bias.

Behavioural systems that are set up primarily as managing systems drive and accelerate internal considering because they do not put people in control of their own destinies, with the ability to affect outcomes. Two of the primary methods in this kind of system are incentives and rewards, which are based on results that are tied to the performance measures of management. They make recognition seem scarce because others determine the few who are to be acknowledged and therefore valued. When a few are set up as role models, the default concern becomes, "all about me and the effects on me."

Another effect of managing systems is to cause people to seek to "beat the game". The goal is winning and some become winners, good at meeting the conditions. With limited rewards, high stakes, and secretiveness, a lot of innovative energy is put to winning. Even when it is a win-win for the company

and the individual, people are likely to modify their behavior to win, thinking less about their contribution to an end larger than themselves.

Managing systems also reduce motivation, particularly intrinsic motivation. The focus is external, as is intended by the behavior systems. But when people are tantalized by the carrot at the end of the stick, they do not motivate themselves or pursue personal agency applied to grander work. They pursue the carrot.

THE HUMAN POTENTIAL OR HUMANIST PARADIGM

According to Wikipedia, the human potential movement arose out of the counter culture milieu of the 1960s and formed around the concept of cultivating extraordinary potential that its advocates believe to lie largely untapped in all people. The movement took as its premise the belief that through the development of "human potential," humans can experience an exceptional quality of life filled with happiness, creativity, and fulfilment. As a corollary, those who begin to unleash this assumed potential often find themselves directing their actions within society towards assisting others to release their potential. Adherents believe that the net effect of individuals cultivating their potential will bring about positive social change at large¹.

Core to this movement was the *ableness* of humans to be aware of and manage not only their own behaviour but also their inner mind and motivation. Most of this movement's emergence was a reaction to the behavioural psychology of the previous decades.

Source of the Theory: Great thinkers and teachers of the twentieth century – including Abraham Maslow, Virginia Satir, Carol Rogers, and many others – rejected most of the ideas of the behaviourists. They felt that humans could be completely self-determining and could change themselves in order to achieve change in the world beyond their apparent potential.

Primary Use: The goal of the humanist paradigm is personal and human growth for each individual. As compared to the source of behaviourist theory, the human potential theory was developed by a movement, where hundreds of people almost simultaneously created Humanist Psychology. The ground was the self, the individuated person who is not fixed or limited from birth, who is characterized instead with unique potential that can be realized when it is intentionally developed.

Direction and Means of Study: The humanistic movement seeks to build programs and practices to realize the unique potential of every human being. Because personal development is the cornerstone of its work, the movement eschews all external motivation in

favour of reflective practice, including meditation. Humans are seen to have agency, free will, and self-accountability. Personal growth is possible throughout one's life.

Pursuing potential is motivational, even more so than external conditions of pain and pleasure and can override the control that external force places on humans. In the last decade, it has become increasingly possible to conduct research on inner experiences, through fMRI, action research, and surveys. This research has the potential to move beyond the generalizations of the machine and behavioural paradigms in order to develop more powerful applications for the development of individuals. However, it is also at risk of becoming a resource for the commoditization of individuals, based on the assumptions that motivation always arises from internal sources and that all people respond in similar ways to educational and development processes.

HUMAN POTENTIAL PARADIGM LANGUAGE AND BUSINESS PRACTICES

Language clues to the human potential paradigm include speech about *family systems, personal interactions, gestalts, mirroring, anchoring, whole persons, uniqueness, self-organizing, self-accountability, and human stewardship for the environment.*

Business practices include the development of emotional intelligence, application of neuroscience, leadership for development, team building including survival courses, mentoring and coaching. They often include applications of therapy and counselling, such as defining types and strengths, and even martial arts as a new field of practice.

EFFECTS OF APPLYING THE HUMAN POTENTIAL PARADIGM TO LIVING SYSTEMS

Practices of the human potential paradigm tend to awaken personal agency. People feel that they can stretch and grow. They are often invited to be self-initiating, and this further fosters the sense of power over one's future. Maybe more importantly to business, it increases the desire to contribute and make a difference. All persons are seen as *growable*, and so mistakes are tolerated and often included, even risk taking.

Where behaviourist practices increase external motivation expectations (What's in it for me? What have you done for me lately?) the humanist practices escalate motivation that is intrinsically evoked by oneself on oneself. Because most of these practices foster teamwork and engagement, along with far less divisive competition, this

paradigm tends to create a sense of belonging and to result in far less reactivity. All of the human potential practice effects combined, fostering self-determination with personal agency, are more intrinsically motivational and team building, ensure more mental space and will for innovation within an organization.

THE REGENERATIVE PARADIGM

The regenerative paradigm is based in a living systems cosmology. Humans exist embedded in an ecosystem that is alive with potential at all levels, from microscopic to planetary. They cannot be separated from this system, and they have unique work to do within it. Each entity in the system is interdependent with the greater system. Its work is complex and dynamic and must be studied as a living whole, not broken into parts by dissection or reductionism.

Source: The theory base for all who work in the regenerative world is the study of ecology and holistic sciences. The goal is to reveal and support the expression of the essence of each living entity, whether a person, a watershed, or a business. Each is unique. The method is to learn to see nodes or keystone processes. For example, when wolves were removed from Yellowstone National Park in the United States, the entire system collapsed, including rivers and the ecosystems surrounding them. When wolves were reintroduced, the system regenerated itself. The wolves were a keystone species, essential to the working of the system. The same kind of effect can be seen in a business's work system, where customers' lives are the source of growth and the keystone of responsibility and innovation. Learning this nature of nodal thinking is the ground of the paradigm. A core capability is learning to see nature as a master designer and humans as integral entities that can develop energies to make the system healthier.

Science Direction: Study and validation of the work of living systems is the source of the paradigm. The work of James Miller and Living Systems points to the overall uselessness of reductionism in understanding the work of living systems. The evolutionary biologist Elizabeth Sahtouris has also been a major developer of theory in this field, as have James Gleck and his Gaia theory of the Earth as a whole, living organism, and Rachel Carson, author of *Silent Spring*.

Instruments: This paradigm's instruments include building human capability for the intentional evolution of living systems and exploring nonlinear reciprocity and the capacity for intentional evolution toward the realization of the potential of all entities with systemic stakes in the outcome. The use of technology such as Google maps has enabled time-lapse

photography that reveals the changes of in ecosystems over time, making the largest living systems seem less static.

REGENERATIVE PARADIGM LANGUAGE AND BUSINESS PRACTICES

Language clues to the regenerative paradigm include the terms, *working*, *imaging*, and other verbs that end in “-ing” and describe processes; *nested wholes*, *regenerative*. Regenerative practitioners use the less anthropocentric term *lifeshed* in place of watershed.

Regenerative business practices include all that image work as a “value-adding process,” in which value increases and extends as the result of each interaction and transaction and in which systems frameworks reveal the complexity and dynamics of living systems.

EFFECTS OF WORKING WITHIN THE REGENERATIVE SYSTEM PARADIGM

Courage in the face of difficulty – one practice that has been very effective, introduced by Carol Sanford Institute, is “promises beyond ableness.” Within the context of a strategic direction, organization members are each asked to find a contribution they want to make that is beyond what they feel they are capable of and their current ableness to deliver. In spite of this gap, those who make promises beyond ableness want to grow and learn in order to make the offering. They are self-directed in achieving the ends they pursue, and they almost always succeed beyond their own expectations and increase their capability for the next round of work and promises.

Another effect is the removal of hierarchies and development of work “self to self,” rather than role to role. People talk to one another without the constraints of rank or authority; only the quality of ideas matters. All parties judge ideas based on the outcomes for a greater whole, and not their own benefit. Without boss-and-subordinate’ roles in mind, creativity grows and the political position disappears.

When intention is focused on producing a regenerative process, global imperatives can be imbedded in strategy from the beginning. They are not a separate function of the few, but the pervasive work of all, part of every conversation to determine which the decision and choices are integral with the imperatives of a vital and viable society and planet.



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¹ Wikipedia contributors 2015, “Human Potential Movement.”