Kautilya on Management by Wisdom during the Fourth Century BCE

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Abstract: In recent years knowledge management has acquired a pivotal place in business strategies for survival and growth. Current research rightly considers data management as a subset of information management and that in turn a subset of knowledge management. It appears though as if knowledge management is a new tool to acquire a competitive edge. However, Kautilya understood the importance of knowledge management to economic prosperity more than two thousand years ago. His analysis offers at least four insights, which may be relevant to today’s enterprises. First, he believed that wisdom was the most valuable asset and advocated a wisdom-based management instead of a knowledge-based management. According to him, information, knowledge, and intelligence were the critical inputs to management by wisdom. A wise person, depending on the situation, understood how to reconcile, negotiate or coordinate, sometimes, the conflicting forces arising from ideas, institutions, and interests. Second, he indicated how one became wise and included acquisition of ethical values as an important component of knowledge. Third, according to him, a wise CEO (King) was ethical, self-disciplined, farsighted, foresighted, humble, and balanced. Such a CEO understood the inherent trade-off between maintaining confidentiality and sharing information and knowledge. Fourth, he suggested that a wise king (CEO) not only maximized the probability of success of a project but also undertook some contingency planning in case the project failed and evaluated afterward as to how much of the success was due to human effort and how much due to pure luck.

Key Words: Knowledge Management, Wisdom-based management, Confidentiality, Bounded Rationality, Contingency Planning, Analysis of Variance, Education.

Introduction

“Every age has its myths and calls them higher truths.” Anonymous

The increasing availability of computers during the seventies made data management easier and faster. During the eighties information management replaced data management for enhancing corporate performance. Since the mid-nineties information management has given way to knowledge management as the most important tool for gaining a competitive edge. Nine articles in a special issue of Omega (Vol. 36, No. 2, 2008, pp. 167-336) are reaffirming that knowledge management is more important than information management, which in turn may be more important than data management but still knowledge management alone is not a panacea for success nor will it ever be. However, if there is any panacea for success it is management by wisdom. Historically speaking, wise people have been at the helms of all successful enterprises.

Kautilya advocated a wisdom-based management during the fourth century BCE. According to him, reflection on knowledge squeezed the nectar (insight, wisdom) out of it. A wise person, depending on the situation, understood how to reconcile, negotiate or coordinate, sometimes, the conflicting forces arising from ideas, institutions, and interests. Kautilya believed that information, knowledge, and intelligence were the critical inputs to management by wisdom for producing the desired outcome. According to him, a wise king (CEO) not only maximized the probability of success of a project but also undertook some contingency planning in case the project failed and evaluated afterward as to how much of the success was due to human effort and how much due to pure luck.1


Kautilya suggested the study of Vedas and philosophy for learning the ethical values, such as honesty, non-violence,
compassion, tolerance and truthfulness. Similarly, he recommended the study of economics and political science for acquiring information and knowledge for survival and material enrichment. A wise person was not only knowledgeable of ethical values and practical skills but also reflected on them and practiced them. Such a person preferred moderation, was self-disciplined, far-sighted, and foresighted, that is, in essence was both efficient and ethical.

Since the seventies there has been an information revolution and specification of the information matrix has become an essential fixture in economic analysis. Since information is costly and imperfect and the theoretical models based on free and full information are no longer acceptable. Kautilya was the first thinker, who had an insatiable hunger for information and insisted on having full information for making informed choices. His list included the collection of detailed information on both economic and non-economic variables. The current research on KM concentrates on acquisition, codification, transfer, sharing, and using knowledge and puts heavy emphasis on knowledge workers and knowledge-intensity. Kautilya believed that wisdom not knowledge was the most valuable asset and a king (CEO) needed wisdom to manage or harness the full potential of knowledge workers. He emphasized the learning of wisdom. He offered insights as to how one could become wise. Particularly the role of education in the learning of wisdom is presented in section I. Almost all studies on KM focus on the benefits of sharing information and knowledge and some discuss the risks associated with sharing knowledge. Kautilya discussed the trade-off between pooling knowledge and confidentiality. This insight is presented in section II. According to him, a wise person was always humble, open-minded and appreciative of the wisdom of others. Lately, bounded rationality has been slowly getting accepted as a representation of reality. Kautilya’s recognition of bounded rationality and the suggestions related to hiring of advisers and benefiting from their good counsel and judgment for relaxing the cognitive constraint are also presented in this section.

I Kauitya on Methods of Learning Wisdom
Generally speaking, variety in products is utility enhancing since it offers wider choices and lower prices due to increased competition. However, any kind of conceptual ambiguity retards growth in knowledge.

I think the council has been good about giving the President a fair picture of his options. It has been less good about preparing him for the possibility that the option he selects turns out not to have the expected consequences.”

Since alternative definitions and interpretations are like repeatedly turning over the same soil and that means no seed would ever take roots and bear fruit. Kautilya emphasized clarity of expression and tried to provide a single, coherent and consistent interpretation of every concept he used. Although Kautilya did not formally define information or knowledge but such definitions are discernible from his applications. According to him, information may be defined as organized data (he designed a format), knowledge as skills, strategies, tactics, approaches or methods and wisdom as an extracted manna (nectar, insight) from knowledge and experience aided by intelligence. That is, wisdom was like separating the grain from the husk and offered vision and insights. A wise person understood that it was shortsighted to be unethical. Kautilya understood the concept of backward induction. He stated gaining a competitive edge over the rivals as the primary objective to be achieved. He looked at all aspects of management for achieving the highest possible economic performance. According to him, a wise person knew how to use information and knowledge for removing gaps between vision and reality and understood the challenges and opportunities presented by ideas, information, institutions and interests.

Importance of Wisdom: Kautilya believed that the power of sound analysis and judgment enhanced economic performance directly as well as indirectly by enhancing national security that was a prerequisite for economic development, which in turn enhanced the power of the army through increases in tax revenue and also by winning public support. Accordingly, Kautilya (p 600) suggested, “When there is choice between a wise son and a brave son, it is better to give the brave son, who though valorous, lacks wisdom. For, a wise son, though timid, uses his intelligence in his endeavors; like the hunter outwitting the elephant, the intelligent outwit the brave (7.17).” If a king was forced to give up a son, he should give a brave son as a hostage. Since the opportunity cost in terms of loss in national security and economic growth of giving up a wise son, who ‘uses his intelligence in his endeavors’ was much higher than that of a brave son.

2 Gene Bellinger (2004) defines information, knowledge and wisdom as follows: Information relates to description, definition, or perspective (what, who, when, where). Knowledge comprises strategy, practice, method, or approach (how). Wisdom embodies principle, insight, moral, or archetype (why).

Vlatka Hlupic, Athanasia Pouloudi and George Rzevsky (2002) compile a list of eighteen definitions of knowledge management and provide valuable suggestions to integrate the various approaches and that might ultimately shorten the list.

Kautilya (p 168) noted, “Sons are of three kinds. A wise son is one who understands dharma and artha when taught and also practices them. A lazy son...
is one who understands what he is taught but does not practice them. A wicked son is he who hates dharma and artha and [therefore] full of evil.” Kautilya (p 177) summarized his advice to a king as: “Ever victorious and never conquered shall be that Kshatriya, who is nurtured by Brahmins, made prosperous by the counsels of able ministers and has, as his weapons, the precepts of the shastras (1.9.11).” He (p 141) added, “A king who flouts the teachings of the Dhamashastras and the Arthashastra, ruins the kingdom by his own injustice (8.2).” Accordingly, Kautilya advised the king for transferring power only to the wise son, who was both ethical and efficient.

Kautilya emphasized wisdom in almost every context. According to him (p 628), “The power of good counsel, [good analysis and good judgment] is superior [to sheer military strength]. Intelligence and [knowledge of] the science of politics are the two eyes [of a king]. Using these, a king can, with a little effort, arrive at the best judgment on the means, [the four methods of conciliation, sowing dissention etc.] as well as the various tricks, stratagems, clandestine practices and occult means [described in this treatise] to overwhelm even kings who are mighty and energetic.

Thus, the three components of power, - enthusiasm, military might and the power of counsel - are in ascending order of importance. Hence, a king who is superior, as compared to his enemy, in an item later in the list, outmanoeuvres his adversary (9.1).” It may be noted that Kautilya indicated that both knowledge and intelligence were the critical inputs to sound judgment.

Kautilya on Education as a Method for Becoming wise: Kautilya discussed four functions of education: learning some relevant historical facts (i.e., providing information) mastering useful skills (knowledge), increasing cognitive abilities and improving self-control over destructive emotions such as ‘anger, lust, greed, conceit, arrogance and foolhardiness’ (i.e., wisdom). That is, Kautilya included not only the three roles of schooling discussed by Conlisk but also added a fourth one that helped in developing the ability to control emotions i.e., he emphasized that schooling developed the ability to draw inferences and promoted self-discipline.3 He (p 144) wrote, “The sole aim of all branches of knowledge is to inculcate restraint over the senses (1.6).” He even described the process of learning. He (p 142) stated, “Learning imparts discipline only to those who have the following mental faculties - obedience to a teacher, desire and ability to learn, capacity to retain what is learnt, understanding what is learnt, reflecting on it, and [finally] ability to make inferences by deliberating on the knowledge acquired. Those who are devoid of such mental faculties are not benefited [by any amount of training] (1.5).” He (p 143) added, “For, a [trained] intellect is the result of learning [by hearing]; from

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3 Specification of the Role of Education: Conlisk asserts, “People spend much on human capital, in large part through schooling. The investment is partly information collection (names and dates), partly skill acquisition (typing), and partly general cognitive investment (“Learning to think”). The cognitive investment must be a response to bounded rationality. The part of schooling cost which goes into general cognitive development is general deliberation cost, and human capital theory is implicitly concerned with bounded rationality. The assumption that students invest optimally in schooling is an unusually strong example of optimal imperfection. Explicit recognition of the relation of human capital theory to bounded rationality might bring new insights to the theory.”
Kaulitya believed that a person’s innate abilities and his desire to learn were complementary implying that education could serve as a ‘signal’ too.

**Learning Wisdom through Imitation:** He stated (p 143), “With a view to improving his self-discipline, he should always associate with learned elders, for in them alone has discipline its firm roots (1.5).” He added, “Only a king who is wise, disciplined, devoted to governing of the subjects and [ever] conscious of the welfare of all beings will enjoy the earth unopposed (1.5).” According to Kaulitya, economic performance depended on wisdom, which was acquired through learning and imitation. He believed that aptitude for learning and intelligence were prerequisites to benefiting from education. The above Table (1) may be used to summarize Kaulitya’s ideas.

II Kaulitya on the Trade-off between Pooling Knowledge and Confidentiality

“A king can reign only with the help of others; one wheel alone does not move a chariot. Therefore, a king should appoint advisers (as councilors and ministers) and listen to their advice.” Kaulitya (p 177)

Kaulitya understood the importance of pooling information and knowledge but was concerned about maintaining confidentiality. He visualized the conflict between sharing and creating knowledge on the one hand and the danger of leaking out that knowledge to potential rivals. He believed that the probability of a successful campaign depended on power, particularly the intellectual power, and protection of its confidentiality.

**Knowledge and Sound Policies:** Kaulitya considered knowledge and intelligence as the most important factors in maintaining (and expanding) the kingdom and enhancing economic growth. According to Kaulitya (p 100), “By following [the principles set out in] this treatise one can not only create and preserve dharma [spiritual good], artha [material well-being] and kama [aesthetic pleasures] but also destroy [their opposites, i.e.,] unrighteousness, material loss and hatred. It is a guide not only for the acquisition of this world but also the next.”

He understood the limits of human cognitive ability. He suggested the appointment of advisers to relax this constraint. He provided an in-depth analysis of (i) the need to have advisers for arriving at a superior decision, (ii) how many advisers to have to achieve an optimum probability of success of a project and (iii) what should be the qualifications of an adviser?

**Kaulitya’s Definition of Bounded Rationality:** It is not claimed that Kaulitya called it ‘bounded rationality’ although his discussions contain the concept. Kaulitya (p 177) observed, “A king can reign only with the help of others; one wheel alone does not move a chariot. Therefore, a king should appoint advisers as councilors and ministers and listen to their advice (1.7).” Clearly the phrase ‘one wheel alone does not move a chariot’ indicates a complementary nature of relationship between the king’s own abilities and the advice from the advisers, which may be critical in ensuring survival and progress of the kingdom. He (p 196) added, “Because the work of the government is diversified and is carried on simultaneously in many different places, the king cannot do it all himself; he, therefore, has to appoint ministers who will implement it at the right time and place (1.9).” That is, according to Kaulitya, there were two kinds of limitations: (i) the ability to process information and draw inferences and (ii) the impossibility of being physically present at various locations simultaneously implying that the king could not run the country alone. Kaulitya recommended that the king himself must be well educated, and also appointed advisers to relax the bounded rationality constraint. For relaxing the second limitation, the king should appoint ministers and delegate responsibility to them for providing various services to the public. Vishalaksha (a pre-Kaulityan thinker) also appears to have emphasized limitations on rationality.

**Kaulitya on Good Counsel and Imperfections in Rationality:** Kaulitya reviewed the prevailing views regarding the need to have advisers, how many advisers the king should have and who should be appointed as an adviser. As noted above, according to Kaulitya, the

4 According to Confucius (551-479 BCE), “By three methods we may learn wisdom: First, by reflection, which is noblest; second, by imitation, which is easiest; third by experience, which is the bitterest.” http://www.brainyquote.com/quotes/authors/confucius.html

5 Liebeskind (1996) labels this as a trade-off between protection and innovation. Similarly, Volker Mahnke (1998, p 3) writes, “This paper suggest that knowledge-sharing might be a double edged sword in attempts to foster competitive advantage. For example, when competitive advantage partially depends on non-imitability of knowledge used in product strategies, and knowledge-sharing comes at the cost of increased leakage of knowledge to competitors, thus easing imitation, the company’s competitive position might be eroded rather than improved.”

6 Simon (1957, p 198) notes, “The capacity of the human mind for formulating and solving complex problems is very small compared with the size of the problems whose solution is required for objectively rational behavior in the real world.”

The survival of a kingdom as well as the success of undertaking a project depended on good counsel. Similarly, he emphasized the importance of secrecy. He (p 562) asserted, “He who cannot maintain
secrecy will undoubtedly find his efforts destroyed like a broken boat in the sea even if temporarily there are some appearances of success (7.13)."

**Optimum Number of Advisers:** The answers to some of the important questions as to how many advisers to have and how much and with who to share information are tied to how ‘both objectives of sound advice and maintaining secrecy will be achieved’. The level of sophistication achieved on this topic is unparalleled for his time. However, elementary calculus (such as, the optimum number of advisers is determined by the condition where the net additional gain of an additional adviser is zero) and graphs are used to bring it out. Kautilya (pp 198-199) critically examined the various ideas expressed by four of his predecessors (Bharadvaja, Vishalaksha, Parasara, and Pisuna) before reaching his own conclusions regarding the number of advisers. According to Kautilya, “Bharadvaja says: ‘a secret [prematurely] divulged is fatal to the wellbeing of the king and the officials entrusted with the task. Every adviser has his own adviser, and latter, in turn, his adviser and so on. Thus [the series become too long and] the secret is divulged [somewhere along the line]. Therefore, a king shall deliberate by himself without advisers. (As the saying goes:) ‘None shall know what a king sets out to do. Only those who have to implement it should know when the work is begun or when it has been completed (1.15).’” Thus according to Bharadvaja, a king should not have any advisers because that might compromise secrecy. However, according to Kautilya, Vishalaksha (another thinker) criticized Bharadvaja’s conclusion.

Kautilya stated, “Vishalaksha says ‘never can a single person arrive at the right decision. The work of government is dependent on [complete] knowledge - that which the king personally knows, that which is reported to him and that which he has to infer. To find out what is not known, to clarify doubts when there are alternatives, to obtain more information when only a part is known - all these can be done only with the help of advisers.

Yet a third thinker, Parasara pointed out that the advice offered by Vishalaksha emphasized only the importance of good counsel and did not address the need to keep secrecy. He suggested that a king might pose hypothetical questions and thus might get answers without compromising secrecy.

A fourth thinker, Pisuna criticized Parasara’s solution asserting that the advisers might not take this hypothetical case seriously and might, therefore, provide ‘ill-conceived’ answer or might ‘talk about it openly’. Kautilya wrote that according to Pisuna “Therefore, the king should consult [only] those who will be involved in the task to be accomplished. Both objectives – getting sound advice and maintaining secrecy- will be achieved (1.15).”

Kautilya provided a synthesis of the above differing views. He found Pisuna’s answer to be unsatisfactory. He (p 199) argued, “This method is inherently unstable. [To involve everyone concerned with the work would impose no limit on the numbers. To change advisers for every task would mean a different set for each one.] A king shall confine his deliberations to [at the most] three or four advisers. If he consults only one, he may find it difficult to reach a decision on complicated questions; for a single adviser can behave as he pleases without restraint. If there are only two advisers, they may either combine together and overwhelm him or fight and neutralize each other (1.15).” Kautilya concluded, “[There should be no more than four advisers] because, with more than four, secrecy is rarely maintained. [While, normally, the king should consult three or four advisers,] he may, depending on the nature of the work and the special circumstances of each case, take a decision by himself, consult just one adviser, or even two. The opinions of the advisers shall be sought individually as well as together [as a group]. The reason why each one holds a particular opinion shall also be ascertained (1.15).”

Kautilya (p. 200) also recommended, “No one who belongs to the side likely to be adversely affected by the project shall be consulted (1.15).” Thus according to Kautilya, as the number of advisers increased, the king received better council which increased the probability of success of a task but the problem of secrecy became serious which was likely to hurt its chances of success. Kautilya’s views may be expressed as follows:

$$\pi = E + \theta N^\alpha - \phi N^\lambda$$

(1)

By differentiating with respect to N and solving for N, we get

$$N^* = (\phi \lambda / \theta \alpha)^{1/(\alpha - \lambda)}$$

(2)

Where $\pi$ = the probability of success of a project, $E$ = king’s education level and $N$ = the number of advisers, $\theta N^\alpha$ = the functional

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7 Interestingly, John Keynes had a similar distinction. Marcello Basili and Carlo Zappia (2005, p 4) observe, “Keynes (1921, p 12) distinguished between direct and indirect knowledge. The former is “that part of our rational belief which we know directly,” the latter is “the part which we know by argument.”.” Keynes explained: “our knowledge of propositions seems to be obtained in two ways: directly by contemplating the objects of acquaintance and indirectly, by argument, through perceiving the probability-relation of the proposition, about which we seek knowledge, to other propositions.”

Hence a king shall conduct his deliberations with advisers of mature intelligence. (As the saying goes;) ‘Despise no one, [but] listen to all views; for, wise man pays heed to all sensible advice, even those of a child’ (1.15).”
specification for good council, and $\phi N^{\lambda} = \text{the functional specification for secrecy.}$ The above discussion may be captured by the following figure:

According to Kautilya, a king’s own education shifted the probability of success function, $\Pi (N, O)$ upwards to $\Pi' (N, E)$ by enhancing his ability to process information and draw inferences and also by reducing his irrationality by developing controls over emotions such as anger (i.e., education reduced imperfection in rationality).

Kautilya provided a very rich analysis: for example, the comparison with the chariot implies that the inputs (i.e., the king’s cognitive ability and advisers’ counsel) are complementary and a Cobb-Douglas type multiplicative functional form specification would be more appropriate. On the other hand, the suggestion that for certain projects, the king might decide without any help from any adviser implies an additive functional form, i.e., the functional form depended on the type of project.

However, only the additive case is discussed here, which is the simplest one. For example, in equation (1), if $N = 0$, then the probability of success, $\pi = E$ and similarly, if $N = 1$, $\pi = E + \theta - \phi$. Under the additive functional form, the optimum number of advisers is unaffected by the cognitive abilities of the king.

According to Vishalaksha, Bharadvaja was so concerned with confidentiality that he did not recommend consulting any adviser. In this case, the probability of success is given by point $B$, which was sub-optimal. According to Parasara, Vishalaksha ignored the negative impact of too many advisers on maintaining confidentiality and his solution lead to point $V$, which was also sub-optimal. Pisuna pointed out that Parasara’s solution amounted to compromising both on confidentiality and efficiency and thus selecting a point like $P$, which was not efficient either.

According to Kautilya, Pisuna made two points: (i) consult every one who was going to be involved with the project and (ii) there should be a different group of advisers for different projects. Kautilya believed that Pisuna’s first suggestion amounted to selecting an inefficient point just like $V$ since there was no limit on the number of advisers. Kautilya believed that Pisuna’s second suggestion to constitute a new group of advisers for each new project would create instability and too many advisers. Kautilya instead recommended that the maximum number of advisers should not be more than four and depending on the task, a sub-group of one, two or three out of the four might be consulted. Interestingly, he was aware of the conflict of interest problem and did not want to seek a biased advice from an adviser who was likely to be adversely affected.

**Qualifications of an Adviser:** After a careful review of the prevailing views on this topic, Kautilya (p 197) concluded, “A king may appoint a childhood friend, so long as he is not allowed to overreach himself; or an associate in secret activities so long as he is not allowed to blackmail the king; or one of proven loyalty; provided he has also proved himself efficient in government; or one from a hereditary family so long as he does not become all-powerful; or bring-in new blood, if he has both theoretical ability and practical experience. In any case, anyone who is appointed as a councilor must have the highest personal qualities.”

**Contingency Planning:** Kautilya (pp. 199-200) suggested, “The five aspects of deliberating on any question are: (i) the objectives to be achieved; (ii) the means of carrying out the task; (iii) the availability of men and material; (iv) deciding on the time and place of action; and (v) contingency plans against failure (1.15).” The specification and achievement of an objective with given resources amount to a constrained optimization approach.

**Evaluation of a policy:** Kautilya proposed the separation of the total variation in a variable, say
wealth into explained and unexplained components for evaluating a policy. He (p 554) stated, “Events, both human and providential, govern the world [and its affairs]. Acts of God are those which are unforeseeable and whose origin is unknown. If the cause is knowable and, hence, foreseeable, its origin is human. If an act of God results in [helping] the achievement of one’s objective, it is good fortune; otherwise, it is misfortune. [Likewise,] any human action which increases one’s wealth is a good policy; otherwise, it is a bad policy (6.2).” Although it took more than two thousand years for the development of the method to carry out ‘analysis of variance’ but this concept is discernible in the above statement. This is discussed in Sihag (2004).

III Conclusions

According to Kautilya, information, knowledge, intelligence and deliberations were the critical inputs to the making of sound decision. He was acutely aware of the limitations on human rationality and emphasized the roles of education and advisers in overcoming the imperfections in rationality. According to him, wisdom was the most valuable asset. He recommended knowing everything worth knowing about his own economy and the economies of adversaries. Of course, one wonders as to what techniques were used in drawing inferences. It is possible that Kautilya used what Biddle (1999) calls ‘eyeballing’ since nothing else would have been possible during his time. However, Kautilya emphasized the critical role of explanation and prediction in the evaluation of a policy.

He (p 147) wrote, “If the king is energetic, his subjects will be equally energetic. If he is slack and lazy in performing his duties the subjects will also be lax and, thereby, eat into his wealth. Besides, a lazy king will easily fall into the hands of his enemies. Hence, the king should himself always be energetic (1.19).” Interestingly, Kautilya proposed the tournament theory at the lower level but not at the level of a CEO. He would not have recommended pleasure-seeking perks like membership to exclusive golf clubs and turning the office into an art museum.

Most importantly, Kautilya suggested, “In the happiness of his subjects lies his happiness; in their welfare his welfare. He shall not consider as good only that which pleases him but treat as beneficial to him whatever pleases his subjects (1.19).” According to Kautilya, a wise king (CEO) would put stakeholders’ interest ahead of his own interest, that is, he would be satisfied with ‘leftovers’ and would never conceive of back dating stock options or any creative accounting.

References
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