Behavioral Economics: What can we learn from the Shiva Sutras?

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Abstract:

Behavioral Economics, which essentially studies psychology, cognition and emotion in the context of economics, has proved that economics in the real world is not always with mathematical accuracy, predictability and clockwork precision. In an attempt to categorize the driving influences and biases underlying decisions made by people, the present article takes a leaf out of the Shiva Sutras, which essentially group the 51 Aksharas (Alphabets) of the Sanskrit language, each Akshara signifying a concept or mode of operation, into 14 categories or 'worlds'. Essentially, the Aksharas form 'alignments' that drive people toward making economic and other decisions. Consequently, such a listing can be quantified using matrices and appropriate weights, thus bringing Behavioral Economics a step closer to becoming a quantifiable, deterministic study.

Keywords: Behavioral Economics, Alignments, Aksharas, Shiva Sutras

1. Introduction

Economics essentially deals with the factors determining production, consumption and distribution of goods and services, which are in turn characterized by equilibrium and scarcity [1-3]. For years, economists have been developing new theories and models to quantitatively determine, predict and forecast, among other things, supply, demand and risk [2,4]. However, recent observations, most notably the ones pertaining to Nash Equilibrium, have revealed that people do not always make rational, unbiased, purely intellectual decisions all the time [5-8]. The focus on psychology, sociology, cognition and emotion in the context of economics has promptly given rise to the study of "Behavioral Economics" [9].

Just as Quantum Mechanics and Chaos Theory have proved to physicists that the world is not all about certainty, predictability and clockwork precision, Behavioral Economics have introduced to economists, the uncertain, complex, intricate dynamics of behavior-influenced economics, where quantitative models may at best be probabilistic [9-11].

A logical question that follows is: if decisions made are not purely rational, then what are they based on, and can some sort of model be developed to characterize these biases? It is clear that, while decisions are not altogether rational, they certainly are not totally unpredictable. Heuristic "rule of thumb" based decisions, mostly based on anecdotes and stereotype framing are most prevalent, where mispricing and lack of complete information in the market add to the uncertainty [9]. In particular, the "evaluation phase" of the Prospect Theory proposed by Kahneman mentions four psychological principles to evaluate risky alternatives: reference dependence, loss aversion, nonlinear probability weights and diminishing sensitivity to gains and losses [12].

Thus, it is clearly evident that people base their cognitive decisions on certain perceptions and intended ambitions. While in a simple profit/loss or win/lose exercise such as the Nash Equilibrium, the intended ambition is inevitably profit-maximization, in the complex 'real world' of economics with a lot of information and influencing parameters, this is not always the case. Thus, to develop a "Universal Model of Behavioral Economics", it is first necessary to develop a list of intentions and ambitions, which are central to driving people's decisions. This would then form a "Periodic Table", a "Standard Model" of sorts describing Behavioral Economics.

However, little inspiration, if any can be obtained from periodic tables and standard models of the physical sciences, since they are based on a materialistic, rather than a functional approach, understandably so due to their development from the reductionist, materialistic European or Western Philosophy [13,14]. However, the Eastern or Oriental Philosophy has been famous for its Non-Reductionist, Holistic and Functional approach to knowledge and life in general [14]. Arguably, all of the Oriental Civilizations, such as China, Korea, Japan and Indochina have been significantly influences by a much older, neighboring Civilization – the Vedic Civilization of Ancient India [15]. Thus, it might be a sensible exercise in searching for the "list of intents and ambitions" here, since a civilization lasting of thousands of years is logically bound to have developed one.

At the heart of the Vedic culture is the Sanskrit Language, with an extremely rich tradition of orally transmitted literature comprising of a vast number of treatises on philosophy and spirituality. Apart from this, the tradition of Mantras, Chanting, Meditation and Yoga, all of which formed crucial aspects of the Vedic way of Life are rooted steep in Sanskrit terminologies, esoteric syllables and what NASA has reported as the most unambiguous, perfect and algorithm-friendly system of grammar to date [16-18].

The building blocks of Sanskrit are 51 syllabic alphabets (phonemes), called the 'Aksharas', and this is where fortunately, our search ends. Rather than being developed from hieroglyphs or pictographs, these Aksharas have been developed from "concepts", of "modes of operation", such as 'stability', 'clarity', 'accumulation', 'coordination' and 'expansion'. This is precisely observed in the tradition of the 51 Akshara Peetha worship, which essentially comprises of 51 temples scattered in different parts of the subcontinent, where in each temple, a form of the Mother Goddess representative of one of the Aksharas, and its corresponding concept is worshipped [19].

In the present article, these Aksharas are explored in the context of the Shiva Sutras, and it is seen that one is able to construct a listing of concepts, based on the Aksharas, which enumerate the list of possible intentions and ambitions, called 'alignments' that drive people toward making economic and other decisions. Consequently, such a listing can be quantified using matrices and appropriate weights, thus bringing Behavioral Economics a step closer to becoming a quantifiable, deterministic study.

2. The Shiva Sutras

The earliest known listing of the 51 phonemes of Sanskrit are the Shiva Sutras, which are referred to in Panini's Ashtadhyayi, as revealed to Panini by Lord Shiva Himself, according to the following verse [20]:

नृत्तावसाने नटराज–राजो
ननाद ढक्कां नवपंचवारम् ।
उद्धर्तुकामः सनकादिसिद्धान्
एतद्विमर्शे शिवसूत्रजालम् ॥

translated as "At the end of His Cosmic Dance, Shiva, the Lord of Dance, with a view to bless the sages Sanaka and so on, played on His Damaru fourteen times, from which emerged the following fourteen Sutras, popularly known as Shiva Sutras or Maheshvara Sutras".

The Shiva Sutras comprise of 14 verses, each verse consisting of a group of Sanskrit phonemes, conventionally terminating in a 'dummy' consonant. In the 14 verses, each of the short vowels (a, I, U etc) are representative of the corresponding long vowels as well (Aa, Ee, Oo etc). The 14 verses along with their transliteration are given as follows.

IAST	Devanāgarī
1. a i u ṇ	१. अ इ उ ण् ।
2. r̥ l̥ k	२. ऋ ऌ क् ।
3. e o ṅ	३. ए ओ ङ् ।
4. ai au c	४. ऐ औ च् ।
5. ha ya va ra ṭ	५. ह य व र ट् ।
6. la ṇ	६. ल ण् ।
7. ña ma ṅa ṇa na m	७. ञ म ङ ण न म् ।
8. jha bha ñ	८. झ भ ञ् ।
9. gha ḍha dha ṣ	९. घ ढ ध ष् ।
10. ja ba ga ḍa da ś	१०. ज ब ग ड द श् ।
11. kha pha cha ṭha tha ca ṭa ta v	११. ख फ छ ठ थ च ट त व् ।
12. ka pa y	१२. क प य् ।
13. śa ṣa sa r	१३. श ष स र् ।
14. ha ḷ	१४. ह ल् ।

The finishing dummy consonant in each of the 14 verses are primarily used in Sanskrit Grammar to construct Pratyaharas (Declinable single syllables), and will be ignored in the present article.

Each of the 14 verses of the Shiva Sutras are representative of one of 14 'Worlds' (Loka), namely Patala, Rasatala, Mahatala, Talatala, Sutala, Vitala, Atala, Bhu, Bhuvah, Suvah, Mahah, Janah, Tapah and Satya Loka. Metaphysically, each of these worlds represent a particular world-view, viewing the universe as different stages of consciousness. However, from an economic perspective, the 14 worlds represent a grouping of related concepts in the 51 "modes of operation" into 14 categories, and these categories along with the constituent concepts are elaborated as follows:

A. The World of Productivity

The first world consists of 6 Aksharas: A (Creativity), Aa (Bliss), I (Desire), Ee (Optimization), U (Care) and Oo (Excellence). These concepts form the core intents of a creative blossoming into productivity, driven towards blissful excellence by optimized innovation fuelled by appropriate desire, motivation and characterized by a careful and well-researched approach.

B. The World of Performance

This world comprises of R (Priority), Rr (Intensity), L (Amicability) and Ll (Awe Inspiring), the four essential qualities for successful performance of a given task. Consequently, the listing of the four concepts highlight the importance of both task-related (priority and intensity) as well as people-related (amicability and awe) qualities to ensure competitive advantage.

C. The World of Equilibrium

The third world comprises of three Aksharas: E (Solidarity), O (Pleasure Maximization) and Am (Completion). While human beings are essentially social animals, constantly seeking the company of each other, the world in general constantly strives for stability, trying to maximizing pleasure and minimizing pain, and eventually, evolution leads us towards achieving completion. These three concepts are thus, the key factors that drive the world into its present state, constantly aiming for attainment of equilibrium.

D. The World of Recovery

This world comprises of Ai (Wealth Abundance), Au (Healing) and Ah (Oneness). All three concepts pertain to the key operations necessary for recovery from crisis. Specifically, one needs to ensure proper alignment of minor and major objectives, and the factor of wealth abundance to fall back on is certainly an invaluable asset in such times.

E. The World of Responsibility

This verse represents the following Aksharas: Ksha (Power), Ya (Honor), Va (Charity) and Ra (Negation). In essence, these four Aksharas are characteristic of assuming a responsibility toward humanity – the power to empower, charity towards the needy and negation of detrimental factors, all characterized by honor towards collective human society.

F. The World of Appearance

The only Akshara in this world is La, representing the concept of physical beauty. This world is one of aesthetics, which is often seen to be a crucial factor in marketing management.

G. The World of Progress

This world comprises of the five nasal Aksharas Nja (Wisdom), Nga (Growth), Ma (Enlightenment), Na (Transformation) and Na (Focus). Clearly, these five are the most crucial elements for progress, both at an individual and societal levels.

H. The World of Influence

This world comprises of Jha (Change) and Bha (Force), both concepts aspects influencing and causing change in the status quo.

I. The World of Sustenance

This world comprises of Gha (Stability), Dha (Accumulation) and Dha (Purity). These three concepts together give rise to sustained growth, development and maintenance.

J. The World of Result

This world comprises of Ja (Prosperity), Ba (Information), Ga (Clarity), Da (Variety) and Da (Achievement), all five concepts either heralding or characterizing accomplishment and positive results.

K. The World of Life

The Aksharas here are Kha (Distinction), Pha (Endurance), Cha (Freshness), Tha (Expansion), Tha (Time), Cha (Enthusiasm), Ta (Fruition) and Ta (Unity). This family of concepts is related to different aspects of reality, evolution and civilization.

L. The World of Management

The Aksharas here are Ka (Coordination) and Pa (Independence). These are the key concepts underlying management.

M. The World of Success

The Aksharas here are Sa (Transcendence), Sha (Support) and Sa (Success), all three related to one another in the context of successfully accomplishing a given feat.

N. The World of Transcendence

The Aksharas here are Ha (Eternity) and La (Liberation), both related to transcending and growing out og the lower rungs of physical, social, emotional and security needs in Maslow's Hierarchy.

Conclusion

In this article, a new approach to Behavioral Economics is explored. Specifically, the core principles underlying the Vedic Civilization, namely the Aksharas of the Sanskrit Language are explored in the light of the Shiva Sutras, which are an arrangement of the 51 Aksharas into 14 worlds. With the Aksharas themselves representing various concepts and intents of operation, the 14 Worlds group related concepts into categories. Thus, the Aksharas form 'alignments' that drive people toward making economic and other decisions. Consequently, such a listing can be quantified using matrices and appropriate weights, thus bringing Behavioral Economics a step closer to becoming a quantifiable, deterministic study.

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