

Change and the Human Analytic Perspective In Science, Life and Reality

Positive – Negative; Create – Destroy; Grow – Decay;
Birth – Death; Expand – Contract; Emerge – Disappear; Explode – Implode

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One Principle is constant and infinite in all of Reality. Nothing escapes it. All things, however large or small, manifest it. It applies at every scale including any we can imagine. Any theory or worldview that excludes or limits it or that creates a boundary that would contain or constrain it is inherently limited and inadequate.

This is the Dynamic Principle of Change. It is the principle that Change from one state to another is constant throughout all aspects of the universe as well as any domain beyond. Unfortunately, humans encounter very significant basic challenges when they try to understand or conceptualize change in reality. And for the most part – even in science, humans either are entirely unaware of these challenges or ignore their significance.

Social scientists recognize that individuals' traditional worldviews, points of view, personal interests, perceptual limitations, and emotional factors both influence their perspectives and serve to differentiate perspectives on reality among individuals and groups. But far beyond these immediate influences, all humans share a common limitation as a result of the dominant analytical perspective that they bring to reality engagement. Reality is largely defined for humans by their perceptual capability to focus their senses and to consider the resulting inputs conceptually within a single analytic perspective, a presentistic time frame, and at a scale or field of view, which is mid-level and relatively immediate in their surroundings. This is the default, everyday, analytical perspective for all humans, and it has been essential for species survival in a predatory world. To achieve an alternative perspective in engaging reality, all humans must shift either to emphasize their intuitive faculties or reset their analytic observer location in time or scale or both.

Other than relatively minor analytic observer shifts, which occur all the time in everyday activities, most major changes in perspective occur in what amount to “non-action” or “time out” conditions that allow for reflection – evoking perspectives of the past or future at different depths or of the scope of the reality field at lesser or greater scale. Under these alternative analytic conditions, the scale, or scope, of the reality field that is considered can vary greatly –

contracting or expanding to consider the realm of subatomic particles, the atomic domain, the molecular sphere, the organismic realm, the geologic or ecological domain, the planetary sphere, and the solar, galactic, cosmic, or multi-verse spheres – to identify a few. The human analytical perspective shifts with a consideration of each of these major scales [and with changes at the subscale level as well]. And with each shift in either scale or time or both, the alternative analytical perspectives recede into the background and are lost from view [though available retrospectively in memory]. Whatever analytic perspective for observation that is adopted in time and scale is exclusive and fixed at that singular position. Conceptually, humans are not analytically built to simultaneously combine inputs from alternative perspectives. This limitation has huge implications for how humans understand reality and their existence in it! But, unfortunately, there is little appreciation, even in science, of this fact.

Until modern civilized times this limitation for humans has not constituted a significant liability. Humans relied on their intuitive capabilities to sense the greater whole of reality and to grasp their place in it. Unfortunately, as culture became more complex, society captured and constrained the awareness available from the use of intuitive human faculties and reduced it to literal, religious constructs. As a result, nascent human intuitive abilities and the potential awareness that they can reveal have lingered in the background mostly undeveloped and underutilized in most modern cultures. Fortunately, human intellectual abilities have developed and exposed the false underpinnings of these religious constructs, but these rational abilities have also mistakenly bundled the intuitive with the religious and discarded both at the same time. The value of the intuitive is nevertheless emerging in its own right in recent years, and if it is properly balanced together with the intellectual/analytical, these two faculties can carry humankind much deeper into an understanding of the fullness of reality and the self. I have discussed the importance and potential of human intuitive capabilities in other works [[Dynamic Humanism](#), 2007], and I will mention the subject only peripherally in this essay. Suffice it to say, currently in the modern, developed world, the analytical reigns, and we must deal with the limitations in perspective that accompany it.

Modern humans are challenged to penetrate and explain a reality that is vastly more extensive and complex than humans ever imagined for 99.999% of their history. If humans expect to have a reasonable chance to intellectually grasp this vast reality, they will have to combine and synthesize awareness from multiple perspectives at a huge range of scales and over vast time periods. As single perspective analytical observers, humans are basically not set up to meet

this challenge, and they must struggle to even recognize the nature of the difficulty they face.

For humans in their everyday reality – where they bring the analytical perspective to the observation of change, the nature of this change seems obvious. It occurs over Time [one state appearing before another], and this change always has a direction from growth [birth, beginning, emergence, expansion] to decay [death, end, disappearance, contraction]. But the subtleties, complexities, and difficulties of understanding change arise when we become aware of what happens when our analytical perspective changes and we realize just how challenging it really is to determine 1) where the boundaries are that define and separate any one phenomenon, entity or event from others, and 2) at what particular point in the change sequence the phenomenon actually is. The problem is that when we shift our everyday, analytical perspective by altering either the time frame or the scale [scope of the field of view], the phenomenon itself can disappear from view or flip from appearing as a beginning to appearing as an end. In this regard, the nature of change – and the reality we assume is operative through it – seems to depend on the perspective the observer brings to it. It could even be the case that what we perceive as change may at the most basic level be better understood as vibration or frequency occurring through an infinite matrix of relationships.

Consider some specific examples of the challenge that arises as a result of the limitations of the human analytic observer perspective. Suppose that our focus is on watching an individual leaf on a tree for a brief moment in time. The breeze turns the leaf to one side and then it returns to its original position. Our beginning has the leaf in virtually the identical state as our ending. If we watch the leaf for a longer period of time [enlarge the time frame], it goes through many of the same oscillations. In this sequence, each end is also a beginning of the next cycle of the leaf shaking to and fro. Depending on when and for how long we observe the leaf, our beginning and our end flip. Now, let's change the scale of our observation. Instead of observing a single leaf, we now step back and view from a distance the grove of trees in which the single leaf on one tree on one branch is shaking. But from our distant position we can no longer discern either the individual leaf or the individual tree it is on. Instead we see the grove of trees as a whole bending to the breeze. The leaf has disappeared as the scale of our observation enlarges. We could have witnessed the same change if we had moved up close to the leaf and focused with our magnifying glass on an aphid sucking on a portion of the leaf stem. The leaf again disappears as the aphid comes into view at a lesser scale of observation. Now, hold the scale constant but change the time frame from a single shake of the leaf to a season as we watch the leaf emerge from its bud, grow to full size and

a deep green shade, and then change to a bright yellow color, and finally release from the branch. In this time frame, our beginning is the leaf emerging from the bud and our ending is the leaf releasing from the branch. But, if we expand our time frame to include a full year cycle and increase our scale just slightly to include the tree and the ground below, we can see the leaf drop to the ground after releasing and slowly decay over the winter and into the next spring. Now, the release of the leaf from the stem is a mid point in the beginning – end sequence, and the end is the leaf as it merges with the soil. The presence of the leaf and its position in the change cycle of beginnings and endings change as our perspective changes. No one of these perspectives reveals reality.

Let's consider a rainbow as a phenomenon. It covers a huge area of the sky and it is absolutely distinct as an entity to our perception. It is most often not fleeting, but rather something that we can watch over a considerable period of time. In some instances we can even see this rainbow quite close off in the distance, maybe only a quarter of a mile away emerging from the grass on a hillside. By all aspects of our perception, we know it is there. But if we move toward it in an effort to "find" it, it moves ahead of us and eventually fades and disappears. Up close there is no rainbow, but for the person who has remained where we once stood and has watched us approach in our effort to "find" the rainbow, the rainbow is very much still there, and as it disappears for us, we are illuminated within it for the person in our original position. What you may not know is that it is only in the last 200 years that humans have finally solved the full puzzle of the rainbow in terms of a visible light source [usually the sun] coming from a certain angle and being refracted through a field of fine water particles to an observer in a location that is at the proper angle to the light and particle field. The reality of a rainbow depends entirely on the perspective of the human observer. Change that perspective and the rainbow either moves or fades and disappears, but it remains constant when viewed from a fixed perspective. It exists as a light phenomenon and we can define it in time frame and scale, but it has no "substance." It can be observed, but it denies most of the characteristics that we require of an entity. Phenomena like rainbows raise significant questions about the active role of the observer's perspective in "defining" the reality that is out there.

What is the point of these examples? The determination of what constitutes both an entity and the beginnings and ends in any change sequence [birth – death, emergence – disappearance, etc.] depends on the particular character of the perspective we bring to it. And the character of the analytical perspective is a function of time frame and scale. And this is true whether we are considering micro particles or multiverse events for nano seconds or eons. The fact is that

beginnings are ends and ends are beginnings depending on what human analytical perspective we adopt [in scale and time]. And locating, separating, and defining individual events and entities depend on the same observer perspective and encounter all the same challenges as beginnings and ends when it comes to determining what constitutes reality.

Now we can consider the huge implications of the role of the human everyday [analytical] perspective in our conception of reality and change within it. We can start the discussion by considering the effect in science and then later address the consequences to our understanding of life and death at the personal level.

In science, if beginnings and ends are relative to observer perspective, what happens to cause and effect? In the analytical mode that dominates the mental functioning of humans in most circumstances – and especially in science, we are only capable of operating in the world from one singular perspective at a time with each perspective fixed in scale and time frame. Causality, and especially the simplistic forms of it that predominate in so much of what passes for science, depends on the analytical perspective accurately revealing reality. But if we realize that reality cannot be captured from within any singular perspective, we have to question the adequacy of all of our assertions about reality and causality that arise from within this perspective. While in science we recognize at the theoretical level the systemic nature of reality where all things are interrelated in vast networks in which causality is hugely complex and diffused throughout the network, our proclivity to adopt a singular analytic perspective [our default human perspective] leads us to constantly be trying to reduce events in that reality to singular causes or a small set of “primary” causes. At one level we know scientifically that such attempts are naïve and futile, and yet we persist in producing “proofs” that rely on this approach. And even where we conduct our scientific work trying to respect the defining notion of system, we are still only respecting the concept at some singular system level when we know in reality system exists at all scales with all “systems” being infinitely interrelated.

So, by the very nature of the limitations that are built into us, human analytical capabilities cannot take us to the goal of a theory of everything, the ultimate task that we have set for ourselves in science. Try as we might, we cannot put “IT” together in pieces because the pieces are themselves artifacts of our own limited analytic perspective and they do not “add up” to make the whole, which itself is impossible to delimit. Truly, the whole of reality is greater than the sum of its parts. So, even our best efforts to capture reality in defined multivariate systems can only produce limited results because systems always exist at greater and lesser scales that we are not considering/including in our “analysis.”

Reality – including the definition of entities, beginnings and ends, and causality within it – is not revealed by any one analytic perspective at any one scale or in any one time frame. From within an analytical perspective, reality can only be revealed in an ideal composite of all possible such perspectives at all possible scales in all possible time frames. Unfortunately, in the context of an infinite set of scales and time frames and system levels of analysis, this ultimate “system” is impossible to locate or achieve. Of course, this does not mean that we should give up trying. Clearly much can be gained by utilizing the analytic process in science even when we approach the problem simplistically from within our singular analytic perspectives. But we have to recognize the pitfalls and inherent limitations of this approach and not fool ourselves about what can be achieved through even its most sophisticated use.

If we fully recognize our challenge in science and realize that the human analytical perspective is inadequate to take us to our ultimate goal, we have two choices to address this problem. We can try to create machines whose artificial intelligence can manage the task of integrating infinite perspectives, time frames and scales. Or we can seriously explore our own human synthetic mental capabilities as housed in our intuitive faculties and develop these talents fully. To date very little attention has been paid in science to understanding these faculties or determining the limits of their usefulness. With sufficient exploration and development, it may even be possible to identify a synthetic methodology for the reliable use of these intuitive faculties, a methodology that can complement and operate parallel to and in concert with the analytic methodology in science. This would be a science of the synthetic whole to combine with the existing science of analytic parts. Our best strategy to address this challenge would probably be to pursue the tracks of both synthetic artificial intelligence and human intuitive development. But when we realize that currently our most advanced supercomputers fail to be able to keep track of all the variables and their potential combinations and interactions once the scale exceeds the level of simple molecular activity, I am inclined to doubt that any machine that is not as complex as the universe itself can track and integrate system levels at most of the scales of observation that are of interest to humans. As a committed humanist, I will place my bet that concerted efforts to develop and utilize the intuitive capabilities within the human computer [the mind – not just the brain] will offer superior results in dealing with the complexity of the integration challenge as we pursue a truly holistic, scientific understanding of reality.

Now, we can consider the effects of the inherent limitations of the human analytical perspective for understanding beginnings and ends [birth and death] at the personal level. For the most part, ordinary humans are entirely satisfied to define reality from within the narrow range of analytical perspectives that arise in dealing with mid-scale, everyday events [from individual leaves to landscape views]. And whatever the breadth of our scale [from bacteria to galaxy clusters], all phenomena are observed to emerge and develop and then decay and disappear over time from within a single analytic perspective. However, as we have noted previously, if we shift the observational perspective, time frame, or scale, the presence of the phenomenon and where the phenomenon is in the change cycle can appear or disappear or flip from participating in growth to being viewed in decay. To provide another example, an exploding star is either in a state of final decay or initial emergence depending on which side of the explosion our observation is located in time. Interestingly, the same must be true for the event that we are so given to currently identifying in astrophysics as the beginning of our universe – the Big Bang. By the Dynamic Principle of Infinite Change at infinite scales, the Big Bang must also be the end point of some part of some larger scale multi-verse system. There can never be an absolute beginning or end of the sequence since the cycle is infinite and eternal. It is the limitation of the human analytic perspective [and our assumptions that are based on it] that gives us our “apparent” beginnings and ends.

So, only as a result of our adopting a particular perspective in scale can we claim to “find” beginnings and ends within the phenomenon of change. The end or death of anything is always the beginning or birth of something else from some other perspective at some other scale or in another time frame. Death is inherently Rebirth with a shift in perspective, time frame, or scale. A mountain decays to be reborn as boulders; boulders disappear to be reborn as rocks; rocks disappear to become gravel; gravel disappears to become sand; under pressure sand disappears to become sandstone; sandstone disappears at the tectonic plates to become magma; magma is reborn as lava which builds mountains. Any end is also a beginning, and this fact applies equally to humans and their individual deaths. Only from a very limited set of analytic perspectives do individuals even appear and seem to be separate, and only within this same perspective set do individuals have an end or death. From most analytic perspectives at alternative scales, these same individuals dissolve or disappear and so over time have neither a birth nor a death. They just participate in the infinite rebirth change cycle.

In the expansive reality of shifting human perspectives and scales, there is only the Dynamic Principle of Change with every perceived end being simultaneously a beginning for entities and events that have an extraordinarily weak basis for being distinguished as separate anyway. Interestingly, even if we allow for discreteness or separateness or individuality within infinite change, at least at the atomic level and over eons of time, all “things” that ever were decay to have parts of themselves become a part of every other thing that has ever existed or that will ever exist. Asteroids and comets bring water and even base elements of DNA from the solar system and galaxy to Earth, and cosmic dust from exploded stars brings the parts of our galaxy and the greater universe to our solar system and Earth to participate in the birth – decay – rebirth cycle here. And major asteroid collisions with Earth send Earth particles into the solar system and potentially beyond. Everything that exists materially in so many ways shares the very essence of its being with everything else in the infinite and perpetual birth-rebirth cycle. In a sense, even while accepting the illusion of discreteness, we are born out of the infinite All and in what we call death we return to continue to participate in the infinite. Decay and death are not a true end, just an arbitrary point that claims our attention from everyday analytic perspectives. In what we call death we end as a singular human identity and disperse materially to be reborn in infinite ways in the infinite cycle of material rebirth and decay. From a limited human perspective, we can mourn the specific loss of this one material identity or manifestation, or from a more expansive perspective we can celebrate the opportunity represented in death to be reborn in the infinite flow of all material things. As defined by the Dynamic Principle, which of these views we elect depends on what analytic perspective we adopt at what scale in what time frame. And this only applies if we accept the separateness of individual entities and events to begin with, which is itself a highly dubious assumption.

Summary and Conclusion

The analytical perspective, which combines perception and conception, is the dominant human mode for observing and engaging reality on an everyday basis. This is the default human perspective that is necessitated by the species biological survival, but it has inherent limitations when it comes to understanding reality as a whole. These limitations arise because the analytical perspective can include a view from only a single scale [field of view] at a time. Humans can shift this analytic perspective to consider alternative scales in alternative time frames, but they cannot simultaneously synthesize information from multiple alternative perspectives. They operate from within one view at a time, and the assumption from within each of these singular views is that it “captures”

reality as it IS. But this assumption is in fact false for two reasons. First, as we have seen, fundamental features of what is real change from within the views provided by alternative analytic perspectives. The discreteness and separateness of entities and events as well as what constitutes beginnings and endings and causality in the change sequence shift across different analytic perspectives, a totally unacceptable situation in an analytically dependent science. Second, non-analytic perspectives are available to humans that are based on synthetic mental processes emanating from human intuitive faculties, and the use of these faculties results in a very different perception, conception, and understanding of reality as compared to the view within any analytic perspective. The view from this intuitive perspective is synthetic and holistic, and it can transcend all of the scale and time frame boundaries that apply in the analytic perspective. In fact, this intuitive perspective constitutes a complement to the analytic perspective in virtually every respect.

While humans are endowed with these two perspective modes – analytic and intuitive, and while these perspectives can operate together, in most developed modern cultures the default, analytic perspective dominates decisively with the intuitive vastly underdeveloped, under utilized and running in the background. The result is that for most modern humans, including most scientists, the weaknesses of the analytic perspective are largely unrecognized and overlooked in science as well as everyday life. In this context, the analytic perspective with all its conclusions based on its view of reality in terms of singular scales and time frames, is allowed to define the way reality IS. Consequently, we proceed to carve separate entities and events out of what at one level we know is an infinitely interrelated whole, and then we permit ourselves to assess these entities and events from within this illusion to “identify” causes and “create” definitive beginnings and ends. This situation leads to two very important results that stunt our worldview and severely restrict the progress we make as individuals and as a species.

- 1) At the individual level, we conceive of ourselves as discrete persons with a beginning at birth and an end at death, and we leave the door wide open for the struggle to arise to deny this terminal death by invoking various religious fantasies. But the fact is that the analytic perspective literally manufactures the problem of our personal death as an absolute end. Without having to reference the intuitive at all, the analysis of the analytic perspective itself exposes this fact.
- 2) In science, we limit ourselves to a science of parts and pieces that seeks to characterize reality at different scales and struggles to account for the complexity of the system that is encountered both within these parts and pieces and even more decidedly across these pieces or domains. In our

pieces, we have theories of particles, theories of atoms, theories of molecules, theories of cellular activity, theories of organismic and ecological systems, all the way to theories of solar, galactic, universe and multi-verse systems. But we have no way to fully integrate theory within these domains or across domains. We have deluded ourselves into thinking that somehow all these piecemeal theories at all these scales will somehow come together if we just continue the pursuit far and long enough. The essential underlying problem is that the weaknesses that are inherent in the analytic perspective preclude our ever reaching these “unified” goals through this approach.

If we really understand the nature and challenge of Change in reality and the inherent inadequacies of the dominant human analytic perspective in perceiving and conceptualizing it, we can be triple winners:

- 1) We can relieve ourselves of the need to accommodate religious fallacies in the name of tradition or tolerance, accommodations that contribute unnecessarily to socio-political conflict and that greatly retard our making progress and being able to take advantage of our species’ window of opportunity.
- 2) We can avail ourselves of a very positive and fulfilling answer for approaching individual death as reemergence in an infinite cycle of material emergence, growth, decay and reemergence without having to buy into absolute discreteness or absolute beginnings and ends, or simplistic notions of causality. And, importantly, this awareness is confirmed from the human intuitive perspective where individuality is “impossible” to begin with.
- 3) We can reap the much more substantial rewards of a new paradigm in science, which combines and integrates the insights that result from both analytic and intuitive modes, processes and methodologies. This more adequate condition can emerge if science encourages intuitive development in the education of modern citizens and identifies a reliable intuitive discovery process.