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CREATIVITY IN BUSINESS

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ABSTRACT

The paper explores the creativity in business under three perspectives: Creativity in technology, creativity in product planning, and creativity in marketing.

Creativity in business has to do with the generation of new ideas that are converted into economic activity. Therefore, creative thinking needs to be supported by a strong culture of commercialisation. Once a new thought has been developed, it must be validated, then a prototype offering has to be created, the competitive environment assessed, the offering tested, feedback used to refine the offering, a business plan tightly constructed and executed when the new entrepreneur is ready to seek outside investors.

INTRODUCTION

S [Science] does not equal T [Technology] and T does not equal I [Innovation]

This is the title of a famous lecture by Akio Morita, Sony's founder, at the Royal Society in London, in 1992.

From his perspective, "just having innovative technology is not enough to claim true innovation". True innovation is made up of three key elements which Morita call the "three creativities":

CREATIVITY

Creativity is a combination of already existing elements.

Contrary to the common belief, creativity in technology, or technological clairvoyance, is far from enabling technology entrepreneurs to succeed.

Technology, even a good one, does not sell itself.

"Creativity in product planning", argued Morita in that lecture, "is so important, though many do not seem to recognise this... What difference does it make how fantastic and innovative your technology is if you do not have the ability to design a useful, attractive, *user-friendly* product?"

Innovation "may not be particularly profound in a technological sense – indeed it often relies on off-the-shelf components" (Christensen, 1997)

"Videotape recording technology – Morita observed – was first introduced to the consumer market in 1965, but the home video market was not born until 1975. That was when innovative product planners took the tape out of the reels and put it into a convenient Betamax cassette for home use. Creativity in marketing also cannot be overlooked. Again, if you have great technology and even a great product, you will only find success if the market is informed enough to welcome your product".

Borrowing an example from Sony's history, Morita made reference to the case of the Walkman. He submitted that *many* have called it an innovative marvel, but where is the technology? [All components to make it were already available on the shelves].

"Frankly, it did not contain any breakthrough technology. Its success was built on product planning and marketing" (Morita, 1992).

The progress in business knowledge is relevant as much as developments of science and technology.

FORESIGHT

So, however dazzling the technology may prove to be, addressing the right window of opportunity into the marketplace will be the dynamo powering technology entrepreneurs (*technopreneurs*) to international pre-eminence. By implication, the technopreneur must be

endowed with perception of the significance and nature of events before they have occurred, care in providing for the future and the ability to look forward: in one word, he needs foresight.

Technopreneurs who are lacking in such foresight are "Men who learn only through suffering" – as Demosthenes warned in his work *On the Trierarchic Crown*.

COMBINING CREATIVITIES

The technopreneur's *modus operandi* consists precisely in combining Morita's *three creativities*.

Figure 1: Conceptual Map to Discern Creativity in Business



Legend for Figure 1 –

MI: market impact

TI: technology impact

L: low impact

H: high impact

C: creativity - high market impact and high technology impact

CL: clairvoyance (far-seeing) – high technology impact and low market impact

T: time-to-market – high market impact and low technology impact

R: routine – low market impact and low technology impact

1: core competence or domain expertise

2: known unknows

3: unknown unknowns

4: today's competitors

5: potential invaders

6: technology islands

How it can happen is represented in **Figure 1** where four different situations emerge from the intensity of both the technology impact and the market impact caused by a given innovation on the company to which it is coupled. In turn, the company is articulated in 6 regions of business knowledge:

- 1. The core competence or domain expertise (that is, what the company is good at see region 1)
- 2. Known unkowns (region 2)
- 3. Unknown unkowns (region 3) nearby the core competence
- 4. knowledge of the current competitors (region 4)
- 5. Knowledge of outsiders as potential invaders (region 5)
- 6. Perception of original technologies from today's new scientific discoveries that can turn into tomorrow's markets (region 6)

Creativity occurs when both technology impact and market impact are high (see quadrant C in **Figure 1**). In one respect, the introduction of disruptive innovation that comes from creativity breaks the rules that have been governing region 4 and, from another point of view, pre-empts attacks from outsiders in region 5.

Thus creativity inflicts major changes on the core competence or even induces the abandonment of what the company until then thought it was good at.

A disruptive innovation is an innovation that sweeps away the traditional competitors whose products or services are hit by irreversible obsolescence.

CLAIRVOYANCE

Clairvoyance exhales a flavour of science. Creativity secretes a business touch of geniality. *Pure* scientists and researchers yearn to go beyond the utmost limits of the current knowledge domain. They have a long-term commitment to solve problems which appear impossible.

Unlike creativity, clairvoyance (quadrant **CL** in **Figure 1**) is a distinctive trait of *pure* scientists and researchers who look ahead, beyond the frontier of the known domain. A prevailing sentiment of a *manifest destiny* nurtured by a rugged individualism urge them to traverse the Pillar of Hercules beyond the frontier of the today's world of knowledge.

Pure research is discovery; basic research is the understanding of the mechanism of discovery; applied research is the investigation of the economic utilisation of discovery, and development is the exploitation of discovery.

Their actions help establish pioneer settlements at the extreme borders of the business world. These are *technology islands* (region 6 in **Figure 1**) whose time is not yet ripe for their commercial exploitation.

Technopreneurs are willing to make the customers aware of new commercial opportunities that stretch beyond their current requirements.

CONCLUSION: TIME-TO-MARKET AND ROUTINE

Time-to-market encompasses the notion of going the pace in the introduction of product or service innovation improvements to the marketplace. Routine is the ability to work with method to gain in efficiency. Compared to routine, time-to-market can have a larger effect on profit than on product cost.

Technopreneurs uncover new business developments that need fresh resources either in money (such as, risk capital) or in kind (such as, human capital – that is, knowledge and competencies to provide solutions for customers). Time-to-market and routine help current businesses release resources to be employed in new ventures.

In fact, by the action of monitoring gaps that are known (such as, articulated user needs) and discovering unknown drawbacks (such as, the behavioural needs of potential customers), time-to-market contributes to go more quickly and more effectively to markets with product or service innovation improvements resulting from ready-to-use technologies (see quadrant **T** and regions 2 and 3 in **Figure 1**).

Routine, on the other hand, enables constant advancements through continuous improvements upon existing models (see quadrant \mathbf{R} and region 1).

Improvement is not innovation. Improvement is about the amelioration of the status quo; innovation is about the disruption of the current stateof-the-art, doing something in an entirely different way (Horibe, 2002).

Time-to-market and routine are the threads that connect efforts companies make to get success from advancements within the core competencies to the resolution with which they carry on the building of a new business order.

REFERENCES

Christensen, C., Innovator's Dilemma, Harvard Business School Press. 1997

Formica, Piero,Industry and Knowledge Clusters: Principles, Practices, Policy, Tartu University Press, 2003

Horibe, F, KM and Innovation: Can They Thrive Together?, KM Review, Volume 5 Issue 2, May-June 2002.

Mitra, J and Formica, P. (Editors), Innovation and Economic Development: University-Enterprise Partnerships in Action, Oak Tree Press, Dublin-London, 1997

Morita, A., 'S' does not equal 'T' and 'T' does not equal 'I', The First United Kingdom Innovation Lecture, Royal Society, London, February 6, 1992.