

BRAIN AS A BUSINESS MODEL

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Clear parallels can be drawn between a new understanding of the human brain's multilayered cognitive functions – the bottom brain, top brain paradigm – and the way that businesses work. Below, the authors identify and analyse four different modes in which people operate and argue that, similar to human beings, business enterprises function as if they have highly intertwined top and bottom brains.

The human brain and “brains” of business enterprises have a lot in common. Both set goals, create situational awareness, and use experience to refine and execute plans. Both have distinct yet highly intertwined parts with complementary roles. The classification of people's cognitive strengths and weaknesses has useful parallels to those of companies. Akin to successful individuals, thriving organisations exhibit a rich and balanced collaboration between different parts of their corporate brains. This enables them to understand “the future that has already happened,” evolve strategies, and remain competitive and relevant.

The newly introduced *top brain, bottom brain* paradigm – the foundation of the Theory of Cognitive Modes – is especially useful for examining this parallel. This new paradigm rests on solid scientific findings about how the top and the bottom parts of the human brain operate. It describes the brain architecture that

gives rise to key aspects of behavior, thoughts, and feelings, all of which shape how a person relates to other people and makes sense of the world. This characterisation of the brain avoids problems encountered by other popular theories, most notably the notion that the left hemisphere of the brain is analytical and logical while the right one is intuitive and creative. The left/right story treats brain systems as independent agents, free to operate in isolation, but neuroscientists have long known that the brain is a single, marvelously complicated and deeply integrated system. Contrary to the cultural myth, nobody is truly “left-brained” or “right-brained”.

The top and bottom brain systems are distinct with respect to their anatomy, neurological connections, and cognitive functions. Many studies converge in showing that the top portions of the brain are crucially involved in making decisions as well as devising, carrying out, and adjusting plans. The top part of the brain is also responsible for noting where objects are located in space, which is often necessary in the execution of strategies. At the same time, research shows that the bottom portions of the brain are crucially involved in classifying and making sense of what one perceives.

Even this brief characterisation underscores why the two parts of the brain must constantly interact: in order for the top brain



to revise a plan, it must have information about what happened as the plan was being carried out – which is registered by the bottom brain. And as the top brain carries out a plan, it generates expectations about what should happen – which in turn “primes” the bottom brain, making it easier to perceive the expected consequences.

At work and elsewhere, people use both parts of the brain. However, they differ in the degree to which they rely on each of the two brain systems. Nothing in the immediate environment may force a person to make a detailed and subtle plan – it is she who deploys certain parts of her brain in a more multifaceted way in order to consider a situation more deeply.

Although people can and do operate in different modes depending on the situation, research shows that we all have a dominant cognitive mode. This mode arises from the degree to which a person typically relies on each brain system above and beyond what is dictated by immediate circumstances:

- **Mover** mode arises when people deeply utilise both the top and bottom brain. They formulate and act on plans

using the top brain – and also register the consequences of doing so using the bottom brain. This leads to effective re-adjustment of goals and plans. People who habitually operate in this mode tend to become natural leaders who enjoy positions and environments that allow them to plan, act, and see the consequences of their actions.

- **Perceiver** mode arises when people deeply utilise the bottom brain but not the top brain. As a result, people operating in this mode focus on making sense of what they perceive, interpreting experience, putting information in context, and understanding the implications of what they encounter. They don’t devote much time to formulating detailed or complex plans.

- **Stimulator** mode arises when people deeply utilise the top brain but not the bottom brain. As a result, people operating in this mode can be creative, original, and indispensable in generating new ideas, but their strategies and behaviours can be disruptive and not adjusted appropriately when a change in the environment warrants a different course.

- **Adaptor** mode arises when people do not deeply utilise either the top or

the bottom brain. People operating in this mode are typically not overly concerned with formulating plans, nor are they focused on classifying and interpreting what they experience in great detail. Instead, they tend to be absorbed by immediate imperatives and tasks, allowing external forces to mold their goals and plans. As a result, people operating in this action-oriented mode often become valuable team members.

Similar to human beings, business enterprises function as if they have highly intertwined top brains and bottom brains that play distinct yet complementary roles.

The nature of this interaction underpins the firm’s business model, described by organisational theorist David Teece as the “architecture of value creation, delivery, and capture.” Business models are the “mechanisms” by which “the business enterprises deliver value to customers, entice customers to pay for value, and convert those payments to profit”. They represent a broad perception of the market need – what customers want and how they want it. They reflect the organisational design that best captures the market need and enables the firm to conceptualise and react to environmental changes. Because business models represent a multitude of decisions, communications, and actions, how the two parts of the corporate brain interact is of critical importance.

In a direct parallel to the human brain, executives and board members who constitute the “top brain” of a company put forth strategic vision and goals, set up processes and plans, direct execution, and revise plans when expected events do not occur. They react to changes in the operating environment through changes in strategy, new products, and business model transformations. In complementing these “top brain” activities, employees and divisions who form the “bottom brain” of a company classify and interpret what they perceive – in terms of changing customer

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needs and feedback as well as emerging dangers and opportunities. These "bottom brain" activities allow companies to execute the evolving strategy, innovate, and improve methods and processes – all while helping executives and boards evaluate and refine strategies.

The new theory of the workings of the human brain offers useful insights into corporate business models in terms of the appropriate integration of corporate strategy, risk intelligence, and organisational development. Thriving companies, through strategy, governance, organisational processes, culture, and innovation, exhibit constant communication and collaboration between the top and bottom parts of their brain. Their top and bottom brain systems do not compete with one another, and their complementary skill sets and fluid collaboration are indispensable in a company's ability to navigate changing environments. In addition to superior performance, this helps create powerful brands that reflect the external perception of the very essence of a firm's vision, value proposition, and culture.

Risk-centric business models of financial firms provide a useful illustration. In a financial industry setting, the corporate top brain is responsible for setting vision and strategy, aligning risk appetite with business objectives, and allocating capital across products, risks, and business units. The top brain conducts strategic planning, evolves products and services, and optimises balance sheets. In the language of

risk intelligence, the top brain continually deploys the arsenal of business, organisational, and risk levers in navigating the firm. The top brain also "primes" the bottom brain, providing it with direction and expectations. At the same time, the bottom brain provides the top brain with situational awareness, interpretation, and feedback that can only be obtained in the "trenches".

In a direct parallel to four human cognitive modes, corporate successes and failures during and since the 2008 – 2009 financial crisis can be described in terms of the interaction between top and bottom parts of the corporate brain.

In pursuit of higher profits, many **Stimulator** firms, most visibly in the insurance and brokerage sectors, augmented low-risk business models with significant risk taking. Reckless strategies – which were excessive to begin with – remained in place well after the change in the market environment warranted a serious readjustment, leading to bailouts and bankruptcies.

Adaptor firms – which were not overly concerned with creating an original strategic vision or deeply analysing the changing environment – allowed external forces to shape their destiny. They believed that even when competitors behaved irrationally or recklessly, their job was to continue "dancing while the music was playing". Nationalisations and bailouts followed.

As a rule, **Mover** companies successfully adapted to environmental changes, mitigated threats, and capitalised on crises and opportunities. Their vision and strategy was rigorously developed and clearly communicated to the entire organisation, shaping a strong culture and brand. Feedback from customer interactions and market signals flowed up and across the organisation, leading to strategy and risk readjustments on the executive and board levels. These organisations deployed business, organisational, and risk levers in effectively

executing the strategy. Their organisational design, feedback loops, and leadership communication were custom-tailored to the nature of their business models and risks. Thus, both top and bottom corporate brains were complementary and aligned, effectively collaborating toward clearly-defined and rigorously measured shared objectives.

Perceiver companies provide perhaps the most intriguing case, spanning a gamut of successes, failures, and mediocre performances. In some industries, the nature of Perceivers' businesses did allow them to deemphasise the top-brain strategy, focusing on "harnessing the slices of genius" across the bottom brain instead. However, experience shows that sufficiently complex firms exposed to a variety of strategic, financial, and operational risks face formidable challenges when operating in a top-brain-lite mode:

- During the buildup to the financial crisis, some Perceiver firms delegated major investment and trading decisions to organisational silos. With plenty of sophistication and situational awareness, these silos invested in asset classes they perceived as undervalued or positioned to benefit from the firm's macroeconomic expectations. Seemingly unrelated risks became highly correlated in a crisis. When the firm's liquidity position deteriorated and the aggregate amount of risk exceeded the risk-bearing capacity, value destruction for stakeholders and taxpayers ensued. Lack of risk aggregation on the firm-wide level and the absence of contingency plans – responsibilities of top brains – have revealed major weaknesses of such Perceiver business models.

- During the same period, some Perceiver firms pursued earnings by investing in asset classes that looked "familiar" but in reality contained entirely new dimensions of risks. In the human brain, we become experts at interpreting only specific domains – and often may not realise that expertise in one domain

does not transfer to another. Similarly, these firms didn't realise that their investment experience in one asset class could not be easily transferred to a different one without significantly expanded knowledge and capabilities. Significant losses ensued.

- Another group of Perceiver firms also operated in silos but remained conservative throughout. They stuck to their knitting before the crisis and stayed away from complex businesses and investments they didn't understand. As a result, they avoided both the extraordinary earnings enjoyed by their competitors as well as subsequent financial or reputational losses. However, they also did not deliver the kind of performance that Mover companies generated after the crisis. It is noteworthy that across the insurance, banking, and asset management sectors, many such ultra-conservative Perceivers were former Stimulators who changed their dominant mode after near-death experiences.

The top brain, bottom brain paradigm enhances the arsenal of tools used by executives and boards of directors in building high-performing, risk-intelligent, and aligned organisations.

It is important to keep in mind that no cognitive mode is inherently better or should be viewed as a matter of "best practices". As an ongoing corporate priority, the interaction between a firm's top and bottom brains must be aligned with the nature of its business, the inherent portfolio of risks, and the operating environment. Such alignment spans division of labour, organisational design, flow of information, and leadership communication. In addition to helping companies maintain a relevant and compelling value proposition,


it helps achieve operational excellence and strong cultures where employees can relate corporate vision to their daily activities – all key determinants of agility and superior performance.

For instance, when facing a disruptive technology or a rapidly changing environment, a company accustomed to operating successfully in Mover mode may fail to adapt quickly enough – by dismissing viable solutions that may seem outlandish. In this case, a "generate and test" strategy that often works well for human brains could prove useful: an out-of-the-box Stimulator-mode idea generation followed by the Perceiver-mode careful examination of alternatives in the harsh light of reality. In another example, when a firm with a viable business model decides to focus on execution and productivity, a temporary shift to an Adaptor mode may be beneficial.

"Business model dynamism" – a company's ability to adapt and evolve its vision and strategy in the face of environmental changes – was identified in *Financial Darwinism* as a key ingredient of corporate survival and lasting value creation. In cognitive terms, "static business models" have a direct parallel to "rigid cognitive mode syndrome" – a person's inability to realise that their mode of operation is not appropriate for the situation at hand. Needless to say, a change of the dominant cognitive mode – or a business model transformation – requires significant motivation and investment. In the corporate setting it requires, above all, genuine leadership.

In addition to insights into high-performing business models, the new understanding of the human brain is also useful in building high-performing teams. First, the knowledge of the dominant modes of thinking and behavior of individual team members enables an assessment of their strengths and weaknesses from a new perspective, helping design an effective division of labour. Second, it helps construct a setting where team

members extend each other's intellectual, cognitive, and emotional capabilities and skillsets. Effective decision making – supported by aligned organisational structures and cross-functional communication – is consequently achieved across strategy, risk-taking, product development, and other important activities. When Mover-leaders or Stimulator-innovators are supported, informed, and cautioned by empowered teams of Perceivers and Adaptors, the collaborative whole can be much greater than the sum of its parts.

The top brain, bottom brain paradigm enhances the arsenal of tools used by executives and boards of directors in building high-performing, risk-intelligent, and aligned organisations. It is also consistent with the lessons learned from successful companies: lasting value creation, resilience, and dynamism stem from a deliberate cultivation of both parts of the corporate brain, their integration, and productive collaboration. 

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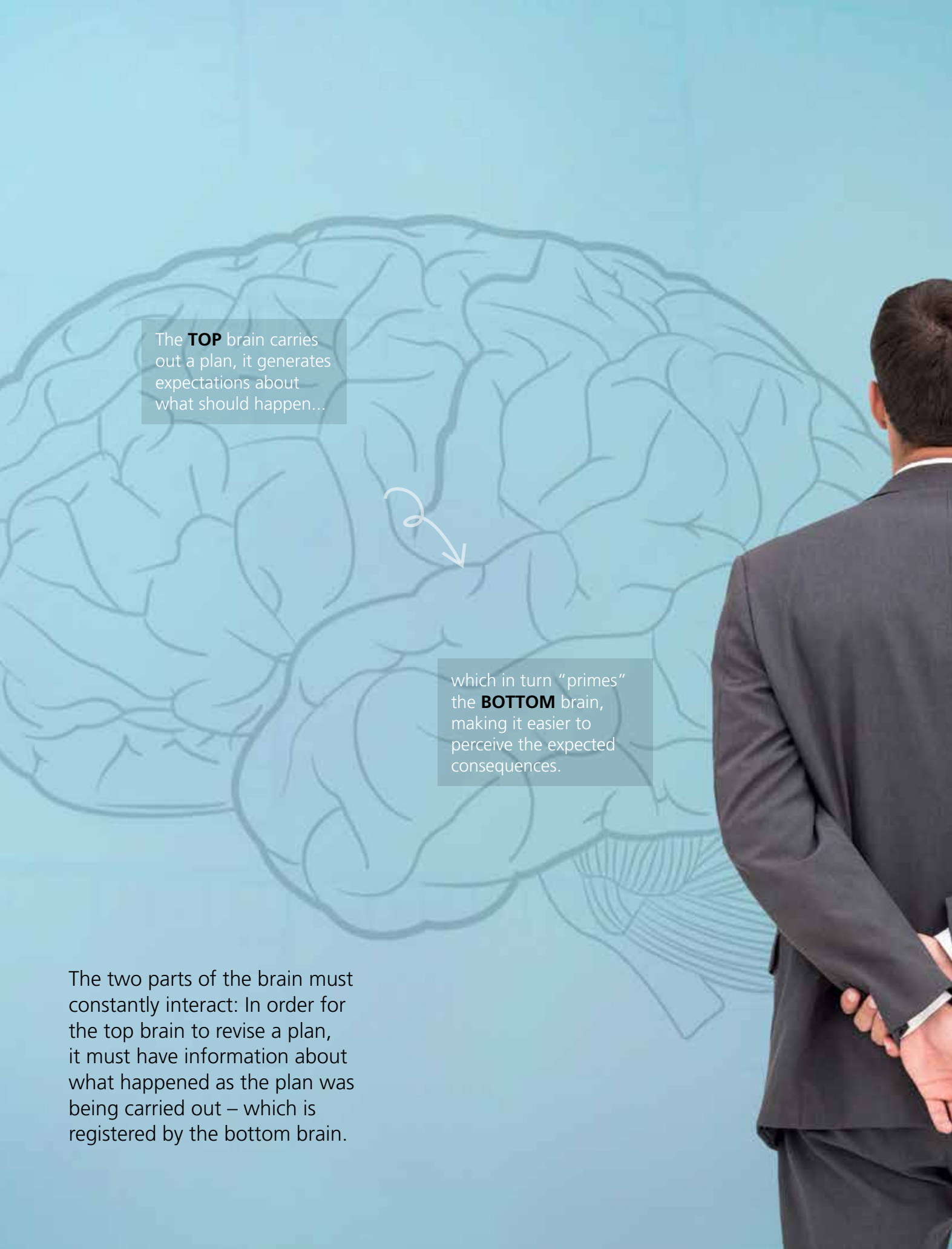
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