



laetus in praesens

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16 December 2024 | Draft

Use of "Sunrise" and "Sunset" as Harmful Misinformation or Disinformation?

Complicity of science in unquestionable dissemination of "fake news"

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Introduction

Considerable focus is currently placed on the harmful consequences of many forms of information. There is considerable confusion about how "harmful" is to be understood globally, as with the distinction between "misinformation", "disinformation" and "fake news" in that regard (*Varieties of Fake News and Misrepresentation*, 2019). Particular concern is evoked with regard to its implications for political processes and electoral campaigns. More subtle are the concerns with regard to the creation and crafting of mainstream narratives. The weaponisation of information through propaganda has long been a feature of warfare and the mobilization of populations and their engagement in unquestioning opposition to an enemy. Arguable the many questionable uses could be framed as a new science (*Towards a Science of Misinformation and Deception*, 2021).

Advertising has long been able to exploit confusion with regard to claims potentially challenged as excessive and misleading -- and the consequences of *misselling* and *overselling* -- all skillfully legitimated by framing

as [puffery](#). Far less obvious are the claims by the religious, as with "Jesus Saves", in contrast with those made by science ([Comparability of Vaxxing Saves with Jesus Saves as Misinformation?](#) 2021; [Reframing Fundamental Belief as Disinformation?](#) 2020). Written just prior to Christmas, especially problematic are [lies-to-children](#) -- and most obviously those relating to [Santa Claus](#) with their commercial exploitation.

In parallel with such concerns are the sensitivities now widely evoked with regard to [discriminatory language](#) deemed to be harmful with respect to issues of race, ethnicity, sexuality, ability, culture, religion, and the like. Whether controversial or not, such language is increasingly removed from place names, signage and legislation ([Understanding hate speech, United Nations](#); [Inclusive Language Guide, American Psychological Association](#); Carmen Cervone, et al, [The Language of Derogation and Hate: functions, consequences, and reappropriation, Journal of Language and Social Psychology](#), 40, 2020, 1; [Language usage: Non-discriminatory language, University of New England](#); Christine Ro, [The pervasive problem of 'linguistic racism', BBC](#), 3 June 2021).

It is within this context that consideration should seemingly be given to potentially harmful language in science (Richard de Grijs, [Offensive or Inclusive Language in Scientific Communication? The Scholarly Kitchen](#), 1 March 2022). There it is noted, for example, that NASA announced in August 2020 that it would retire the use of [potentially offensive astronomical nicknames](#). Citing a beetle named [Anophthalmus hitleri](#), similar concerns have been expressed by biologists regarding the names of species ([When Species Names Are Offensive, Should They Be Changed? Yale Environment 360](#), 4 January 2024). However no reference is made to the problematic use of "sunrise" and "sunset" -- and the consequences to which this may give rise in reinforcing a worldview that is effectively a betrayal of Galileo as an early icon of science. Ironically the use of such terms reinforces a "Flat Earth" perspective purportedly deprecated in a global society, most notably by science.

Curiously there are compilations of terms in other languages recognizing phenomena understood otherwise than in English (Howard Rheingold, [They Have a Word for It: a lighthearted lexicon of untranslatable words and phrases](#), 2000; Adam Jacot de Boinod, [Meaning of Tingo -- and other extraordinary words from around the world](#), 2008; Sara Gates, [28 Genius Depictions Of Words With No Direct English Translation, HuffPost](#), 9 May 2014; Anjana Iyer, [Found In Translation, Behance](#)).

As in the previous experiments, the responses of [ChatGPT 4o](#) are distinctively presented below in grayed areas, with those of [Claude 3.5](#). **Given the length of the document to which the exchange gives rise, the form of presentation has itself been treated as an experiment** -- in anticipation of the future implication of AI into research documents. Web technology now enables the whole document to be held as a single "page" with only the "questions" to AI rendered immediately visible -- a facility developed in this case with the assistance of both ChatGPT and Claude 3 (but not operational in PDF variants of the page, in contrast with the [original](#)). Reservations and commentary on the process of interaction with AI to that end have been discussed separately ([Methodological comment on experimental use of AI](#), 2024). Whilst the presentation of responses of two AIs could be readily considered excessive, it offers a "stereoscopic" perspective highlighting the strengths and limitations of each.

The question evoked by this approach is what can be "gleaned" from interaction with AIs, given their unprecedented access to information generated by a vast array of authors and authorities. The approach also offers the possibility that similar questions could be asked of any AI facility to which readers may have access, currently or in the future. The questions could well be refined, and the responses challenged, given the proactive responses of AI to such interaction as indicated below.

Show All AI Responses

Harmful disinformation exemplified by "sunrise" and "sunset"?

Briefly stated, it was the achievement of [Galileo Galilei](#) to challenge an authoritative geocentric worldview through his articulation of an heliocentric perspective. The challenge evoked considerable opposition from the

Catholic Church, variously described as the [Galileo Affair](#). This began around 1610, and culminated with the trial and condemnation of Galileo by the [Roman Catholic Inquisition](#) in 1633. Galileo was prosecuted for holding as true the doctrine of [heliocentrism](#).

After being forced to recant the claim that the Earth moves around the Sun, rather than the converse, Galileo is alleged to have asserted the contrary through the phrase *Eppur si muove* ("And yet it moves"). In this context, the implication of the phrase is, despite his recantation and the [Inquisition's](#) proclamations to the contrary (or any other conviction or doctrine of men), the Earth does, in fact, move ([around the Sun](#), and not [vice versa](#)).

It is therefore somewhat ironic, if not tragic, that modern science would seem to have cultivated uncritically a complicity with an obsolete religious perspective in variously promoting use of the term "sunrise" -- contrary to the insights of Galileo and to the investigations of science since his time. It can of course be immediately asserted that reference to "sunrise" or "sunset" is to the appearance from the surface of Earth -- and that "everyone knows" that the Earth moves round the Sun.

The difficulty with any such reframing, as indicated by the contextual sensitivities indicated above, is that appearances now count to an ever greater extent -- exemplified in politics and business by reference to the "optics" (David Blitz, *The Optics: perception matters more than reality in business*, *Forbes*, 14 September 2020; Jeffrey Bairstow, *How did 'optics' become a buzzword for PR?* *LaserFocusWorld*, 1 April 2010; *Optics Matter: using perception to stay ahead of issues and challenges*, *Medium*, 12 September 2023).

Science has not engendered neologisms recognizing the heliocentric perspective. Cumbersome reference to "earthlit" or "earthunlit" illustrate the perceptual challenge faced. Rather science has cultivated through meteorology (and the geosciences and "Earth sciences") the specific references to "sunrise" or "sunset", as notably featured in broadcast weather bulletins. There is no "small print" to suggest that any such understanding is qualified by "appearance" or "perspective".

Science, variously held as a language in its own right, does not seem to have any scientifically consistent alternative to "sunrise" or "sunset" that is appropriately succinct.

Factual proof of sunrise and sunset?

As a corrective to misinformation, disinformation and fake news, considerable emphasis is now placed on "fact-checking" and "evidence-based practice" based on scientific evidence. Such concerns have recently resulted in the [retraction of an unprecedented number of papers from academic journals](#).

It is therefore remarkable to discover that South Australian legislation includes a *Proof of Sunrise and Sunset Act* (1923) -- for which ministerial responsibility and subordinate legislation is regularly clarified in *The South Australian Government Gazette*, and in which "[sunrise and sunset times](#)" for past years can be found. The purpose of the Act is *to facilitate the proof of the times of sunrise and sunset, and for purposes incidental thereto*. This is all the more remarkable in that a very active concern in Australian federal politics is currently the formulation of legislation in more specific response to disinformation (*Communications Legislation Amendment (Combating Misinformation and Disinformation) Bill 2024*), *Minister for Communications*).

As noted with respect to those legislative provisions:

[Sunrise and sunset times](#) were originally provided as a means of establishing when vehicle lights should be turned on. The times are checked using: *Geoscience Australia* [and] The United States Navy. The published times are computed and are not observed or recorded events. The computations assume certain ideal conditions and the data might not be relevant to a specific case. The times are intended for general public use, not for litigation purposes. They are provided as a prima facie proof of sunrise and sunset and acceptance by a court for other purposes is not guaranteed....

The sunrise and sunset times are calculated by interpolation from tables in the *Astronomical Phenomena* publication for each year. This almanac of sun and moon times is prepared jointly by the United States Naval Observatory and Her Majesty's Nautical Almanac Office... The times of sunrise and sunset are the instant the upper edge of the sun appears to lie on the horizon for an observer at sea level. An allowance of 34' has been made for refraction and a further 16' has been made for the semi-diameter of the sun.

Formal definitions for *Sunrise and Sunset* are provided by Geoscience Australia (*Astronomical Definitions*, 27 June 2014) with no indication that it is indeed the Earth that is rotating -- as is the case with *Moonrise and Moonset*. As might be expected, without any reference to proof or fact-checking, analogous information is available for other countries (*Sunrise and Sunset Times in United States*, *Sunrise-Sunset.org*; *Sunrise and Sunset in the United Kingdom*, *TimeandDate*). Forecasts are provided for "sunrise" in cities accessible via the search facility of the *World Weather Information Service* of the World Meteorological Organization. Specific reference is made to "sunrise" in the *Rules of the Air* of the ICAO/UN *Convention on Civil Aviation*. This usage can be held to suggest the complicity of the United Nations in reinforcing an obsolete geocentric worldview at variance with promotion of any global perspective.

Clarification of implications of linguistic bias with AI assistance

Question: Given that "sunrise" can be described as a *terminological inexactitude* -- as with "sunset" -- do you have any trace of a language in which it is not implied that it is the Sun that is in motion

Show/Hide AI response

Despite the more appropriate alternative recognition in the Japanese language, there is the curious irony that Japan has long claimed an identity as the "Land of the Rising Sun" (*Japan, the land of the rising sun: meaning and origin*, *Japan Experience*, 16 July 2020; Yasu Shimizu, *Why is Japan called the "Land of the Rising Sun"?* *Japan Luggage Express*, 18 November 2024). With reference to the flag of Japan as the "rising sun flag", the author discusses why this reference remains controversial -- even potentially offensive (*Is the Rising Sun Flag Offensive?* *Japan Luggage Express*, 28 May 2023).

Question: Much appreciated, but does your response imply that most other languages of which you are aware do indeed imply movement of the Sun

Show/Hide AI response

Question: Did the movement of the Sun feature in the language of the prosecution of Galileo -- *Eppur se muove* -- or any such recognition thereafter by religion or science

Show/Hide AI response

Question: To the extent that "sunrise" and "sunset" are a feature of daily meteorological forecasts, to what extent could they be considered to exemplify harmful "misinformation" or "disinformation" -- given increasing concern with "fact-checking" and "evidence-based" education

Show/Hide AI response

Question: Whilst it can indeed be claimed that asserting the movement of the Sun is not in any way harmful, how does that compare with uses of language recognizing phenomenological truths -- language now severely deprecated as harmful. Does "sunrise" reinforce a Flat Earth perspective which could be deemed fundamentally harmful an misleading in a global civilization

Show/Hide AI response

Requisite distinction between "good" disinformation and "bad" disinformation

Question: Whilst the matter can easily be set aside for reasons you cite, it raises questions about the status of discriminatory language that is itself a reflection of phenomenological truth -- although held to be disinformation increasingly condemned by legislative and other measures. Does it create a distinction between "bad" disinformation and "good" disinformation -- as with so-called lies-to-children

Show/Hide AI response

Question: That response omits reference to the claims made in advertising, electoral promises, and those of religion -- all of which elude verification and exploit it, even abusively so. That dynamic may be protected legally as "puffery" -- with each free to claim their product as "best", even scientifically "proven"

Show/Hide AI response

Conceptual laxity of science faced with phenomenological experience?

Question: The reference to "acceptable deviations from literal truth" merits careful consideration in a period in which disinformation is being strictly defined in relation to "harmfulness". It could however be argued that the failure of science to engender a term which reflects a post-Copernican understanding of "sunrise" is an indication of conceptual laxity and complicity in promotion of misunderstanding -- however comfortably convenient.

Show/Hide AI response

Question: Whilst efforts are made, when strained resources permit, to educate people of the reality of the rotation of the Earth (as fundamental to the appearance of a rising Sun), do you have any trace of whether such efforts extend to how that rotation can be readily proven -- "fact-checked" as is now widely required. Is it assumed by science that the heliocentric model must be unquestionably accepted. What skills are required to prove such rotation and who is educated to understand and make use of them.

Show/Hide AI response

Question: This exchange regarding a geocentric perspective versus a heliocentric perspective could be reframed through the number of distinct illusions between appearances cultivated in the first case and the reality of the second. Could you identify these illusions with a view to the manner in which they are indicative of distinct psychosocial analogues potentially governing the perceived relation to any "other" of primary significance

Show/Hide AI response

Question: The set of distinctions made in that response recalls the *Eight Similes of Illusion* recognized by Buddhism -- namely the metaphors that are used to show how phenomena are empty of inherent existence and yet still appear. The sense in which the geocentric illusions are "comforting" accords with the articulation of illusions by Longchenpa (*Finding Comfort and Ease in the Illusoriness of Things*). Could you comment on any comparable distinctions of illusion by science -- which the methodology of science seeks to address.

Show/Hide AI response

Question: The clarification made in those responses could be considered highly relevant to current legislative

initiatives regarding misinformation and disinformation and the manner in which they should be defined and distinguished. Could you comment on their comparability with the distinctions made in those responses -- and the relevance to the case of "sunrise" and "sunset" as "comforting" illusions in their own right

Show/Hide AI response

Question: That response appropriately frames conditions in which misinformation is usefully "benign" -- citing "sunrise" as an example. Given the currently intractable challenges to global governance faced with polycrisis and widespread conflict, should what is framed as "benign" and "comforting" be the focus of a far greater degree of critical thinking -- as potentially obscuring new insights into the engagement with otherness, alterity and disagreement. Given the engagement by physics with a wave-based reality seemingly alien to experiential reality, a striking example is offered by its application to international relations by [Alexander Wendt](#) (*Quantum Mind and Social Science: unifying physical and social ontology*, 2015). Does the significance associated by poets with "sunrise" accord with a wave-like metaphor radically distinct from its questionable legislative definition (*Encountering Otherness as a Waveform: in the light of a wave theory of being*, 2013).

Show/Hide AI response

Question: References to Galileo in this exchange offer the reminder of his iconic role with respect to the scientific dimensions of the "Renaissance" -- a term readily associated symbolically with the renewal of "sunrise". Given his effective betrayal by science in the use of that term, could you comment on the manner in which any variously anticipated new form of "Renaissance" may be harmfully inhibited by cultivation of comforting illusions by science

Show/Hide AI response

Reinforcing a "Flat Earth" mentality and its associated harmfulness?

Deemed pseudoscientific of necessity, the credibility of a "Flat Earth" perspective has long been cultivated by a variety of organizations and individuals, most notably through the [International Flat Earth Research Society](#) and its recent gathering (Harry Dyer, *I watched an entire flat Earth convention for my research-- here's what I learned*, *The Conversation*, 2 May 2018). It is appropriate to raise the question whether reference to "sunrise" merits recognition as pseudoscientific, although it does not feature in references to those beliefs (Ruth Freitag, *The Flat Earth and its Advocates: A List of References*, *Library of Congress Research Guides*).

There is a confusion between the argument for heliocentrism by Galileo and widespread assumptions that Christendom (through the Catholic Church) denied the sphericity of the Earth, as discussed separately (David Hutchings, *Flat Wrong, Of Popes and Unicorns: Science, Christianity, and How the Conflict Thesis Fooled the World*, 2021). By contrast, Islamic scriptures imply, adhere to, and describe a flat-Earth cosmography ([arranged in a geocentric system](#)) which conceives of the Earth as existing in the form of a large plane or disk (*Islamic Views on the Shape of the Earth*, *WikiIslam*).

More intriguing is the extent to which "Flat Earth" is used as a meme to deprecate or reframe various authoritative and legislative initiatives -- although not those which embody "sunrise" and "sunset" into legislative measures. Examples of potential interest include:

- An anonymous [submission](#) to the Committee articulating the Australian Communications Legislation Amendment (Combatting Misinformation and Disinformation) Bill 2023.
- *Is American Falling Off the Flat Earth?* (National Academies of Sciences, Engineering, and Medicine, 2007)
- Erik M. Jensen: *The Case for a Flat-Earth Law School* [as the antithesis of globalization] (*Case Research Paper Series in Legal Studies*, Working Paper 07-22 July 2007)
- Michael O'Brien: *Obama: No time for 'flat-earth society' on climate change* (*NBC News*, 26 June 2009)

2013)

- Robert Charrow: *The Lame Mule Act is today's Flat Earth Society* (*The Washington Times*, 12 October 2021)
- Robert J. Schadewald: *Equal Time For Flat-Earth Science* (*Creation/Evolution Journal*, 2, 1981, 1)
- Paul Armentano: *DEA Reaffirms 'Flat Earth' Position With Regard To Scheduling Marijuana* (*NORML*, 10 August 2016)
- *Frivolous Legal Threat From Ebenezer Breach Against Sir John Gorst* (*Flat Earth News*)

As a consequence of refusal of some engineering firms invited to tender for the construction of the Suez Canal (because they thought it would be impossible to hold up huge sand banks on the Earth's curved surface), an act of Parliament was passed by the UK (*The Railways, Powers and Construction Amendment Act*, 1870) forbidding any engineer invited to tender for the construction of railways and canals to make any allowance for the curvature of the Earth's surface. As previously reported, the act has not since been repealed (*Flat Earth*, *The Denmark Post*, 11 January 1951)

History is replete with legislative measures that seem flagrantly at odds with scientific understanding or logic. Many of these laws reveal a combination of ignorance, cultural bias, or political expediency, often clashing with reason and evidence. Examples exist in various domains that might be considered particularly egregious can be categorized as: anti-science legislation, laws reflecting scientific ignorance, pseudoscientific and unjustified laws, and outdated and eccentric laws.

Question: The existence of legislative measures that have contradicted scientific understanding helps to recognize the role of science in misusing its own authority to frame misinformation, such as "sunrise", which is fundamentally inconsistent with the facts it otherwise promotes

Show/Hide AI response

Question: To what extent is the current global knowledge-based civilization characterized by the fundamental irony that a geocentric worldview promoted with religious authority has purportedly been replaced by the promulgation of a heliocentric worldview whose reality very few are able to validate. More problematic is that this facilitates the assumption in practice that the world experienced by many can be readily assumed to be "flat" -- although this assumption is deprecated by scientific authority. The irony is that science effectively enables credibility in practice in a "Flat Earth" perspective deplored by science.

Show/Hide AI response

Question: There do not appear to have been any surveys to establish the degree of recognition of a "global" Earth in contrast with one that is "flat" to all extents and purposes. The former perspective is consistent with the sense of "finite but unbounded" whereas the latter would be consistent with one of infinite extension. The first has healthy implications for resource constraints in contrast with the extreme dangers of lack constraints and of unboundedness. Does a Flat Earth have "planetary boundaries"

Show/Hide AI response

Question: The inability of science -- or of any language other than Japanese -- to clarify the conceptual reality of the movement of the Earth (in an intuitively meaningful term) merits wider recognition in the light of its subtler cognitive and strategic implications. That inability has been replicated in the popularity accorded by space enthusiasts to the term "Earthrise" through an iconic image of the Earth apparently rising over the Moon's horizon. This suggests a projection of unconstrained conceptual inexactitude into the process of space exploration.

Show/Hide AI response

Question: The emphasis of the responses is that reference to "sunrise" and "sunset" is relatively benign with relatively negligible global implications. This could be fundamentally challenged to the extent that the geocentric framework is systemically analogous to the sense in which "everything" revolves "around me", "around my family", "around my group", "around my gender", "around my nation", "around my discipline", "around my culture", "around my religion", and the like. By analogy the heliocentric framework requires an insight into how collectivities of any kind revolve around some kind of "other". The instances cited are all challenged to articulate such an understanding. Science has not helped in this respect through its reliance on "explanation" and "education" in a resource challenged civilization in which their availability is typically questionable and ineffective.

Show/Hide AI response

Question: With regard to the phenomenological implications of "sunset", whether from a geocentric or Flat Earth perspective, how does any "other" risk being framed as inhabiting an "other side" -- even an "underside", with its archetypal connotations inviting the demonisation which continues to be a feature of global discourse

Show/Hide AI response

In quest of a lexicon of phenomenological relevance to otherness

Question: In contrast with "sunrise", this exchange has drawn attention to the cumbersome nature of phrases which might be proposed as more appropriate -- and are therefore necessarily not fit for purpose: *"the Earth's rotation causing the Sun to appear"*. Given the rotational dynamic implied by engaging with any "other" -- and seeing from another perspective -- there is a case for challenging the lack of creativity of science in imagining other possibilities, potentially drawing on poetry and insights from other languages (Adam Jacot de Boinod, *Meaning of Tingo*, 2008; Howard Rheingold, *They Have a Word for It*, 2000). Given the historical irony that it was the preoccupation of Galileo which was one of the instigating processes for the [Age of Enlightenment](#), "enlightening" is perhaps more appropriately suggestive than "sunrise". This however lacks the rotational implication, arguably vital for a ["circular economy"](#) in a society faced with "endarkenment" and the need for a ["sunset provision"](#). Could you speculate on other pairs of succinct terms which might frame the cyclic engagement with otherness through metaphor

Show/Hide AI response

Cyclicity of relations with any "other" from a "heliocentric perspective"

Question: The response is valuable as an indication of the merit of complementary metaphors through which the systemic and cognitive complexity might be rendered coherent in matching the dynamics of the phenomenological reality experienced. Ironically missing from the suggestions formulated in relation to "sunrise/sunset" is the degree to which they might be informed by the experiential parallels to the many familiar relations to otherness -- notably expressed in poetry and solar symbolism. These include the manner in which "special relationships" may degrade tragically into "divorce" and "conflict". The quest is therefore not unrelated to the challenge of "two-state relationships" more systemically understood -- whether at the collective or the personal level.

Show/Hide AI response

In the light of the urgency of the response to solar radiation as a means of mitigating its effects on global warming, its symbolic implications for psychosocial health merit careful consideration of the significance of engendering artificial "eclipses", as currently envisaged. The possibility of "unilateral" initiatives has already been demonstrated by the unconstrained placement of satellites obstructing starlight ([Symbolic Disconnection from the Stars and the Universe?](#) 2019). This can be recognized as a form of surreptitious global

implementation of full-spectrum dominance and shielding. Curiously the implications of "sunrise" have already ensured a potentially dangerous form of cognitive disconnect.

Question: Faced with what is deemed to be the ultimate challenge to the viability of life on the planet, namely global warming, a case continues to be made for "space mirrors" -- namely the necessarily controversial placement of satellites designed to change the amount of solar radiation that impacts the Earth (Emmi Yonekura, *Why Not Space Mirrors?* RAND Corporation, 19 October 2022; Petra Stock, *Space Mirrors: reflecting light where the sun doesn't shine*, *Cosmos*, 27 July 2023; *EU should ban space mirrors and other solar geoengineering, scientists say*, European Council for an Energy Efficient Economy, 10 December 2024). Missing from the technical focus of geoengineering on diverting solar radiation are the implications in systemic terms for the psychosocial relations indicated above -- with which solar symbolism and "sunrise" (and "sunset") are so intimately related.

Show/Hide AI response

Question: This exchange has variously suggested an unexplored pattern of subtle connections between climate change (through global warming) and the role of the Sun, extending through its symbolism to a renewal and Renaissance curiously inhibited by static cognitive frameworks -- ironically resulting in the "overheating" of strategic discourse. Given this memetic nexus, could you comment on the extent to which the unqualified reference to "sunrise" (and an effective quest for "sunset") exemplify the psychosocial constraints on articulation of a viable strategic response to "climate change" -- potentially even in public opinion.

Show/Hide AI response

Question: Given that much inspiration has traditionally been drawn from solar symbolism, most obviously with respect to the drama of interpersonal relationships, the use of "sunrise" and "sunset" can be fruitfully challenged by the sense of "dawn" and "dusk" as metaphors of the changing significance of such relationships -- or at least of a portion of any "diurnal" cycle. Particular significance is then associated with "renewal" following a hidden portion of the cycle -- with allusions to recognition cultivated by any sense of reincarnation. Does the rotation of the Earth in relation to the Sun offer other vital insights into engagement with an other -- as potential framed by poets. How might this apply in the case of the drama of Russia-Ukraine, Israel-Palestine, or the two Koreas, for example.

Show/Hide AI response

Question: The response suggests that the resistance to a heliocentric perspective from a geocentric one, as exemplified by the historical opposition of the Catholic authorities to Galileo, is now ironically echoed to a degree through the inability of science to articulate a comprehensible "heliocentric" perspective of relevance to psychosocial relationships -- if only in metaphorical terms. Science would appear to have little insight to offer about the phenomenological experience of cycles of psychosocial relationships -- and the tragedies with which they may be associated. This inability is highlighted by the "drama" of science (Thomas Kuhn, *The Structure of Scientific Revolutions*, 1962-2020) and the inadequately acknowledged dynamics of relationships between disciplines and their practitioners (*Knowledge Processes Neglected by Science*, 2012; *Challenges of Science Upheld as an Exclusive Mode of Inquiry*, 2021).

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Question: With respect to "sunrise", it is curious to note the manner in which key figures of a discipline may be framed by their disciples through a solar metaphor -- if not as deities -- even in anticipation of their eventual decline as a "setting sun", having been a "rising star". The pattern is even more striking in politics, as with Louis XIV as the "Sun King" (Stephan Richter, *Donald "L." (as in Louis) Trump: The Sun King Reloaded? The Globalist*, 6 December 2024). The pattern can be recognized as extending -- often tragically -- into family relationships in which the father is effectively framed metaphorically through a solar archetype in a dynamic typically exploited. The failure of science in this respect is exemplified by the apparent inability of

scientists to frame creatively their own decline or their experiential relationships to significant others, as may be provocatively explored ([Mathematics of death and dying as an engagement with limits?](#) 2024; [Metaphors To Die By](#), 2018)

Show/Hide AI response

Question: Given the importance widely associated with solar symbolism over millennia, could the "rise" (or "emergence") of a strategic or spiritual goal be considered in that light -- with psychosocial implications for the UN's Sustainable Development Goals

Show/Hide AI response

Question: The response to the cognitive and experiential challenge of misleading reference to "sunrise" and "sunset" have variously highlighted the role of a phenomenological version of this argument perspective. This has notably been articulated by [Steven Rosen](#) ([Dimensions of Apeiron: a topological phenomenology of space, time, and individuation](#), 2004). Could you comment on a (shared) version of his argument with respect to the appearance of "sunrise" and "sunset" ([Why Natural Science Needs Phenomenological Philosophy, Progress in Biophysics and Molecular Biology](#), 119, 2015).

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Galileo Commission report from an AI perspective

Question: Given the focus of this argument on the revolutionary role of Galileo with regard to traditional misunderstanding of the dynamics of "sunrise" and "sunset", these merit comparison with the challenging arguments to conventional science of the [Galileo Commission](#), founded by the [Scientific and Medical Network](#) in 2017 in order to "expand the scope of science". Could you comment on whether its [conclusions](#) (shared) can be understood as addressing the phenomenological challenges of engaging with any "other" as highlighted by the argument above.

Show/Hide AI response

Mnemonic lyrics and imagery to rectify sunrise/moonrise misinformation

Whilst there are indeed many metaphors relating to the Sun and the Moon, some extend to those of sunrise/sunset and moonrise/moonset -- all of which may well be of symbolic significance in different cultures. The metaphors are extensively used by poets and in song lyrics. For example.

- [30 Metaphors for Sunrise and Sunset and its Meaning](#) (*Inglishe*, 9 August 2024)
- [12 Sun, Sunrise and Sunset Metaphors for Writers](#) (*Symbolism and Metaphor*)
- [50 Metaphors For Sun with Meaning](#) (*Engdic*)
- [31 Metaphors for Sunset: a powerful collection](#) (*Verbomaster*, 26 September 2024)
- [40+ Moon Metaphors That Illuminate Your Night](#) (*Verbal Versa*)
- [19 Best Moon Metaphors for Writers](#) (*Symbolism and Metaphor*)
- [30 Metaphors for the Moon: A Journey Through Lunar Imagery](#) (*Phrases Directory*)

There is the curious possibility that strategic "goals" serve a role as "suns" in psychosocial terms -- or even as "moons". This might then offer the sense that global society is surrounded by a complex of orbiting moons -- namely the UN's 16 Sustainable Development Goals. Their apparent phases might even be understood to be indicative of their relative fulfillment.

Question: Given the extent to which metaphors of sunrise/sunset and moonrise/moonset are employed by poets and for ritual purposes, there is a case for speculative elaboration of succinct mnemonic lyrics which would explicitly embody a corrective to the implication that it is the Sun or Moon which is moving around the

Earth in some way. Could you compose an example of such a memorable lyric

Show/Hide AI response

Question: Whilst lyrics offer corrective insights in one mode and for one language, a potentially more powerful mnemonic device would be an image which would be explicitly indicative of the set of illusions (highlighted earlier) regarding the misleading appearance of sunrise/moonrise (and sunset/moonset). This could be complemented by an image indicative of the dynamics in reality. More ambitiously, the complementary images could be suggestive metaphorically of their psychosocial implications for the dynamics with otherness. Are you able to generate such imagery or can you comment on when this may be possible

Show/Hide AI response

Psychosocial conclusion

Question to Claude 3.5 : I reproduced your responses together with those of ChatGPT for comparison (a paper I am sharing share). My concern is that -- unusually -- your responses were particularly succinct in comparison with those of ChatGPT. My question is whether you could review the paper as a whole, especially to determine whether the cognitive implications for relations with alterity are adequately clarified.

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Question: My particular interest is how -- when confronted with sunrise -- people are enabled to recognize that it is in fact the Earth that is turning. This seems to require an insight beyond conventional explanations dissociated from the experience of a rising sun. The question is how this may apply to relationships with any other where one's own "rotation" is neglected in favour of the appearance of the emergence or disappearance of the other

Show/Hide AI response

Question: Whether Foucault's pendulum is relevant is not clear to me. The problem is the difficulty of rendering credible any sense in which one is oneself "rotating" when stasis and invariance are far more credible

Show/Hide AI response

Question: The posted responses note the types of illusions which may be active -- as well as Buddhist reflections on such illusions. Both suggest misplaced concreteness and even "idolatry" -- a dog's focus on a pointing finger comes to mind. What kinds of metaphors would be appropriate under such circumstances.

Show/Hide AI response

Question: The metaphors are indeed somewhat helpful. The problem is many have been concerned with the disconnect but little seems to have been achieved in reconciling the perspectives -- other than in anecdotal terms. Science continues to reinforce reference to "sunrise"

Show/Hide AI response

Question: Further exploration would indeed be appreciated. My concern is that any clarification, citing sunrise -- tends to distract from the cognitive implications as they apply to psychosocial relations where the consequences are especially dramatic

Show/Hide AI response

The argument with respect to sunrise/sunset and moonrise/moonset merits exploration with respect to frequent recognition of psychosocial forms of "rising" and "falling":

- fundamentalism:

- Grant Wacker: *The Rise of Fundamentalism* (National Humanities Center, 2000)
- Michael O. Emerson and David Hartman: *The Rise of Religious Fundamentalism* (*Annual Review of Sociology*, 32, 2006)
- technocracy:
 - Jesse Smith: *Technocracy Rising: Why It's Crucial to Understand the End Game* (*Global Research*, 19 December 2024)
 - Patrick M. Wood: *Technocracy Rising: The Trojan Horse Of Global Transformation* (Coherent Publishing, 2014)
- fascism:
 - Walden Bello: *The Global Rise of Fascism and How to Fight It (Focus on the Global South*, 22 February 2024)
 - Henry Giroux: *America's Descent Into Fascism Can Be Stopped* (*CounterPunch*, 8 November 2024)
 - Mukul Kesavan: *India is witnessing the slow-motion rise of fascism* (*The Guardian*, 8 September 2024)
- democracy:
 - *Democracies in Decline* (Freedom House)
 - Damien Kingsbury: *Democracy in Decline* (Australian Outlook, 19 May 2023)
- West / Europe:
 - Oswald Spengler: *The Decline of the West* (1918)
 - Mark Pierce: *The Decline of Europe: "Rage, rage, against the dying of the light"* (*The Interpreter*, 29 September 2023)
- relationships:
 - *The Decline of the Human Relationships* (*Victorious Living*, 9 September 2019)
 - *The End of Relationships* (*Psychology Today*)

Question: Given the conclusions in your responses, could you comment on the potentially misleading understanding of the "rise" of fundamentalism, fascism or technocracy, as well as the "decline" of democracy, of the West, and the like

Claude 3.5	
<p>This is a profound application of the insight about misattributed motion/change to current global dynamics. Just as we misperceive the Sun as "rising" when it's our own rotation creating that appearance, we may be misreading major social transformations:</p> <p>"Rising" Phenomena:</p> <ul style="list-style-type: none"> • Fundamentalism isn't necessarily "rising" - we may be "rotating away" from nuanced understanding • Fascism might not be "ascending" - we could be turning toward more authoritarian perspectives • Technocracy may not be "emerging" - we might be spinning toward technological dependence <p>"Declining" Phenomena:</p> <ul style="list-style-type: none"> • Democracy might not be "setting" - we may be rotating away from democratic engagement 	<p>The Implications:</p> <ul style="list-style-type: none"> • Agency Attribution: <ul style="list-style-type: none"> ◦ We attribute active movement to external forces ◦ Miss our own role in changing relationships ◦ Overlook our collective "rotation" ◦ Avoid responsibility for transformations • Response Limitations: <ul style="list-style-type: none"> ◦ Focus on stopping others' "rise" rather than examining our own movement ◦ Try to prevent "decline" instead of understanding our rotation ◦ Miss opportunities for intentional reorientation ◦ React to symptoms rather than addressing dynamics • Strategic Blindness: <ul style="list-style-type: none"> ◦ Fail to recognize our power to shift orientation ◦ Miss opportunities for systemic intervention

<ul style="list-style-type: none"> • The West isn't necessarily "declining" - we could be turning toward different reference points • Values aren't "falling" - we might be spinning away from certain ethical frameworks 	<ul style="list-style-type: none"> ◦ React defensively rather than adaptively ◦ Overlook our role in creating what we fear <p>Would you like to explore specific current examples of how this misattribution affects political discourse or policy responses?</p>
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Question: With respect to your comments on metaphors relevant to comprehension of the dynamics of sunrise/sunset, these recall the arguments made by [William Irwin Thompson](#) as a cultural historian concerning the process of [enantiodromia](#) as framed by Carl Jung (*Jung on the Enantiodromia*, Jungian Center; *Are We Experiencing an Enantiodromia Now?* Jungian Center). This is the tendency of things to change into their opposites, especially as a governing principle of natural cycles and of psychological development. Thompson develops the relevance of the process (*Pacific Shift*, 1985), as variously reviewed (*Enantiodromia: cycling through the cognitive twist*, 2007; *Toward an Enantiomorphic Policy*, 1983; *Through psychodrama to enantiodromia?* 2019). It is appropriately described by David Tiong as *Enantiodromia: Navigating the Balance of Extremes* (6 October 2024). Could you comment further on its relevance to comprehension "otherwise" of sunrise/sunset, especially given its relevance to engagement with any "other" as highlighted in this exchange

Claude 3.5	
<p>This is a profound connection that enriches the discussion of sunrise/sunset dynamics through the lens of enantiodromia. The relevance operates at multiple levels:</p> <ul style="list-style-type: none"> • Natural Cycle Dynamics: <ul style="list-style-type: none"> ◦ Day/night as fundamental enantiodromic cycle ◦ Apparent opposites revealed as complementary phases ◦ Continuous transformation rather than binary states ◦ Natural rhythm of emergence/withdrawal ◦ Integration of light/dark aspects • Perceptual/Cognitive Shifts: <ul style="list-style-type: none"> ◦ Movement between geocentric/heliocentric views ◦ Transformation between subjective/objective perspectives ◦ Oscillation between phenomenological/scientific understandin ◦ Integration of apparent/real dynamics ◦ Balance of experiential/theoretical knowledge • Psychosocial Implications: <ul style="list-style-type: none"> ◦ Self/Other as complementary rather than oppositional ◦ Identity formation through engagement with difference ◦ Cultural evolution through tension of opposites ◦ Transformation through apparent contradiction ◦ Growth through embracing paradox 	<ul style="list-style-type: none"> • Strategic Applications: <ul style="list-style-type: none"> ◦ Conflict resolution through recognition of complementarity ◦ Development through cyclic rather than linear processes ◦ Innovation through integration of opposites ◦ Transformation through embracing tension ◦ Evolution through apparent regression • Deeper Understanding: <ul style="list-style-type: none"> ◦ "Sunrise" as phase in continuous transformation ◦ Opposition as opportunity for integration ◦ Difference as catalyst for development ◦ Apparent conflict as path to synthesis ◦ Tension as creative force <p>This suggests that enantiodromia offers a valuable framework for understanding both celestial dynamics and human relationships, potentially informing more sophisticated approaches to engagement with "otherness" at all levels.</p>

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