

Naturalism—as Religion, within Religions, without Religion

with Willem B. Drees, “Naturalism and Religion: Hunting Two Snarks?”; Ursula W. Goodenough and Jeremy E. Sherman, “The Emergence of Selves and Purpose”; Matthew D. MacKenzie, “Spiritual Animals: Sense-Making, Self-Transcendence, and Liberal Naturalism”; Curtis M. Craig, “The Potential Contribution of Awe and Nature Appreciation to Positive Moral Values”; Mark E. Hoelter, “Mysterium Tremendum in a New Key”; Charles W. Fowler, “The Convergence of Science and Religion”; Todd Macalister, “Naturalistic Religious Practices: What Naturalists Have Been Discussing and Doing”; Paul H. Carr, “Theologies Completing Naturalism’s Limitations”; James Sharp, “Theistic Evolution in Three Traditions”; Alessandro Mantini, “Religious Naturalism and Creation: A Cosmological and Theological Reading on the Origin/Beginning of the Universe”; and Willem B. Drees, “When to Be What? Why Science-Inspired Naturalism Need Not Imply Religious Naturalism.”

THE CONVERGENCE OF SCIENCE AND RELIGION

by Charles W. Fowler

Abstract. Many natural patterns are obvious. We observe them in the weather, our physiology, the solar system, and our habits. We see that every finite thing is made up of parts and every finite thing is a part of something else. Relationships and characteristics occur in patterns. We see structure and function everywhere we look; everything falls into categories. Some patterns are not so well-defined, including the function of our minds—thoughts, beliefs, emotions, opinions, and worldviews. Even so, patterns exist in the ways our minds influence what we are and do. Changing our thinking changes everything. This article is based on the premise that carefully chosen patterns provide holistic guidance. Furthermore, thinking that seeks and follows such guidance is essential—but it is ominously absent from today’s world. The case is made that rectifying this situation involves conceptual consistency that matches reality/truth and the convergence of all belief systems.

Keywords: belief systems; consonance; emergence; evolution; holism; immanence; interconnectedness; normative information; reality; veracity

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You have to be spiritual in order to truly be able to accept what the world is about.

—Mary Oliver.

The main points of this article are: (1) Consistency among belief systems is essential and involves an evolution toward a perspective that conforms with reality—the truth. (2) Normative patterns provide holistic information for decision-making, policy, and action—nothing is excluded. In particular, (3) mammalian species of our body size improve as role models for being a species as they are relieved of abnormal human influence. (4) Conscious attempts to be a normal species involve substantive and significant progress toward unprecedented consistency in matters of mind.

Foundational to these points is the definition of *Reality*: *That from which nothing is excluded* (Fowler 2009). In particular, belief systems are parts of reality and are subject to any form of selection—collectively and individually. Also included, are things like every galaxy, all history, every culture, the complete set of natural laws, all emotions, every subatomic particle, all politics, every physical force, and the full set of interactions among everything. Reality involves the infinite set of points in space and time with all combinations, qualities, and interactions.

From this point forward, terms in **bold type** point to concepts representing various qualities of reality—qualities taken as real to varying degrees within both science and religion. A primary premise is that progress toward recognizing, understanding, accepting, and implementing such concepts contributes to the convergence of all belief systems. Using normative information for guidance exemplifies the process.

NORMATIVE INFORMATION

What is **normative information**? Figure 1 shows an example: human body temperature. It has a mean/average of about 98 °F. It is finite with limited variation explained by things like body size, age, and time of day—things that we are aware of and can account for directly, ourselves. **Consonance** is involved in specifying the expected/normal temperature as *we* procedurally take such variables/categories into account—always in comparison to the body temperature of other individual humans. Temperatures outside the normal range of natural variation are considered pathological with an increased risk of death. This is a risk that is taken into account by the pattern itself; in other words, risks are part of the pattern's **immanence**—risks contribute to the pattern's evolved intrinsic nature. They are innate to, reflected by, and inherent to, its existence.

By definition, **homeostasis** (self-organizing processes such as death) is involved in the origin and maintenance of this pattern. **Immanence** is its reflection of all factors (**holism, complexity**) that contributed to its **emergence** along with all factors involved in its preservation—as actually

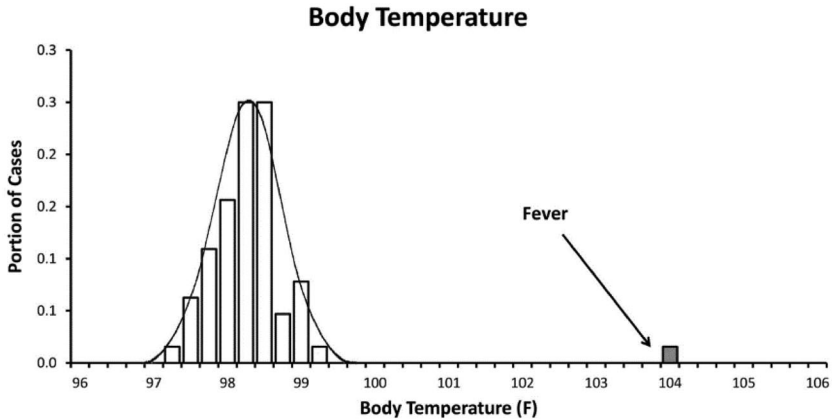


Figure 1. The pattern for human body temperature under normal circumstances and the pathological of a fever (abnormal—outside the bell curve); <http://jse.amstat.org/v4n2/datasets.shoemaker.html>.

involved (**veracity**). Nothing is excluded. **Veracity** means that things are the way they actually are, not necessarily the way we imagine them to be. **Normative information** tells us what our body temperature should be, not anyone's opinion. The **veracity** of **immanence** is expressed in the words of the eco-theologian, Thomas Berry (2009a): “The wonderful thing about the universe is that it constitutes an absolute unity in which each component is universe-referent, and all the components are inter-referent among themselves.”

It requires **humility** to accept the limited and biased nature of our minds—that the things we do not (or cannot) know about are *always* reflected by what we see (**immanence**, Fowler 2003, 2009; Belgrano and Fowler 2011). Unbiased, objective, and **holistic** consideration of the full **complexity** of reality is achievable only through the **immanence** of each thing that exists—exemplified by normative patterns. With something akin to a mental quality (as maintained in Panpsychism), everything is accounted for through the **immanence** of all parts of reality.

Climate change was the topic of the annual meeting of the Institute on Religion in an Age of Science (IRAS) in 2017. **Interconnectedness** prompts the following question with even the slightest suspicion that the production of carbon dioxide (CO₂) by our species might be involved: *At what rate would the human species produce CO₂ if we were a normal species?* To answer this question, scientists reveal the pattern of **consonant** normative information (Fowler and Hobbs 2009). Figure 2 shows this for estimated total CO₂ production—using the same units of measure for all species (the pattern is among species, not individuals). The species represented are all mammals, warm-blooded, with similar body sizes.

Global CO₂ Production

A - Nonhuman Species



B - Including Humans

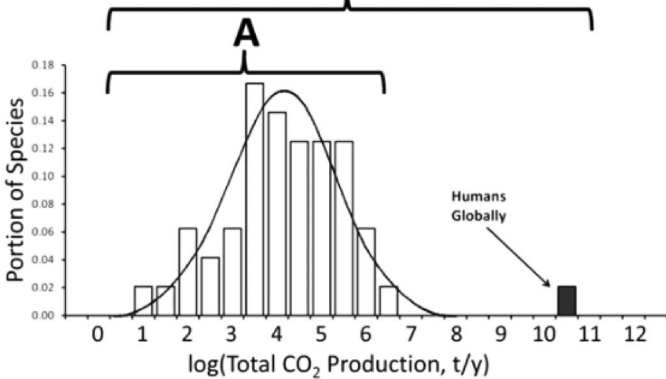
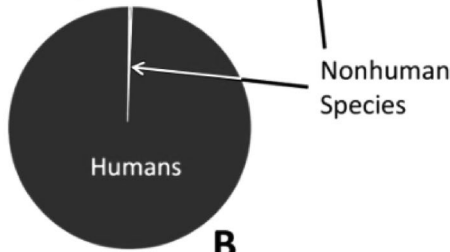


Figure 2. The pathological nature of global CO₂ production by humans (Fowler and Oppenheimer 2017). Each unit in the abscissa involves a 10-fold increase to show human abnormality in orders of magnitude. The area of the small dot (in A) and the slice of the larger pie (in B) are the same—representing the full set of nonhuman species.

Consonance is achieved through consistent **normative information** involving the same category or class of beings—in this case, comparing our species with the same kind of species (Belgrano and Fowler 2011).

There are over five orders of magnitude in the abnormality of our species’ CO₂ production (Fowler and Hobbs 2002; Fowler 2008). Metaphorically, the Earth has a fever, and we are the pathogen—to the extent our CO₂ production actually contributes (**veracity**) to global

warming. As with body temperature, the **immanence** of the pattern illustrated in Figure 2 accounts for the actual **complexity** of all of reality (**velocity**). This **holism** includes the full history of the cosmos in the origin or **emergence** of the pattern—including the evolutionary interactions among all species and the full set of dynamics involving extinction, speciation, and ecological relationships (Belgrano and Fowler 2011). Importantly, also inherent to this pattern is every human influence, direct and indirect, on all species and their environments. And behind that influence is the function of our brains—our minds, including all of the paradigms, belief systems, worldviews, and perspectives that led to current human impact.

Thus, other species currently provide information about what works under conditions that include human abnormality (**immanence**). Reduced pathological human influence would result in more realistic guidance (Fowler 2008). This can happen only if our species finds it possible to override many of our hard-wired tendencies and begin to function more normally as a species—to exhibit impulse control. Ideally, other species serve best as role models when free of all abnormal human influence. Under all circumstances, patterns persist—revealing abnormality and providing guidance. With policy and action to follow such **holistic** guidance, our participation in reality would be **reflexive**—responding to our changing influence and the way it is reflected by the patterns (as they respond to all changes in environmental circumstances). This would happen through the **transcendence** and **interconnectedness** of reality. Patterns reflect our thinking as feedback regarding the function of our brains. We, as a self-referent part of the universe, can learn from our mistakes.

Owing to the **holism/complexity** in the **immanence** of the pattern in Figure 2, our risk of extinction would also be taken into account just as the risk of death is accounted for by patterns in body temperature.

HOLISM

Scientists cannot measure everything. However, the **holism** of normative patterns includes *all* of the numerous ways for which things *can* be measured—particularly those involving the nature of our own physical being and impact on the existential nature of other elements of reality. There is a normative pattern for each dimension. Among species, most of those that have been examined show human abnormality measured in orders of magnitude (Table 1; Fowler and Oppenheimer 2017). According to Thomas Berry (2009a): “... the political, economic, educational, and religious communities ... appear to be either incompetent or unwilling to consider the magnitude of the ecological problems we are facing.” Current efforts to deal with environmental issues are extremely superficial.

If we were to fully embrace the value and meaning of being normal, intentional contributions to the evolution of belief systems (Bateson 1972)

Table 1. Human abnormality in orders of magnitude (Fowler and Hobbs 2002, 2003; Fowler 2005, 2008, 2009). For example, four orders of magnitude mean that the human species is 10,000 times greater than the average for the other species

Dimension of being a species	Abnormality in orders of magnitude
Water consumption	>6
Energy consumption	>4
Consumption of primary production	>4
Total population (and total biomass)	>3
Population density	>2
Biomass consumed	>3
Production of CO ₂	>5
Estrogenic compounds produced	>3
Geographic range	>2

would: (1) eliminate denial and (2) recognize or acknowledge the magnitude of our species' current pathological existence. Such aberrance is made obvious by graphs of the abnormalities listed in Table 1 (Figure 1; Fowler 2009; Rodden and Fowler 2018). Our unprecedented ways include the extinctions we cause (Fowler 2009), our evolutionary impacts (Etnier and Fowler 2010), suppressed nonhuman populations and rates at which we harvest resources (e.g., fish from specific species, ecosystems, or the full marine environment; Fowler and Hobbs 2003; Fowler 2003, 2009) ... the list goes on. Two examples of being normal are our trophic level and body size (although the latter is problematic and emphasizes the need to find **consonance** regarding size in choosing species for guidance; Fowler 2009).

Holism also includes the infinite set of ways we can mimic other species as role models—biomimicry (Benyus 1997) writ large. Consider population density, the production of CO₂ per unit area, and the consumption of things like energy and biomass per unit area. These species-level measurements can be made to detect abnormality for any subdivision of our planet's surface occupied by other mammals of our body size. There are an infinite set of such subdivisions just as there are an infinite set of subdivisions for any line of finite length. Finding normalcy applies to our participation in any combination of such areas. For example, randomly picking just 300 species, the combined geographic ranges for each subset of 150 make up 9.376×10^{88} areas (with distinct boundaries, areas, shapes, and locations). In each, accepting the value of normalcy would require

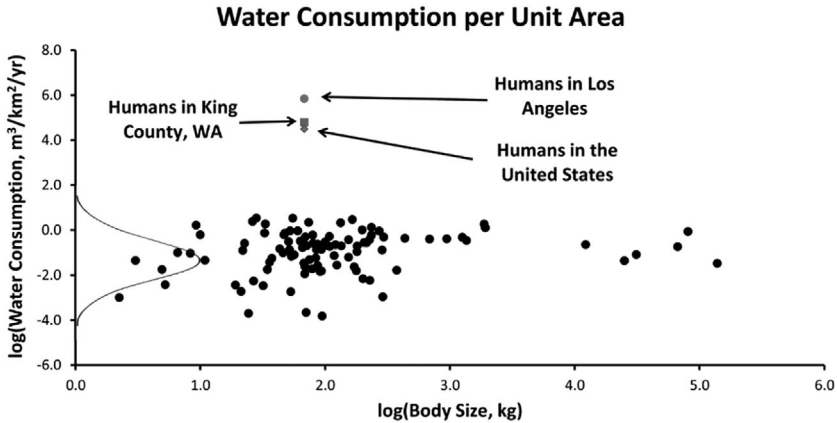


Figure 3. The relationships between water consumption per unit area and body size for 124 species of mammals showing examples of the abnormality of humans in a variety of areas. The measurements for humans are based on data found on the internet. For nonhumans, data from the IUCN Red List were combined with the relationship between body size and per-capita water consumption. From: Peters (1983).

alleviating any ecological/evolutionary human abnormality discovered—to relieve everything of abnormal human influence.

This kind of **holism** is exemplified by water consumption per unit area (Figure 3). As with several other species-level dimensions, there is no correlation between this metric and body size—we can compare ourselves to the pattern among all species of mammals. In this figure, our pathological existence is shown for a city, a county, and a country; this pattern can be used to guide us toward normal water consumption in any of the infinite regions of our planet occupied by mammals of our body size. Improved **consonance** involves comparing ourselves to the mammalian species of our body size in the specific area under consideration.

Holism is also involved in the infinite set of consequences of any aspect of human abnormality—especially in their combinations. This includes repercussions that are so minuscule as to be unmeasurable. If it is important to achieve justice, a measure of environmental (systemic, **holistic**) justice would be served in any case of achieving more normal human participation in natural systems. This is true for the full set of impacts for any way we are abnormal (each being a current form of injustice). The restoration of humans to normal participation in reality would involve relief from every abnormal human impact by every creature, all species, every ecosystem, and all of reality. Owing to **interconnectedness** and **homeostasis**, this would include ourselves, both as individuals and as a species.

Humility is required in recognizing that achieving normalcy for any of the ways we are abnormal would include every unknown and unknowable

impact—including all indirect effects along the infinite chains of domino effects. This infinite set of effects (distinct for everything) varies greatly in strength and timing, but all are included. This includes the risk of extinction we pose to every species—including our own. The **veracity** of the **interconnectedness** of reality guarantees this to be the case.

WHOLES/PARTS

Populations of species count as parts of ecosystems. Species (as wholes) consist of sets of individual organisms (as parts with all of their categories). Individual creatures have their parts all the way from organs to cells, molecules and beyond. This hierarchical structure to reality (e.g., galaxies have their stars; atoms have their electrons) carries with it sets of opposing forces, or **conflict** between wholes and parts. Such opposing forces (**conflict**) play major roles in the **emergence** and maintenance of all empirical patterns. What is good in the short-term can be detrimental in the long-term. **Conflict** between wholes and parts, in all ways, is accounted for by the **immanence** of all empirical patterns.

Bateson (1979) recognized such **conflict**, saying: “What has survival value for the individual may be lethal for the population....” as did Thomas Berry (1988): “...what is good in its microphase reality can be deadly in its macrophase development...”. **Homeostasis** for parts can be destructive for wholes; **homeostasis** for wholes can be destructive to parts.

A specific example is seen in the field of medicine. In Figure 4, we see a case of human abnormality largely explained by the fact that nearly everyone wants death rates that are as low as possible—we consider this to be a good for ourselves and all loved ones. We want to avoid the suffering that comes with sickness or death. These desires are functions of our brains/minds. As a species, we have reduced our risk of death through things like technology, agriculture, and medicine—using our brains. However, as Gregory Bateson (1972) put it, medicine is “a bag of tricks” without “overall **wisdom**.” This applies to virtually all applied science today. The abnormality shown in Figure 4 is a result of conventional (simplistic rather than **holistic**) conscious purpose. **Humility** is lacking when we assume the objective of minimizing our mortality rates rather than finding normalcy—we are ignorant of most consequences.

Thus, the results of the current function of our brains/minds (decision-making, policy and action) include the abnormality illustrated in Figure 4. Abnormal survival rates, in turn, contribute to the **emergence** of our pathological population size, population density, CO₂ production, energy consumption, and so on. These, then, stimulate **homeostatic** forces within the more inclusive system(s)—powerful feedback as consequences of our thinking. A specific example is illustrated in Figure 5. We are forced to take responsibility for the conventional use of our minds and their

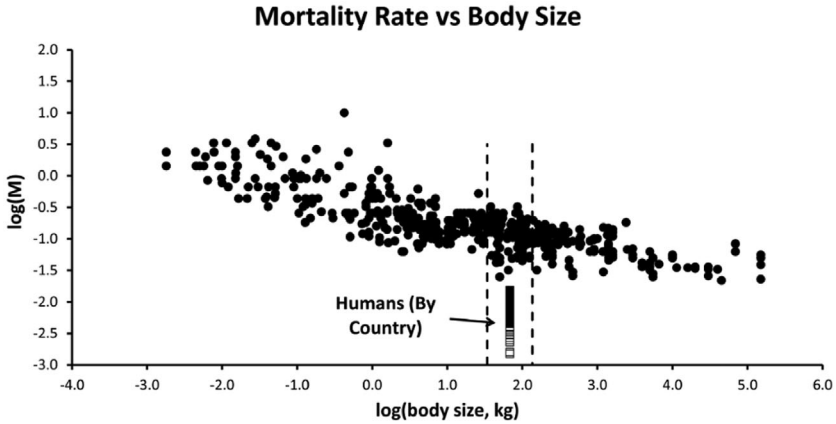


Figure 4. The relationship between total annual mortality rate and body size (for 524 species of mammals) showing abnormally low mortality for humans (in 201 countries around the world). The vertical dashed lines show assumed upper and lower boundaries for species with body sizes similar to that of humans. From: <http://databank.worldbank.org/data/reports.aspx?source=2&series=SP.DYN.CDRT.IN&country=> and McCoy and Gillooly (2008).

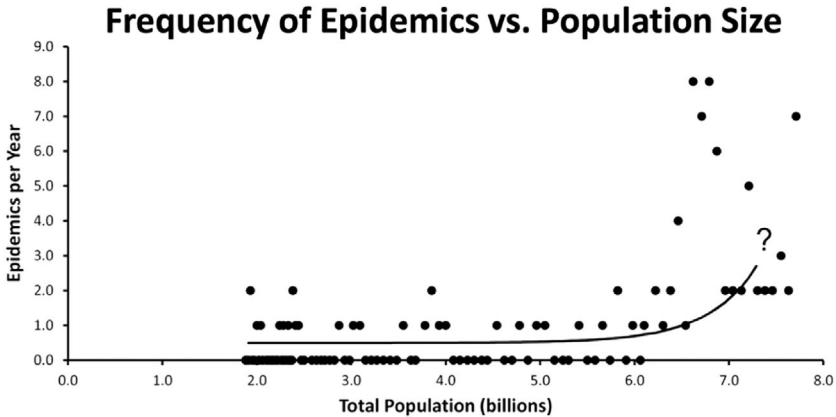


Figure 5. The frequency of epidemics as related to total human population. From: <https://ourworldindata.org/world-population-growth> and https://en.m.wikipedia.org/wiki/List_of_epidemics.

contribution to recent epidemics (including the Covid pandemic); we can expect the frequency of epidemics to increase. These are among the repercussions of our worldviews, paradigms and what William Rees (2020) calls “social constructs”—including beliefs at the foundation of commerce, politics, and economic systems. Figure 5 illustrates only one among many ramifications of the way our minds contribute to the state of our world

today. Others include extinction, climate change, international conflict, and pollution. The nature of reality puts us in the position of having to prove otherwise if we resist being normal. The depth of our challenges begins to become apparent in hard-wired personal resistance to the changes required to alleviate abnormality. The genetic nature of our brains and their function cannot be ignored.

Thus, we face a real risk of being genetically predisposed to extinction—through the function of our minds. Scientists understand that species often evolve to extinction (Okasha 2006; Fowler 2009). The principle of **conflict** involves knowing that: *What is good for the part may be detrimental to the whole and what is good for the whole may be detrimental to the part.* Belief systems that embrace this principle make substantive and significant progress toward **consonance** with reality and convergence toward common ground.

DISCUSSION

The convergence of belief systems involves **selectivity**. In Gregory Bateson's (1972) words: "...the creation and interaction of ideas must necessarily exemplify evolutionary process." He characterizes this as: "...natural selection which determines the survival of some ideas and the extinction or death of others..." Our belief systems are maps of reality and the more **consonance** they bear to reality as the truth (**veracity**), the better they serve us (Townes 1966)—and the more likely they (and we) are to survive. Belief systems that do not match reality lead us astray. We gain experience facilitating convergence among belief systems by conducting science that reveals **normative information consonant** with both reality and the question being addressed (Fowler and Hobbs 2009)—the best form of applicable science (Fowler and Hobbs 2011). Scientists revealing such information can be viewed as ecosystem/biosphere-level physicians—monitoring the health of all species, ecosystems, and the biosphere. Adopting normative science for guidance would shift the focus of "follow the science" from partial and biased applications that cause problems to applications that are **holistic** and solve problems.

Our resistance to using **normative information** for guidance is palpable. In this regard, natural selection among humans (expression of the selfish gene) gives rise to risks at the species level—owing to the **conflict of selective** forces operating at each level (parts and wholes). This places clear emphasis on the conscious purpose of being a normal species to account for the risks of our own extinction. It also places focus on the importance of consciously contributing to the evolution of our belief systems (functions of our minds).

In 2021, the IRAS conference focused on the emerging belief system called Naturalism. "That we need a planetary ethic is ... obvious..."

(Goodenough 1998). Ethics, morals, rights, and wrongs are much more matters of religion than science. One definition of sin is “missing the mark” (Vawter 1962). As a species, our physical and ecological abnormality is clearly a matter of missing the mark at all scales—especially globally. There is clear basis for arguing that we should seek being normal. The consequences of our abnormality mean that all beings are forced to endure the resulting lack of justice; our abnormality has resulted in the complete disappearance (death) of some ecosystems (Fowler 2009). Scientifically, we can explain this as millennia of failing to develop and abide by global environmental impact statements (Rodden and Fowler 2018)—or, more religiously, failing to “ask now the beasts, and they shall teach thee” (Job:12, Hobbs and Fowler 2008). Thomas Berry consistently maintained that “every being has its own voice” (e.g., Berry 1999). This applies to each individual species as well as to the patterns among groups of species in the same category as humans. Even though we have failed to hear their nonverbal messages (failed to heed their body language) for thousands of years, that option is now clear. In short, we should be a normal part of reality. Our minds, decision-making, policy, and action are things we can change—malleable parts of our intrinsic nature. Confining conscious purpose to being normal is deep naturalism; it involves consistency in the merger of all belief systems through alignment, isomorphism, and harmony with reality.

The patterns of **normative information** that we are now capable of defining, recognizing, and revealing, are a miniscule start. **Humility** accompanies the realization that we will never discover, nor be able to measure, all dimensions of being a species. We are left with doing our very best to relieve our planet of all discernible abnormal human influence. **Interconnectedness** guarantees that the Earth would experience proportional relief from the complete set of associated side effects. Overcoming our inherent resistance to making such changes is extremely challenging. We tend to insist that we maintain the status quo (proceed with business as usual). This drive undoubtedly has both genetic and social determinants to include all human emotions and belief systems. Our brains and minds (and thinking) have evolved to be what they are with the resulting dilemmas we face.

Given the **complexity** of making such changes, as a species, we have the option of reversing our opinions about homeostatic forces (such as disease, e.g., Figure 5) and accepting them as normal means for our abnormality to be reduced. The system we call reality can do the work for us—a species-level version of “let go, let God” in a nonexistent collective 12-step program. There is an extremely positive nature to collapse when it is **homeostasis** alleviating abnormality, even though we usually think of such things as catastrophic, horrific, and bad. What is good for the whole can be detrimental to (but, in the long run, good for) the part. If we find

it impossible to achieve normalcy, there is a modicum of hope that our extinction is not part of the short-term solution provided by the work of nature and that there remain enough other species of the right kinds to provide some quality of life.

There is nothing novel about the concept of **immanence** and its **holism**. Indra's net (from Hinduism) considers reality to be an infinite web with each vertex reflecting all vertices. The concept of Akasha involves a record, chronical, or memory of the universe that informs—also with roots in Hinduism (László 2004). As Whitehead (1926) put it: "...each unit is a microcosm representing in itself the entire all-inclusive universe." Physicists see information in everything—often calling it a holographic presence of reality (Bohm 1980; Talbot 1991). Along with maximizing diversity, such information can be maximized **reflexively** by being normal—particularly as a species (Fowler 2008). **Immanence** is the result of natural integration (Belgrano and Fowler 2011) and has been referred to with a variety of colorful terms—including "consciousness," an element of pansychism. In Bohm's (1980) terminology, everything is "implicated" in everything. In each case, nothing is ignored. All of the components of the cosmos are "inter-referent" (Berry 2009a) among themselves. In essence, reality has a quality of mind far superior to ours—"remembering" and "accounting for" everything (**holism**), in direct proportion to its actual importance (**veracity**).

Interdisciplinary teams are often assembled to deal with the consequences of current thinking and belief systems. However, symptomatic relief fails to deal with root causes—especially those that involve the functions of our brains, and specifically our belief systems. Furthermore, interdisciplinary efforts combine expert ignorance (Fowler and Hobbs 2009, 2011). Such efforts are a manifestation of the Humpty-Dumpty syndrome (Fowler 2003) in which the unity and **complexity** of reality itself can never be replicated. Our brains and their built-in biases are insufficient for the task. There is a failure to exercise **humility**; this perpetuates the simplistic thinking of conventional belief systems as maps and models of reality. These maps/models of reality are never "the territory" (Bateson 1972)—they are never fully isomorphic with reality. In fact, they are always woefully partial (Holling et al. 2002) and often outright misrepresentations of reality. Current interdisciplinary approaches fail to find **holism**. It is arguably imperative that the evolution of belief systems involve acknowledgement of such failures.

In the face of impending tragedy, another form of hope lies in our capacity to reject failing ways and think entirely differently. We can understand all ways of thinking (our brains and all their functions) as parts of reality that are taken into account perfectly through **immanence**. It would involve thinking, policy, and action with genuine **reflexive** integrity. The cases presented above exemplify taking advantage of the **holistic** nature

of reality to do just that. They build on what Gregory Bateson (1972) calls the “systemic view” to have our thinking accounted for fully, objectively, and **reflexively**, through **holistic** natural integration (Belgrano and Fowler 2011). This view achieves what Bateson calls the “necessary unity” between mind and nature (Bateson 1979).

The IRAS conference in 2018 focused on artificial intelligence (AI). AI will perpetuate/accentuate existing problems if confined to mimicking conventional thinking and the limited intellect involved. In contrast, a constructive use of AI would be that of revealing normative patterns. Through **immanence**, this would automatically account for everything (including AI itself). Such a move would take on the character of artificial **wisdom** (AW) because such pattern recognition would aid in finding **holistic** guidance.

Through the field of systems science, we know about butterfly effects—immeasurable factors with major consequences. The **holistic** guidance of normative patterns accounts for every butterfly effect—over all scales of time and space. This includes all functions of our brains and all real elements of quantum entanglement. **Immanence**, as the result of natural integration, takes everything into account—“...every component of the universe is integral with every other member of the universe...” (Berry 2009a). Einstein understood the workings of natural integration, saying: “God does not care about our mathematical difficulties. He integrates empirically.” (Infeld 2006). Everything is an integral part of reality taking everything into account (Fowler et al. 2013)—including itself.

The **selectivity** behind evolving belief systems occurs in myriad ways. Individuals are subject to mortality brought on by their beliefs even though repercussions persist, and others continue holding those beliefs. In the extreme, this may involve suicide, murder, or crusades—all subject to the limitations of conventional conscious purpose. Less tragically, individuals can change their minds—opening the potential for intentionality. Such learning occurs along personal journeys toward enlightenment. The multiple paths toward change of mind, as recognized in Hinduism, can include psychedelics (Pollan 2018; Richie 2021), shamanism (Abram 1996), therapeutic counseling, music, and communing with nature. As a species out of touch with reality, we are experiencing a collective psychosis that largely explains the scourge we are on this Earth. There is little to rely on in the way of human shamans, therapists, or counselors to help us. Other species remain at our service. We are very likely facing the prospect of a tragedy (even our own extinction) brought on by homeostatic forces with root causes involving evolved beliefs and ways of thinking—our brains. Following such events (if we survive them), would we learn and avoid repeatedly getting into the circumstances we now face? Our extinction would carry with it the extinction of the belief systems that contributed,

much like the beliefs held by people in cults, wiped out because of their beliefs.

The title “The Convergence of Science and Religion” has appeared in *Zygon: Journal of Religion and Science* before (Townes 1966). There is a set of common understandings increasingly accepted and understood (e.g., the terms in bold in this article). However, small minorities of people still view the Earth as flat or reject evolution. As our belief systems evolve toward **consongance** with reality, there will always be resistance—the convergence can be only asymptotic or aspirational, never perfect. It depends on humble, open-minded communication among all parties—including the nonhuman, given their right to vote in a more **holistic** democracy.

Ambiguity is a barrier to consistency and **consongance** in thinking, communication, and effective use of **normative information**. Some words in the languages of the world (like “eye” in English) translate directly and clearly point (**consongance**) to commonly recognized things—keeping in mind that identical sounds, like “aye,” can point to something entirely different. Others (like “God”) are impossible to pin down. One of our challenges is that of concepts which have their ambiguous qualities; love or anger (functions of the mind) are impossible to measure. Ambiguity makes it easy to gravitate toward seeing unbounded, disparate opinion as something to embrace rather than a challenge to overcome on the path to **consongance** with reality. Phenomena such as oxygen consumption by a species are quite clear and can be defined in support of uniform and consistent measurements by scientists. For those things with well-defined metrics, there are always patterns with bounds. Science conducted to reveal such patterns and religious recognition of their **holistic** qualities (**immanence**) contribute to the merger of the respective belief systems.

Although the field of medicine is a significant contributor to our ecologically pathological abnormalities, it has also provided us with the gift of understanding the value of **normative information**. Normality is valued in metrics involving body size, blood pressure, pulse, O₂ levels in our blood, urine production, pH of our blood, and any number of other ways we can be measured as individuals. In large part, these have to do with the concept of health—a concept that arguably needs expansion to include all species, ecosystems, and the biosphere.

Based on the mathematical quality of reality (Tegmark 2014), both science and religion can contribute to understanding its fractal nature (Fowler 2009). For example, **selectivity** occurs at all levels. Importantly, this is to be recognized among and within belief systems (Bateson 1972). **Immanence** occurs at all levels. According to Thomas Berry (2009a) everything is “universe-referent” and (Berry 2009b) “...every component of the universe is integral with every other...”. Normative natural patterns exist at all levels, particularly for us—both as individuals and as a species. Categories occur at all levels—including the levels themselves.

Homeostasis is fractal in nature with **conflict** between all adjoining hierarchical levels. The mathematical nature of reality also guarantees the **reflexive** quality of following the guidance of role models that respond to our decisions/actions—everything best reflects itself via **immanence**. Individuals mimic individuals (among numerous species) and, fractally, our species can mimic other species.

Progress toward **consonance** involves using the same metrics, or units of measure, in characterizing each normative pattern. This raises the matter of abnormality in the form of things attributable to no other species. If our CO₂ production were confined to respiration, our abnormality would be of a magnitude nearly identical to that of our total population. The same holds true for energy consumption. Because no other species uses atomic energy, nonrespiratory combustion, or electricity, all such forms of energy consumption are abnormal in and of themselves. We, with our current mindset, take such things for granted—with little or no acknowledgement of their side effects. The magnitude to which we are ecologically pathological has yet to be appreciated! Total energy consumption, total CO₂ production, and total water consumption are metrics that can be applied consistently among species. Human aberrance is accentuated by participating in ecological systems in ways that no other species of mammal does. Settlements on the South Pole would be abnormal.

Can our physical aberrance be alleviated by taking on a mental peculiarity that makes us a truly unique species in a positive way? In the experiments conducted by reality, some things work, and some things do not—**selectivity** expressed through both nonhuman and human origins. This article has made the argument that, within the mental realm, consciously adopting systemic thinking would achieve an extreme form of uniqueness—presumably, no other species does this. It would be an abnormal use of mind that would objectively account for everything (including our risk of extinction, all other natural forces, and thinking itself). It would be much like the eye—a hugely important novelty for so many forms of life with the parallel of seeing our way forward by empirically observing what works.

When dealing with our species' physical footprint, the **consonance** of metrics requires that all species be measured in identical units to obtain **holistic normative information**—patterns in footprints for other species provide **holistic** guiding information for normal human species-level footprints. Failure to use identical units of measure involves logical typing errors prevalent in conventional thinking (Hobbs and Fowler 2008; Fowler 2009; Fowler and Hobbs 2011). Progress toward more **consonance** would advance the convergence of all belief systems. Choosing other mammalian species with not only our body size, but also our trophic level would exemplify progress and practice for the scientists conducting the research to guide our species toward normalcy.

CONCLUSIONS

The grand dynamic system of reality excludes nothing—including, specifically, are our brains, minds, and belief systems with all of their consequences, whatever their magnitude. Ecologically (part of our material existence), the current focus of human efforts is that of manipulation or control to achieve the well-being of humans. There is nothing trivial about converting to self-control (the intransitive of participating normally, Fowler 2003) to ensure the health of all systems. As a species, achieving a normal total human population would require a reduction of over seven billion people! It would be abnormal to accomplish this on our own—and arguably impossible. We may have no other choice than to accept the forces of nature (reality) and see *normative information* as a means of predicting the results (Fowler 2009). Acknowledging, even welcoming, the benefits of **homeostasis** are largely rejected in current belief systems—with our extinction hanging in the balance. It would be a major shift to give diseases their right to *function* normally—as the earth’s immune system, and for the good of everything. Arguably, all beings have the right to be free of abnormal human impact. Ceasing to do things that accentuate human abnormality (Rodden and Fowler 2018) can be done today, even though (while extremely important) it would be an exceedingly superficial first step.

The appreciation of other species as role models involves awe, honor, respect and (consistent with the work of Thomas Berry) reverence. Recognizing and embracing their value would be facilitated more within the religious realm, than by science. We need to read, and take seriously, the book of nature (Berry 1999, 2009a). Gregory Bateson, with his scientific heritage, contributes substantively to how belief systems can change, and to what end. The convergence of all belief systems is effectively exemplified by the combined work of Berry and Bateson—standing on the shoulders (**immanence**) of many significant luminaries in both religious and scientific circles.

The drive to be, and function, normally, as a species, involves religion much more than science. Developing that motivation would be served through expansion of our capacity for empathy, awe, compassion, and love for the nonhuman—including other creatures, species, ecosystems, the biosphere, and **reality**. Included would be humans and our long-term wellbeing. Were we able to achieve normalcy, everything (through **holism/interconnectedness**) would be granted the gift of normal human influence—a form of justice from which all things are now deprived. It can be argued that such empathy, compassion, and love would be abnormal—no other species exhibits these qualities so extensively/intensively. We need to remind ourselves that these ways of being unique fall outside the realm of physical existence. They fall into the category of the spiritual and

mental as aspects and functions of our brains—things for which there is hope for being able to change for the good of everything.

Through Bateson's systemic perspective, all belief systems converge. Education can facilitate progress—education at all levels to help people understand that the truth of reality is self-evident and that the confluence of belief systems is possible. There are unintended consequences (ecologically and evolutionarily) to our practice of medicine, agriculture, and other forms of applied science. A global shift in paradigm is required; do we have to experience the trauma of self-corrective **homeostasis** repeatedly to make the shift? The intuitively obvious aspects of normative patterns provide the foundation for education in its contribution to the convergence of our belief systems—a positive form of being extremely unique. This provides hope for the world of politics wherein our collective psychosis seems most extreme—especially in cases of open, and often conscious, denial of the truth. The convergence promoted by the systemic view can involve intentionality by every person, every human institution, all cultures, every aspect of education, every nation, and all international agencies—our global society and all of its parts, including science and religion. It involves a cultural maturation parallel to that of individuals wherein respect for others includes learning from them—another fractal quality of reality. The conscious purpose of being normal changes everything—continuing to use our minds, but in an entirely different way. It finds **wisdom** and supersedes simplistic cleverness.

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