The Rule of Three in Minds and Machines

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ABSTRACT

This paper presents a brief account of the Rule of Three, its history and philosophy, and its use in a variety of fields ranging from rhetoric, design, business, politics, minds, and machines. It presents the mathematical logic and physical ideas on which the rule is based and provides many examples of triads in the Indian cultural tradition. The Rule is applicable to social and political dynamics in the contemporary world dominated by machines.

Keywords: Rule of Three, minds, and machines, Indian cultural tradition

1. INTRODUCTION

The Rule of Three is that many things in a wide variety of situations work best in threes, and this is the basis of triadic classification in science, art, design, religion,medicine, psychology, politics and philosophy. For example, there are three kinds of forces of nature, three generations of elementary particles, the length of three for the codewords in the genetic code, and the triad of brain, mind, and consciousness (Kak, 2025). The Rule of Three is widely recognised in various fields like writing, rhetoric, and design, where triads are seen to create balance and harmony (Amirshahi et al., 2014). The related rule of thirds, which goes back to an observation (Smith, 1797) plays an important principle in the spatial composition of aesthetic images (Koliska & Oh, 2021).

In biology, DNA, RNA, and protein form the basis of genetic expression and regulation within living cells. The blueprint (DNA) is transcribed into a messenger (RNA), which then directs the synthesis of functional units (proteins). Then there is the triune brain, where its hierarchical structure is seen in three layers: the reptilian brain (instinctual functions), the limbic system (emotions), and the neocortex (higher-order thinking). Even more fundamentally, the highest level of biological classification consists of three domains: Archaea, Bacteria, and Eukarya.

Chemistry is broadly categorised into three main branches: physical chemistry, inorganic chemistry, and organic chemistry, providing a structured approach to studying the field. Chemical triads are groups of three chemically similar elements where the atomic weight of the middle element is approximately the average of the other two. These triads, discovered in the early 19th century, played a crucial role in the development of the periodic table, highlighting the relationship between atomic weight and chemical properties. In physics, three dimensions define physical reality. Atoms are composed of three primary subatomic particles: protons, neutrons, and electrons. These particles determine the atom's properties and behaviour. There are three

fundamental forces excluding gravity: electromagnetic, strong nuclear, and weak nuclear. The strong force binds quarks into protons, neutrons, and other particles and holds atomic nuclei together, whereas the weak force is responsible for beta decay. The elementary particles come in three generations. In Ayurveda medicine, the body is described as a balance between three doshas. The activity at a more basic level is also seen as a balance between the three characteristics of sattva, rajas, and tamas.

The origins of the 'Rule of Three' lie in mathematics and logic, which is a fact not widely known and surprising due to its applicability across a broad range of seemingly unrelated fields. This paper will provide the theoretical basis for the triads in nature and describe their occurrence and uses in different cultural areas. The perspective of the Rule will be used for investigating the interface between minds and machines in society and polity.

2. THE UNDERLYING THEORY

The 'Rule of Three' is based on a mathematical theorem, according to which the fabric of information is governed by dimensions that are close to three (Kak, 2020). The optimum value is not an integer (it is equal to $e \cong 2.718\dots$), but the integer closest to it is 3. The mind prefers to see it in the integer dimension closest to the number, which is then the origin of the Rule. This also implies that underlying the triadic structure implied by this Rule are further connections between the domain variables. It may be that this is the basis for the three dimensions of physical space. Turning to biology, this triune nature has implications for the structure of the genetic code (Kak, 2023) and it provides new insights on the nature of time and consciousness and even leads to the idea of triadic time (Kak & Kafatos, 2025). It is also in accord with the premise that tripartite logic is superior to binary (Hayes, 2001).

A further implication is that nature is fractal-like, with characteristics that are scale invariant. The property of fractality implies that in a free system, the size of organisations will fall in a power series according to the probability function. When normalised for 9 items, the first three account for 62% of the total, and the first four about 72%. If the largest has size 1, the next one is 53% of it, and the following one is 37% and so on. Roughly speaking, the second is just over half the size of the biggest one, and the third is just over one third of the size. This empirical fact was generalised by Bruce Henderson in 1976 to suggest that a stable, competitive market will rarely have more than three or four significant competitors, and within those three competitors, the largest will have a market share roughly four times that of the smallest (Sheth & Sisodia, 2010). The logic to support this is that unit costs are inversely related to the market share. Thus, when market forces are allowed free rein, three companies usually end up dominating the market, and they are often called the Big Three.

2.1 Triads in cultural context

We tend to process and remember information more effectively when it is grouped in threes. Psychologically, one is too simple, two suggests duality or opposition, but three creates a sense of completeness and harmony. Roman orators spoke of the power of triads in speech and writing for three elements, creating a sense of symmetry and rhythm. The tricolon is a stylistic device where the first item introduces, the second reinforces, and the third seals the idea. Examples include Julius Caesar's famous "Veni, vidi, vici" ("I came, I saw, I conquered"). Some further examples are given below:

- Life, Liberty, and the Pursuit of Happiness – Rights outlined in the U.S. Declaration of Independence

- Liberté, égalité, fraternité – The slogan of the French Republic predating 1790

- Faster, Higher, Stronger – The Olympic motto (translation of the Latin Citius, Altius, Fortius)

- See no evil, hear no evil, speak no evil. – Three wise monkeys

In Christianity, the Triad of deities refers to a divine family structure that includes a principal god or goddess, their consort, and their child. The Trinity (Latin: Trinitas, lit. triad, from trinus "threefold") is a Christian doctrine concerning the nature of God, which defines one God existing in three, coeternal, consubstantial divine persons: God the Father, God the Son (Jesus Christ) and God the Holy Spirit, who are three distinct persons (hypostases) sharing one essence or nature.

In pre-Islamic Arabia, a triad of goddesses, Al-Lat, Al-Uzza, and Manat, were the most prominent deities. These goddesses were not just local deities, their worship extended across the Arabian Peninsula and even into Palmyra (Syria).

Al-Lat, called The Mother of All Gods, was associated with fertility, springtime, and prosperity. She was often linked to the moon. Al-Uzza, the Mighty One, was associated with the morning and evening star (Venus), justice, war, and honour. She was also linked to the acacia tree and considered a protector of ships. Her main sanctuary was at

Nakhlah, near Mecca. Manat was the goddess of fate, time, and destiny and she was considered the oldest of the three goddesses.

The concept of triads is deeply embedded in various aspects of Hinduism, from cosmology and philosophy to symbolism. The cosmic functions of creation, preservation, and destruction personified by three deities: Brahmā (the creator), Vishnu (the preserver), and Shiva (the destroyer) (Trimurti), as the three worlds (earth, atmosphere, heaven or bhur, bhuvah, svah), or the three guṇas (qualities) of nature: sattva (harmony, goodness), rajas (passion, activity), and tamas (inertia, ignorance). Some more triads are given below.

Tridevi: This triad of goddesses consists of Mahāsarasvatī, Mahālakṣmī, and Mahākālī, representing creation, preservation, and destruction, respectively. They also represent the powers of desire, wisdom, and action. The sacred sound "Om" with the constituents A, U, and M represent the triadic nature of reality in a variety of ways such as divisions of time, or the three states of consciousness.

Three human goals (*Puruṣārtha or Trivarga*): These goals guide a fulfilling life: *dharma:* Ethical living, duty, righteousness; *artha*: prosperity, wealth, ambition; *kāma*: enjoyment, pleasure, desire.

Three paths to self-realisation (yogas): *jñāna* (knowledge), *bhakti* (devotion), and *karma* (disinterested action). Three characteristics of dharma: *adroha* (no malice), *anugraha* (compassion), and *dāna* (generosity).

Three debts (Ṛṇa Traya): Debt to the deities, debt to the sages, and debt to the ancestors.

Three powers of the mind: jñāna śakti (cognition), icchā śakti (desire), and kriyā śakti (action).

Three forces of desire: putrēṣaṇā (offpring), vittēṣaṇā (wealth and power), and lokaiṣaṇā (fame, recognition).

Three āśramas: brahmacarya (student), gṛhastha (householder), vānaprastha (retirement), Trikoṇa is a Sanskrit word which signifies a triangle and is used as a yantra. The upward pointed trikoṇa represents fire, Śiva, and consciousness and portrays spiritual ascent. A downward pointed trikoṇa represents water, Śakti, and the material womb. Two interpenetrating trikoṇas represent both the physical and consciousness aspects of embodied reality.
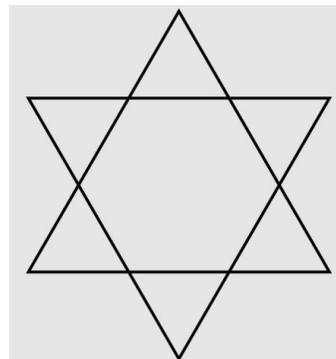

Figure 1: The ṣaṭkoṇa

The ṣaṭkoṇa (Figure 1) is a symbol yantra; a "six-pointed star" is made from two interlocking trikoṇas, whose sacred number is six.

The Three Jewels (Triratna): the Buddha, the Dharma (teachings), and the Sangha (community). In Jainism, the Ratnatraya of Samyak Darśana (currect understanding), Samyak Jñāna (right knowledge), and Samyak Caritra (right conduct).

The Three Defilements (Triviṣa): The triad as the root of suffering: delusion (moha), attachment (rāga), and aversion (dveṣa).

The Three Baskets (Tripiṭaka): Scriptures, traditionally divided into three sections: the Vinaya (monastic rules), the Sūtra (Buddha's teachings), and the Abhidharma Pitaka (commentaries and explanations).

The Jains speak of the triad of non-violence (ahiṃsā), many-sided reality (anekāntavāda), and non-attachment (aparigraha). They also speak of a division of reality into three categories of substances or *dravyas*: non-material and sentient (jīva), material and non-sentient (pudgala), and non-material and non-sentient, like space, time, and motion.

Kashmir Śaivism, often referred to as Trika Śaivism, is a non-dual tradition that uses numerous triads (trikas) to explain its philosophy of Ultimate Reality and the path to liberation. Some of these are: Śiva, Śakti, and Nara, in which Śiva is the pure, transcendent consciousness, and the source of all existence, Śakti is the dynamic, creative power of Śiva that brings the universe into being and sustains it, and Nara is the individual being, experiencing life within the divine play, yet possessing the same divine essence as Śiva. Another triad is that of Parā, Parāparā, and Aparā, where Parā is the highest, non-dual, and completely independent aspect of reality; Parāparā is the intermediary state, bridging the transcendent and immanent, representing the active

principle of manifestation, and Aparā is the immanent, dualistic, and limited aspect of reality, representing the manifested universe.

Another triad is that of pati (Śiva), paśu (individual controlled by animal nature), and pāśa (bondage). The pāśa are the various limitations or impurities (*malas*) that bind the individual consciousness and prevent it from realising its true nature. There is also a triad related to how to achieve true freedom: *āṇavopāya* (individual effort), *śāktopāya* (power of Śakti) using the purification of mental constructs, and *śāmbhavopāya* (power of Śiva), the direct path involving an immediate intuitive apprehension of reality, where grace plays a crucial role.

3. THE UNIVERSALITY OF THE RULE

The universality of The Rule of Three springs from the nature of perceived reality and the subject, the object, and the process that joins them. It is also the foundation of grammar where one way to see a typical sentence is to view it through the triple of subject (the initiator of action), verb (the action), and object (the receiver of the action). Past, present, future; birth, life, death; heaven, earth, hell; and the good, the bad and the ugly are examples of it. Looking at the Rule from the perspective of the subject, the action may be seen as the culmination of the triple sequence of desire, knowledge of which the desire forms a part, and action. In literature and storytelling, three characters or events often form a compelling structure (e.g., beginning, middle, and end).

There also exists the notion that each person is split three ways: in time, space, and in reflection in the mirror of the mind. The last of these includes the possibility of endless reflections. Recent research is consistent with this, showing that memories are stored in triplicate (Kveim et al., 2014). The Rule applies both to the mind and to the organisation of machines and their deployment in society.

4. FROM PSYCHOLOGICAL TRIPLES TO BINARIES

Although triads are the natural representation of the individual and society, in moments of extreme stress things reorganise in binaries, as in the individual going through a serious bout of disease or a society fighting a war.

Tribal organisation is based on perpetual conflict and unsurprisingly; in it, reality is viewed in binaries. In more recent traditions tribal membership is established by the confession of a chosen belief, and non-believers are to be killed or enslaved.

The nineteenth century binary system of Marxism divides society into two groups: the oppressor and the oppressed. A related ideology is that of late-stage feminism that sees maleness as a privilege and thus indirectly views womanhood itself as inferior rather than complementary. Binaries are not life-affirming, and they promote endless cycles of conflict.

Ancient Indian texts speak of three kinds of states: *Dharmic, Asuric,* or *Rakshas* that are based on the enlargement of fundamental human impulses related to justice, power, and physical domination. When enlarged from the original context of kingly rule, they would correspond to moral, authoritarian, and war-state, respectively. These categories are important in the understanding of the modern age dominated by artificial intelligence machines (Kak, 2024). The encountered multiplicity is born out of the interplay of a multiplicity of minds, of which the two most interesting ones are the mind of the warrior, and the mind of the *asuric* person. These two paths are grounded on different understandings of reality. The first one hinges on the sense that we are all connected, whereas the second rests on the idea that we are atomised. The first springs from the intuition that love binds all, and we love others if we love ourselves, and this leads to a feeling of compassion for all; the second comes from self-loathing and hostility towards others. Love gives one the strength to look straight into the eyes of death to take the path of the warrior and of freedom, whereas fear and hate make one choose the *asuric* path of supremacy.

On the battlefield, all are equal. The warrior will not bow to anyone and doesn't wish others to bow to him; the asura scrapes the floor in front of those who are more powerful than him but also expects the less strong to bend the knees before him. The warrior knows pain and suffering, which is why he is unafraid, and going with the heart has decided to put life on the line for the larger good. The asura worships power for its own sake, privileging physicality over consciousness. The warrior is taught secretly by death, whereas the asura is lost in the webs spun by the mind. The warrior is calm, observing events dispassionately, whereas the asura is full of perverse intensity. If one were to find parallels with science, the warrior's understanding is in tune with quantum theory in which things are entangled with each other, and the asuric view is that of classical physics of disconnected objects.

The *asuric* or the left path that Marx and his followers sketched out is an ancient tribal path to separate people from each other by means of stories that lead to resentment and a sense of victimhood. In Italian, directly descended from Latin, the left is

called *sinistra*, and the right is called *destra*. The original term in Latin for the left side is sinister, and for the right side it is *dexter*. The sinister is associated with the irreverent, the profane, and the revolutionary, whereas the right is associated with the sacred, the traditional, and the orthodox.

Political people have always been aware of this distinction. The Roman religion went around the altar rightwards, that is clockwise, whereas in Christianity the movement around the altar is leftwards, or anticlockwise. There is also a complementarity between life and death, so in funeral processionals in northern Europe the casket goes in clockwise direction.

Sinister political parties are driven by emotion. This is the reason why workers' parties in earlier Europe and America were left parties. But now wealthy billionaires are driven by emotions generated by the power of their wealth and so they gravitate to sinister groups. Literally all dynastic parties in India are sinister because it is easier to use emotion to exercise control. The dynastic head names the successor from amongst his or her family or just remains at the top like a king. In the Indian tradition, the dichotomy is between righteousness and non-righteousness, that is dharma and adharma. The dharmic action liberates both at the individual and the collective levels; and the adharmic action enchains and subjugates at both levels. The pure left is demonic, which means that it is principally about power and domination. This explains why political parties that believe in top-down control and religious groups whose philosophy is to dominate others often see each other as political allies. In a world based on domination, almost everyone including those who exercise levers of power lives in a psychological prison, without being aware of it.

5. CONTEMPORARY GEOPOLITICS

The four largest world economies in 2025 in PPP dollars are China, US, India, and Russia with GDP at 31, 25, 13, and 6 trillion dollars respectively1[1] . But for a variety of historical reasons, India is not acting at a level commensurate with its strength at the global stage, and competition is mainly among three major powers US, China, and Russia. This competition spans various domains, including military, economic, and technological spheres. The US and China are the primary contestants globally,

whereas the US and Russia are so in Europe. Proxy conflicts include kinetic, cyber, economic, and others ranging from disinformation to acts of sabotage. The global landscape is now split into three camps: the "global" West (US and its European and Indo-Pacific allies), rising Eurasian powers (China, Russia, and allies), and global swing states like India that navigate between these two with varying affinities.

The great power competition is playing out in three key geographic theaters: Europe, the Middle East, and East Asia. There are hot wars in the first two, and a lot of shadow fighting in the third theater. India was involved in a brief war with Pakistan earlier in 2025. South Asia, with three nuclear powers—India, Pakistan, and China—is also a danger zone for US wishes to use it as a counterweight not only to China but also India. Outside of Europe, most states are unwilling to compromise their development by becoming entangled in the war in Europe. They want the Europeans to manage their own conflicts, just as the rest of the world manages theirs. The US wants Indonesia and Vietnam to counterbalance China. In general, Southeast Asians want the United States to remain committed to the region without causing major disruptions. Both India and Indonesia are pursuing multi-alignment strategies, with ambitions extending beyond their home regions, while trying to avoid the flashpoints of global US-China competition. This is also reflected in the diverse power constellations across the three main theatres. Only the Middle East can be described as a multipolar constellation. In contrast, both Europe and East Asia feature bipolar orders: the US and its allies on one side, and Russia or China, respectively, on the other. This suggests that creating an equilibrium, and thus stabilising these bipolar regions, is more feasible, while the Middle East is more likely to remain unstable.

6. CONCLUDING REMARKS

This paper reviewed the origins of the Rule of Three and how it shows up in art, science, cognitive states, social structures, politics, and embodiments that include machines. The Rule is significant in geopolitics, where generally there exist three dominant powers, quite as in the world of business.

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