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FOSTERING INTELLIGENCE AND AI BY AN OPERATIONAL WISDOM AND ARTIFICIAL WISDOM (AW)

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Abstract: Especially in the domains of business and management, it is vital that Intelligence as well as AI are to be taken good care of, directed and controlled by Wisdom inclusive by Artificial Wisdom: AW. This requires that Wisdom and Artificial Wisdom are made operational. In the past Wisdom received a lot of attention. The last decennia enormous efforts and investments was made on intelligence and AI. Scientific research and attention on wisdom was minimal. A lot of components of wisdom were elaborated in the Sumerian Mesopotamian cultures, in the Indian, Chinese Persian, Grec, Roman, Islamic cultures... These components of wisdom have still a lot of relevance. Only they have to be made operational in view of todays challenges, needs, requirements... From the large set of historical wisdom approaches (possible targets of other attempts for making them more operational), we overview, the Sumerian conflict resolution, the Illeism wisdom approach and *the innovation approach within the Wisdom fractal frame (WFF)* in view of elaborating an operational wisdom and artificial wisdom (AW).

Keywords: AI, artificial wisdom (AW), conflict resolution, dialog-dialectic, Illeism, intelligence, Pandora, self-correction, wisdom, wisdom fractal frame (WFF).

1. Towards Research on Generating Wisdom and AW

A lot of research and development has been done and is going on concerning intelligence and AI. Regarding Wisdom and AW: Artificial Wisdom, not that much is done. Although the needs to generate better knowledge of Wisdom and AW in view of the disasters through wars, through the climate catastrophes, through human crazy interferences are alarming high. Besides the Mesopo-

tamian Sumerians initiatives on producing wisdom, we see also some efforts going on present days, between others, through the illeism paradigm, and the culture-fractals approach. We will comment these attempts. *The kernel of Wisdom and AW: Artificial Wisdom approach can be characterized as to contribute to and to support harmonious conflict resolutions. Any way the use, development and application of intelligence and AI, without their control by wisdom and AW are risky (note 1)!*

2. The Illeism Wisdom Approach

An interesting approach to the scientific study of wisdom has been spear-headed by Grossmann and Kross (2012). Grossmann first drew on the work of numerous philosophers to decide on a series of “metacognitive components” – including intellectual humility, acknowledgement of others’ viewpoints and search for compromise – that are commonly considered to be essential for wise decision making. In this context Grossman paid a lot of attention to “Illeism”. Illeism is the practice of talking about oneself in the third person, rather than the first person. (note 2) The rhetorical device is often used by politicians to try to give their words an air of objectivity. In his account of the Gallic War, for example, the emperor Julius Caesar wrote “Caesar avenged the public” rather than “I avenged the public”. The small linguistic switch seems intended to make the statement feel a little more like historical fact, recorded by an impartial observer. To the modern ear, illeism can sound a little silly or pompous – and we may even deride famous people who choose to talk in this way. Yet recent psychological research suggests that illeism can bring some real cognitive benefits. If we are trying to make a difficult decision, speaking about ourselves in the third person can help to neutralize the emotions that could lead our thinking astray, allowing us to find a wiser solution to our problem (Robson, 2023).

Grossman used “Illeism” to solve the “Solomon’s Paradox”. Solomon, the ancient Biblical king, was famous for advising others wisely, while making a series of disastrous personal decisions that ultimately left his kingdom in chaos. The problem seems to be that when making personal choices, we become too immersed in our emotions, which cloud our thinking and prevent us from putting our issues in perspective. If I have received negative feedback from a colleague, for example, my feeling of embarrassment might lead me to become overly self-defensive. I might therefore dismiss their opinions without considering whether their advice could be helpful in the long-time. So illeism resolves Solomon’s paradox. The idea makes intuitive sense: by switching to the third person, our descriptions of the situation will start to sound as if we are talking about someone else rather than ourselves. This sense of detachment would allow

us to see the bigger picture, rather than getting caught up in our own feelings. People employing illeism to talk about their problems showed greater intellectual humility, capacity to recognize others’ perspectives, and willingness to reach compromise – increasing their overall wise reasoning scores (note 3) (Grossmann & Kross, 2012). “So one can argue that applying illeism to all decisions, small and big, whether facing trials at work, conflict with friends, or strife in the family, one find that a few moments contemplating problems from a third-person perspective, helps to see the issue more clearly (Robson, 2023). In this spirit some authors argue that education wisdom is possible between others through exercising illeism: Ask students to write texts in the third person to learn to write and think more objective, to see the bigger picture, rather than getting caught up in own feelings. Grossmann favors wisdom training: participants were asked to keep a daily diary for one month in which they describe the situations they have just experienced. Half are told to write their entries in the third person, while the other half have to write in the first person. Result of such exercises? At the start and end of the study, the team also tested the subjects’ general wise reasoning. As hoped, the researchers found that, over the course of the intervention, the participants who had been encouraged to use illeism in their diaries saw a rise in their wise-reasoning scores over the course of the month.

3. The Sumerian Dialog-Dialectic Wisdom

The scenario to generate wisdom we find in a lot of Sumerian texts (Vandamme, 2021). It is interesting to note that in the oldest cultural forms in Mesopotamia, there was already attention to conflict resolution issues. We find reference to it in the rich “dialogue tradition” as early as 2500 B. C.. We can say that we are effectively witnessing an extensive use of the prototype paradigm to promote and propagate the conflict resolution perspective. This is still a relevant paradigm today. It is probably the oldest form of conflict resolution aimed at harmony, and we can say, the oldest form too of dialectics: transforming oppositions into a higher synthesis: harmony. We find this as a genre throughout the Mesopotamian cultures, and in its earliest form in the Sumerian

period (McCall, 1994, pp. 19, 33-36). We find this in the myths, legends and even in humorous stories in the form of dialogues. We find this in the Epic of Gilgamesh but also in many other dialogues: “The Corn and the Wheat”, “The Cow and the Horse”, “The Winter and the Summer”, “The Babylonian Theodicy”, “The Dialogue of Pessimism”, “The Poor Man of Nippon”, “The Epic of Creation”...

The format of the dialogues is as follows: two opposing views, personified by two opponents, defend their interests and merits. The texts do have a stereotypical form (note 4). First there is an introduction presenting the opponents, and the reasons for their polemic. Next, the antagonists will highlight their own merits and their opponent’s faults. The discussion is then submitted to a god: an investigator who delivers his verdict. The opponents accept the conclusion and become close friends when they leave the scene. The role of the investigator: “God”, “judge” is critical and very clearly targeting to achieve a higher synthesis: realizing a harmony. In other words in the Mesopotamian myths and legends, the task of the “judge” is, to realize conflict resolution through reconciliation: a synthesis resulting in higher harmony. His role is much more than to decide on the rights of one of the two parties involved! This is the challenge par excellence for applied law research but also the challenge for every researcher, expert, technician: conflict resolution, not by approving the one or the other party to be right but by realizing a higher harmony and cooperation between the opponents through a creative synthesis. This process must be based on knowledge and always focused on the interests of individuals, groups, society and environment. Harmony is used here in the etymological meaning of “congruent ameliorating merging of the various components in question in the dialogue between the actors involved”. We can speak here of a “Peer or we-creation process method”. We see here very clearly a collaboration in a knowledge-gnostic and scientific perspective of all possible stakeholders, people concerned: real or imaginary gods, demigods, all humans, animals, nature involved in a sometimes confrontational collaborative dialogue and dialectical methodology in the creation, construction of new knowledge structures in the search, improvement, renewal of structures to create positions: knowledge, ac-

tions, community... In summary, we may say that the Sumerian production of wisdom, of harmony creation happens in a dialogue, dialectic dynamic development. Each side highlights its own position and merits and points out at the faults of the opponents. The discussion is then submitted to the community of investigators, who deliver the verdict very clearly, targeting a higher synthesis: realizing a harmony. Here, in the context of the creation of wisdom, the question arises on the interpretation of the judge, the “gods”. Is it (1) the community of researchers? However this can be interpreted too (2) as the “critical pluralistic actor: investigator” according to the spirit of Protagoras’ applying an efficiency “theory of truth”. Truth is what is efficient as a function of time, environment, culture, technology, ecological conditions, etc.. This means that truth is dynamic. It can and must always be questioned and re-interpreted and redefined by the local responsible actors!

4. Towards Research on and Generating Artificial Wisdom: AW

4.1. Based on the Sumerian Dialog-Dialectic Paradigm of AW: The D3SG System

On the base of the developments of the LaMDA (Language Model for Dialog Applications) (Li, 2023; Naik, 2023; Pichai, 2023) and using AI chatbot, or ChatGPT: OpenAI, 2022, BARD chatbot system, the GPT-4 engine, and also Bing integration (Sarwar, 2023; Vandamme & Kaczmarek, 2012) we can **develop the Dialog (D) - dialectic (D) - dynamic (D) - synthesis (S) - generation(G) - system: the D3SG system. The function of the D3SG system is 1) generating dialogs, 2) generating alternative antagonistic dialogs, 3) generating syntheses of antagonistic dialogs.** Moreover it is also the challenge to generate restrictions on relevant antagonism and conflicts in specific contexts as well as to generate restrictions on the generated dialogs, dialectics and attempted syntheses and harmonies. Another as important challenge is to generate syntheses to overcome the existing antagonisms and solutions in the competing dialogs as well as argumentations. A third challenge is to develop an assessment system to be able to compare and measure the degree of success and relevance of

the several generated syntheses, from the point of view of the starting alternative antagonistic dialogs. On the basis of such assessment, a phase of bargaining and negotiation can be started between antagonistic parties. Anyway the basic target of the researchers is to produce higher and more successful syntheses: realize better and more successful HARMONY among the antagonists at the start...

4.2. *Based on the Illeism paradigm of AW: ILLEITIC System*

The illeism approach to AW-wisdom consist out of generalizing the individual or personal solutions to a larger group, ultimately even to everybody relevant in the specific domain or target group. Several generalization methods can be applied. We can mention: 1 search for more general formulation of solutions of a specific group, to get acceptance by broader groups, 2 search for solutions which are acceptable too for competitive or antagonist groups, 3 elaborate the conceptual processes needed to transform a egocentric plan (proposal, text) in a illeitic plan.

4.3. *The Generation of AW and Fractals: The Wisdom Fractal Frame (WFF)*

4.3.1. *Introduction*

Many authors, like Y. N. Harari (2014), among others, traditionally emphasize the great difference between humans and other living beings. Wrongly, we argue. After all, the distinction between humans and other living beings is rather gradual. This applies in particular to the communicative and cognitive abilities of humans and animals. Moreover, in humans we have a concentration of more diverse cognitive and communicative skills. Yet, certain specific cognitive and communicative skills in some animal species are much more specialized and are higher-performing than in humans. This is a challenge for integrating in AW.

In addition, Harari emphasizes – erroneously again in our view - that only the Homo sapiens is capable of creating bonds with groups larger than 150 individuals. This is the magical boundary that only Homo sapiens manages to cross via culture, via fictional stories, via common myths, which only exist in the collective imagination.

Here he refers to symbolic constructs such as the “state”, “legal system”, “legal personality”, etc!

We see that this magic limit of groups of ‘150 individuals’ is frequently transgressed in the animal kingdom too. Among others think of a flight of starlings. More than thousands of birds are flying around and landing on a relatively small group of trees or on a few hedges. Moreover think of the migration of thousands of cattle in the African savannah, the swarms of bees and other insects looking for food or for a new place to settle. Think of masses of herring swimming together in schools and being chased by a few seals, sharks, etc...

Both in humans and in animals, we can refer to a description of these processes via fractals (note 5). *It is challenging to introduce here “the culture fractals: C-fractals”. These are actions that create or activate collective group units. The ambition to translate cultural, actional, social processes and structures in topological and mathematical concepts has a long history (Thomson D. W., 1917, 1961; Thom R. 1974; Rapoport, 2011, Quetelet, 1834, ...). To use fractals for this end is also already suggested by several authors (Sabrina Farías, 2016, Sabrina Farías-Pelayo, Ron Eglash, 2007; Ayten Aydin, 2008). In their view this is a static description. Culture, however, is in continuous change: “Panta Rei” Taking this into account we introduce transformation functions “f” on existing fractals which can create innovations in the fractals as well as operations “O” on fractals which influence the success or failure in the execution/realization of the fractal (DC-fractals). This permits a much more realistic and useful use of fractals to describe, explain, predict and even to influence and perhaps even control cultures and civilizations. Before we go into more detail, we also want to point out a very important socio-individual strategy in humans, called among other names hypocrisy, humbuggery, pretense, dys-social behavior,... We have already pointed out repeatedly that, concerning man, such techniques and methods exist in all kinds of domains, in politics, business, management and even in extensively developed and specialized, sophisticated cultural societies. Such “pretending” is also a very frequent behavior and know-how in many animals. For instance pretending to be hurt, to lure away the enemy: predator, to protect one’s offspring, or even as a clever survival*

strategy, in the cuckoo for instance...

This phenomenon of dyssocial behavior also plays a major role in the development of large cultural units in humans, but also or should we say especially in the breaking up and fragmentation of large cultural units: “Destruction by creations of new successful C-fractals”.

4.3.2. A Contribution to Wisdom, AW and Harmonious Conflict Resolution in the Fractal Frame

Quetelet Adolphe (1834), who was the strong fervent of introducing mathematical and quantitative methods in social and human sciences argued that quality and progress of science can be measured on the base of the degree that a science can be expressed in mathematical terms. Today we will formulate that as follows: the possibility to express a science in mathematical and /or formal terms. From this perspective it is very important that we are able to formulate through the language of fractals the basic processes of hypocrisy, innovation, cooperation, hypocritical cooperation, dyssocial or psychopathic behavior, and moreover to be able to express and to describe and to apply these in management, in theoretical and applied science of justice, jurisdiction, jurisprudence, politicology, the science of war and peace... *The most important however is to be able to better understand, manage and apply Wisdom, AW, harmony and harmonious conflict resolution making use of the fractal frame* (see Vandamme et al., 2022; Vandamme 2022, 2023, 2021a, 2021b; Kaczmarek & Muylle., 2021). The C-fractals laws indicate that individuals, groups integrate easily and efficiently in and with the cultural C-fractals. These fractal laws are self-correcting. These self-correction is the basic contribution and support of the fractal approach to wisdom: stimulating harmony and moreover supporting *harmonious conflict resolution*. *There is however one important drawback or restriction on the potential of generation of self-correction for wisdom: for harmony generation and harmony conservation as already mentioned by Heraclitus and also effectively a reality in the Fractal model of Culture. This crucial remark and warning of Heraclitus (500 BC) is the following: “Invisible harmony is stronger than (or superior to) visible one. Harmony development is a dynamic process of vigorous and contrary*

motions neutralized by equilibrium and so unapparent” (note 6). *The same point of view we find also in Hesiod with the story of the Box of Pandora, as well as in the myth of the golden age (confrat Ovid Metamorphoses). This basic warning and message is: too fast innovation is destructive for the existent culture, peace, wellbeing, welfare.. It leads inevitably to destruction of prosperity, to violence, to war ... Indeed the self-correcting potential of fractals: culture is restricted. If innovation goes too fast, too strong it leads to self-destruction of whatever species, human or non-human. This is the case, if one is not able to control and temper the innovation rate to the existent cultural self-correcting potential of wisdom and the ecological environmental requirements...*

4.3.4. The Myths of Pandora: Concerning the Dangers of Innovation

Dualism is dominant in the Indo-European myths and cultures. The world is defined by two opposite powers: good and bad. What is rather surprising, at first glance, is that knowledge, science, intelligence, technology, innovation even “writing” are put to belong to the bad component. It is in this perspective that we can understand that in the “Golden Age”: “the ideal beginning of the world” in the Indo-European Mythology (note 7), one has happiness, well-being. Then knowledge, technology, science arrive and with them arrive destruction, unhappiness, bad luck, abuse, misfortune... It goes on worse and worse... with the silver age, the iron age... This Indo-European view is found back in Zarathustra, in the bible (under strong Persian influence), in Christianity, in Scandinavian, Greek and Roman mythology...

It is only in the 17th/18th century that we have a reversal. We get the new myth, the ‘myth of progress’. The present is better than the past. The future will be better than the present. Nevertheless in a lot of domains the facts are entirely different. Climate issues, poverty, criminality, cruelty, suffering, hunger, etc. are becoming worse and worse. Still we all believe in the “fable” of progress, of growing well-being, the coming golden age... The golden age is now projected in the future, despite the many bad omen... In this perspective, we can understand that more and more people believe in Science and AI as being

the Box of Pandora. This is a box, which will lead to the total destruction of humanity. Not only Knowledge, Science, Technology but also Arts, Beauty, Attractivity, Woman Beauty are seen to belong to the Box of Pandora in the Indo-European Mythological base. This is contrary to the monism of the Mesopotamian Sumerian Gnosticism: the oppositions are by the latter considered to be just complementary elements which through a dialectical process grow or return towards a unity in harmony. The challenges of conflicts, differences, antitheses are: to grow into Mesopotamian Sumerian dialectical processes towards higher unity and monism rather than to grow into an Indo-European destruction of the opponents leading finally into self-destructions of humanity.

Today the challenge is to scrutinize, to assess if intelligence and especially the AI with its new format the “ChatGTP” and other AI systems in natural language, are again rather levers to self-destruction of humanity, of wellbeing, of happiness, of progress. Can they become true levers for realizing progress, well-being, to strengthen the chances of survival for humanity? In other words under what conditions is intelligence and especially the AI with its new format the “ChatGTP’s” a chance for stimulation survival and under what conditions it is rather a tool for self-destruction. Let us look with this perspective towards the myth of Pandora, the formulation by Hesiod of the old Indo-European pessimistic viewpoint on the use and abuse of intelligence in all its forms and of all the other human properties, skills and qualities like beauty, strength, appeal.

The Pandora myth in Hesiod’s poem (8th-7th century BCE) goes as follow: “After the humans received the fire from Prometheus, what he stole from the gods, Zeus was very angry and he decided to punish humanity. He ordered Hephaestus to make from earth the first woman: a very beautiful evil, whose descendants would torment the human race. Athena made a silvery gown etc... When she: “Pandora” (note 8) appeared before the gods and mortals, she was not to be trusted. Still, men were not able to withstand her. Zeus sent her with her beauty, to Epimetheus, the brother of Prometheus. Epimetheus was warned by Prometheus not to accept gifts from the gods. Epimetheus nevertheless accepted her. She opened her jar (later the jar was called a box).

The content of the jar was scattered: all evils. Epimetheus hastily closed the jar. Too late, still one item did not escape from the jar: hope.” This myth is an explanation of why there is evil in the world. Moreover, all these evils are presents of the gods with a positive aspect related to them. Athena taught Pandora needlework and weaving (Hesiod 63-4). Aphrodite “shed grace upon her head and cruel longing and cares that weary the limbs” (65-6). Hermes gave her “a shameless mind and a deceitful nature” (67-8). Hermes also gave her the power of speech, putting in her “lies and crafty words” (77-80). Athena then clothed her (72). Next Persuasion and the Charites adorned her with necklaces and other finery (72-4). The Horae adorned her with a garland crown (75). Finally, Hermes gives this woman a name: “Pandora (i.e. All-Gift) because all they who dwelt on Olympus gave each a gift, a plague to men who eat bread” (81-2). From her is the race of women and female kind: of her is the deadly race and tribe of women who live amongst mortal men to their great trouble, no help meets in hateful poverty, but only in wealth. Hesiod goes on to lament that men who try to avoid the evil of women by avoiding marriage will fare no better (604-7). So this means all these presents: intelligence, strength, beauty, skills, appeal, ... are in se ways to destruction. The Sumerian Mesopotamian mythological solution is that these presents: potentials need to be used through a dialog-dialectic integration into harmony . In the wisdom and AW: artificial Wisdom approach through the Wisdom fractal frame (WFF), we get the result that the kernel of WFF-wisdom is the *control and temper of the innovation rate to the existent cultural self -correcting potential and ecological environmental requirements* ... This is the rejection of the modern box of Pandora: “the myth of progress” running as follows: “the present is better than the past. The future will be better than the present. Don’t bother about the problems generated by the innovations. New innovations will solve these problems anyway!”.

5. General Conclusion

Intelligence as well as AI are ethical, social, economic, ecological, politic... neutral. They need to be taken good care of and directed by Wisdom made operational, inclusive by Artificial Wis-

dom: AW. The same can be repeated concerning the “Myth of Progress” introduced by the “Enlightenment: the Age of Reason”. This Myth has contributed sometimes, to the blinding of Science, that got and get out frequently of touch with Wisdom.

We can today already discern three Wisdom and AW Pillars. These are the D3SG system (1) a bridge between Indo-European dualism and Mesopotamian Sumerian Asian Harmony-monism through continuous dialog-dialectical harmony creation. The generation of the IL-LEITIC system (2) of more general, less personal oriented problem descriptions, problem solving and assessment and (3) the Wisdom fractal frame (WFF) with its control and temper of the innovation rate, adapted to the existent cultural self-correcting potential and ecological environmental requirements on all domains of activity... Intelligence, technology, beauty, creativity, arts, boldness, courage, self-sacrifice... are all real relevant skills and properties. At the same time, these skills and properties are potentially destructive, able to destruct humanity. The only way to avoid these destructive effects, is to use all these skills, with wisdom. This means continuously to adapt their uses to reach, to target and in fact, to control them in view of ad hoc harmony, of the present actors involved, human, and non-human participants, in the environment. This is a continuous task of wisdom: to search and find harmony. All the skills of intelligence, the generation of beauty, the creation of law and order etc., are part of positive feedback processes which inevitably lead to self-destruction, if they are not embedded in continuous search and integration in harmony creation: through wisdom (note 9) supported by AW...

Notes

Note 1. Etymologically “intelligence” is derived from the Latin “inter” (between) and “legere”: “choosing, making a choice”: that is making the best choices in function of the targets, the means etc. In other words, “intelligence” has to do with ameliorating ones’ own behavior, targets and situations, etc. This can happen in several domains, and so we can differentiate several types of intelligence. Moreover

one can introduce several criteria to assess amelioration (Crombez 2020a, 2020b; Wang, 2023).

Wisdom is something entirely different. It is not related to the amelioration of ones’ successes, realizing higher level of efficiency etc. Etymologically “wisdom” is a combination of “wise” and “dom”. “Wise” refers to “learned, prudent, discreet, known, cunning”. “Dom” refers to a certain general “state, condition, statute”. So “wisdom” refers to a general state of knowledge and prudence. Wisdom is not directed to ameliorate efficiency, success, progress and influence... Rather, wisdom is related to the conservation of a general state or getting to a higher level of state of interactive vivid harmony. The keyword is here “harmony”. Etymologically the term ‘harmony’ is derived from the Greek term ‘harmonia’ this means literary ‘a joint of planks’. This metaphor means: the fitting together, yet retaining differences and diversity, in knowledge, skills, attitudes, qualities, forms of beauty, goals, means, forms of enjoyment of life, perspectives, desires, in a continuous movement also of changes and modifications maintaining the integration in short: a holistic whole.

Note 2. Illeism: Derived from Latin “ille” meaning “he” + English “-ism”. It refers to the use of “he” (third person), instead of “I” (the first person) (gnostotheca 6637).

Note 3. In certain Eastern religions, like Hinduism, illeism is sometimes seen as a sign of enlightenment, since through it, an individual detaches their eternal self (atman) from their bodily form; in particular, Jnana yoga encourages its practitioners to refer to themselves in the third person (Swami Ramdas). (gnostotheca 6638).

Note 4. Classical oration (based on Ancient Oratorical Structuring in ancient Greek and Roman society, itself derived from Mesopotamian Sumerian sources (Vandamme, 2006, 2009) consists of six parts: the exordium, the narratio, the partition, the confirmatio, the refutatio, and the peroratio, which in composition terms is the

following: introduction, narration, partition, arguments, refutation, and conclusion. This method of persuasion is still used in modern classrooms as a model for argumentative papers. Exordium: The introduction: *it sets the tone for the rest of the paper: urgent, calm, humorous, satirical etc...; reaches out to a specific audience who shares common goals, values, or concern; engages the reader's interest by: showing the importance of the issue - why is it relevant?; showing how the issue affects people or the community; connecting the topic with the audience's interests.* Narratio: *brings forth the facts of the case; often a narration updates the reader on relevant material - lays a foundation; briefly provides specific examples and background information; offers ample information for understanding topic more thoroughly.* Partitio: *the thesis; a description that directly names the issue in dispute; concisely lists arguments to be used in order of their appearance in the paper.* Confirmatio: *writer lays out and supports arguments; clearly defines each argument, point-by-point; provides proof or evidence for arguments previously listed; presents research or results to support thesis; offers reasoning for claims of value; explains why something is significant.* Refutatio: *writer looks at counter arguments and demonstrates why they aren't compelling; first, presents arguments along with research and evidence on opposing viewpoint; then, explains why counter arguments are impractical; demonstrates any deviations from logic; shows how these arguments are weak or points out any flaws; overall, show how your argument is somehow better despite oppositions.* Peroratio: *conclusion/resolution of paper; summarizes strongest arguments by reminding reader what was prove;. may include emotional appeals or a call to action; proposes a solution to the proble; leaves the reader with a final impression; paints a picture of what it may be like if the advice of the argument is (or is not) followed.*

Note 5. Definition of fractal: A fractal is a geo-

metric figure with the distinctive property that parts (details) of the figure are similar to the figure itself, but on a smaller scale. Thus a recurring pattern occurs when 'zooming in'. Some people perceive this as very beautiful. In the ideal fractal, the similarity returns every time the scale is reduced, in other words, when one zooms in. When the number of steps at which this succeeds is limited, one speaks of a pre-fractal.

The name 'fractal' is derived from the mathematical property that the figure has a so-called 'broken dimension'. That dimension is then a purely mathematical concept (Hausdorff's dimension concept) and represents the relationship between the size and repetition of the similar-shaped 'puzzle piece' and the number of puzzle pieces required to make up the total fractal. While a fractal appears to have a complicated structure, a single mathematical equation is often enough to describe the structure completely.

The Mandelbrot-collection provides a variety of figures at different scales, based on the equation " $z = z^2 + c$ (with c as constant). Fractals can play a role in the shortest possible coding of images. From 1982 onwards, the mathematician Benoit B. Mandelbrot made efforts to make the remarkable properties of fractals widely known. In the 1990s, artists and amateur mathematicians generated numerous fractals with computers. But precisely because of the simple mathematics behind complex structures, fractals are ideal for describing complicated patterns. In nature many structures that are similar to fractals occur. Fractals can also be important in elucidating how the brain recognizes things.

Note 6. Heraclitus(500 BC) according to Guthrie (Gnostotheca 5583).

Note 7. See the Greek and Latin mythology (Ovid Metamorphoses), the Bible (strong Persian influence) etc.

Note 8. Pandora (Greek "Πανδώρα") is derived from "Παν" (pan), meaning "all", and "δωρον" meaning "gift". So we get "all-gifted". In the older version of Hesiod, the lady was not named at all. In more

recent versions she was named “Anesidora”: “She who sends us gifts (implying “who sends up gifts from below, within the earth”). *Balder M.* (gnostotheca 6562).

Note 9. Other interesting and relevant historical pillars of Wisdom which deserve to be made operational, inclusive by Artificial Wisdom: AW, concern the realization of individual and social “Transcendences”, the realization of individual and social “Sublimation”, the realization of individual and social “Katharsis”, the realization of individual and social “sense of duty”, the realization of individual and social “function identification” (La fonction fait l’homme) ... All these are potential parameters that can be relevant, to take care of, to steer and to control intelligence, AI and other positive feedback processes.

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