Power, Complexity and Post-Visual Attention

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Abstract. The transition from modernity to post-modernity features changes in values amplified by an enormous increase in visual stimuli. This increase motivates analysis of the power of attention to create the present. Complexity theory illuminates this power and leads to the startling conclusion that we spend much of our waking life in a gap of non-existence.

Key words: visual stimuli, appreciation, decoding, semiotics, values, chaos, communication, complexity, power, attention.

Modernity as the Visual Age was an efflorescence of visual registers that began to drive a wedge between appreciation and decoding. The power of this wedge was social in a broad sense that included political, economic, scientific, artistic and other registers. The technologies of these registers occupied the space created by the wedge. Semiotics as a coping discipline was born during this period. The new visual registers included electric light, photography, the automobile, impressionism, cubism, surrealism, futurism and abstract expressionism, the Bohr model of the atom, billboards, neon, television, big screen cinema, animation, satellite and space probe imagery, radio and infrared telescopy, electron microscopy, and computer driven imagery from the Mandelbrot Set to the latest website to interactive audiovisual technologies. The Post-Visual Age signifies the achievement of the distance between appreciation and decoding that allows any visual item to serve some kind of social agenda. This achievement marks the decline of traditional aesthetic values and the ascendance of the values of efficiency, uniformity, accessibility, speed and flexibility. Increases in information sources, quantity of information, variety of information and speed of information processes have led to new ideas of order and chaos. Chaos theory grew as computer technology was applied to complex natural phenomena. Complexity theory followed the realization that a dualism of order and chaos was inadequate to describe many kinds of data. But it also

became clear that chaos, as defined in non-linear dynamics, is often indistinguishable from many different kinds of complexity. This paper presents a three-step approach through chaos and complexity to a new understanding of attention in the Post-Visual Age.

We can begin this understanding with the following three steps:

1. The present causes itself.
2. The causal processes involve feedback in memory, attention and expectation.
3. Whoever controls the feedback processes controls the causation and creation of the present.

We may understand these steps through the following thought experiment. A driver starts a car. The turn of the key completes an electrical circuit that sparks vapor that combusts in piston chambers which turn the drive train that moves the car. The driver has no watch and there is no clock in the car. The car is sealed against any sound from outside. The only clues to motion are the changes in what the driver sees through the windows and the mirrors. The car becomes an airborne vehicle that travels at precisely the rate of the change in the relationship between a particular place on the surface of the earth and the sun. There are therefore no clues for diurnal change. The airborne vehicle then becomes an outerspace vehicle. The driver is enclosed with no windows or devices to look beyond the skin of the vehicle. There are therefore no clues for sidereal change. The vehicle is powered by solar cells and nuclear energy and its trajectory is controlled completely by preprogrammed computers operating external navigational and directional devices. The only clues to change left to the driver are those of the driver's own body. There are no mirrors in the vehicle so the driver is able to use only those visual clues that come from seeing their own body. The only remaining clues are those of processes such as breathing, hearing, thinking, touching and eating, drinking and excreting. All of these processes have both voluntary and involuntary parts. Among the involuntary parts of each process are feedback processes that give the driver various kinds of stimuli that are information about the functioning of each process. The awareness of the driver is therefore continually enfolding voluntary actions including acts of attention, and involuntary receptions of stimuli.

The awareness of the driver continually folds and unfolds through, in and as memory, attention and expectation. The driver's awareness is always concrete – grown together (from a Latin verb meaning to grow together with), and complex – folded together (from a Latin verb meaning

to fold together with). How the driver's awareness unfolds determines the driver's sense of past, present and future. The combination of voluntary acts and involuntary feedback processes therefore continually causes or creates the sense of presence, of present awareness, or of the present.

The word *present* is very interesting in relation to this thought experiment. *Present* derives from the present participle of the Latin *praeesse* to be before, to be at hand. The complex structure of these two phrases deserves close attention. We notice first that there is no single atom of experience. There is neither an atomistic subject or ego, nor an atomistic object or other. Given together in both phrases from the beginning is something for someone. Something / one is before someone, or something/one is at, to or in someone's hand. This structure is not, however, static. Whenever something is before someone or in someone's hand there are involuntary feedback processes giving stimuli as information to that person. Without those feedback processes, it would be impossible for someone to be aware that there was something before them or that there was something in their hand. In this way, the present causes itself because it is the concretion and the complication of voluntary and involuntary processes that include attention and feedback.

Indeed, the driver in the outerspace vehicle has no need for ideas or devices of linear time. The voluntary control of attention in relation to the involuntary feedback processes of the body allows the driver to mark, in whatever way they please, differences among things that have happened, things that they expect to happen, and things that are now happening. Moreover, the driver could simplify the entire issue of time by considering all of the things that happen as part of a continuous now, punctuated not by linear segmentation based on the relative motions of sidereal bodies or the rates of emissions of subatomic particles, but on perceptual qualities such as color, smell, pressure, and temperature. In this way, the driver would gain even more complete control over the causation and the creation of the present.

The foregoing may suffice for an elucidation of the first two steps:

1. The present causes itself.
2. The causal processes are memory, attention and expectation.

We can now turn our attention to the third step:

3. Whoever controls the feedback processes controls the causation and creation of the present. The control of the causation and creation of the present positions the visual as a signifier of exercises of power whose goal is gaining and holding attention.

The qualities of those exercises contribute strongly to the pasts and futures of those presents.

We fold and unfold our presents in many registers. We have mealtimes, work hours, conference schedules, long distance travel, recreation, solitude and sleep. Each register creates an alternate present that in turn creates alternate pasts and futures. Emphasizing the visual foregrounds a certain kind of attention that transforms itself in memory, expectation, musing, daydream and nightmare. The fact that all kinds of communication increasingly include visual components signifies the evolutionary, economic and political prominence of the visual as the most powerful register for human information exchange. If we may characterize our age as post-visual, then it is not because we have decreased our valuation of the visual. It is rather because the visual is so pervasive, so constant and so accessible that it has become a transparent venue in which we usually operate without needing to reflect on the venue itself.

The third step of complexity, however, suggests that reflection on the visual as communication venue throws processes of social control into strong relief: attention pervades all registers of the visual and the effort of social control can be recoded as the effort to gain and hold the attention of human beings. Human attention is the conduit of many kinds of decisive human power. The longer an advertiser holds your attention the more likely you are to buy their product. The longer a political candidate holds your attention the more likely you are to favor them in an election. The longer an artist or entertainer holds your attention the more likely you are to support them financially or in some other way. Attention is a conduit of power. Visual attention is the most powerful conduit. But the use of attention to gain power has nothing to do with traditional aesthetic values such as contemplation, symmetry, harmony, balance, sublimity, sacrality, purity, modesty, depth or beauty. In fact, a sign of cosmopolitanism in all urban centers is the extensive, deliberate and detailed use in all visual registers of precisely the opposite values: skim/scan, asymmetry, disharmony, imbalance, mundanity, secularity, impurity/grossness/crudity, immodesty/nudity, superficiality and ugliness/grotesqueness/ repulsiveness. But the pointedness of this use is precisely the point: no one pretends that these values are superior to the traditional ones – except for the fact that set over against the old registers, they do prick the bubbles of boredom, apathy, indifference and inattention. They do get attention.

The force driving this bifurcation of values is the synergy of efforts to focus human attention. *These efforts are self-similar across different scales.* The

effort to promote birth control takes place in small, unindustrialized villages and in the chambers of the United Nations. *These efforts are unpredictable in their outcomes*. An effort to reduce soil erosion by reforestation may succeed in a Chinese agricultural province and fail in a mid-Western state of the United States. *These efforts connect with each other through non-linear feedback*. A global news report on grass-roots banking operations in rural India may stimulate an urban banker in Rio de Janeiro to initiate similar projects through local channels among Amazon farmers. *These efforts occur as coexistent trajectories in density spaces*. A half day's walk through an art gallery district can present impressionist idyll's of softly toned people picnicking on river banks, dark expressionist portraits of inmates in asylums and prisons, abstract expressionist flowerings of streak, splotch and swirl, installationist projects of headless dolls, electric chairs and fiberglass figures enmeshed in barbed wire, banks of color monitors with multiple tapes and cameras that alternately show the viewer viewing, the artist constructing, the artist's dog sleeping and screens bristling with electric snow, and racist graffiti on the alley or parking lot walls of the galleries.

The underlined and bold sentences above deploy signifiers from chaos theory. There is no way, however, to rigorously prove that the efforts described are part of a chaotic regime. Because concrete social reality continually escapes the mathematical schema required by non-linear dynamics, the social reality of post-visual attention is more tractable through the lens of complexity theory. We may recall the three steps: 1. The present causes itself. 2. The causal processes involve feedback in memory, attention and expectation. 3. Whoever controls the feedback processes controls the causation and creation of the present.

For an exercise of power in a particular social agenda to be successful, the most important feedback process is not the various kinds of clues that let us know that we are seeing something. A feedback process such as the one in response to which we call out, 'Focus', is certainly important. But it is not as important as the feedback processes in which we feel and think about what we see. Our feelings and thoughts bear directly and effectively on what we do and do not do about what we see. Controlling our feelings and thoughts has therefore become a primary preoccupation of the purveyors of the visual in the post-visual age.

For example, it is not enough to give us the news. We must hear the news couched in terms and accompanied by commentary that reflect somebody's point of view. That point of view is not a visual item. The visual images, accompanying verbiage and soundtrack are all signifiers of that point of view. That point of view attempts to connect through the

visual with our sexuality, our guts and our brains. The closer we are to urban centers and the more time we spend watching visual media or using the internet, the more we experience attempts to connect visual imagery with our sexuality, our guts and our brains. As the density of the stimulant space increases, feedback becomes more rapid and more frequent, synergy becomes more common, and emergent phenomena become more prominent. Feedback, synergy and emergence are signifiers of complexity theory. In complexity theory, we acknowledge the possibility of chaos as it is defined in non-linear dynamics but we focus instead on the multiple, looping intersections that occur in the gap between traditional visual aesthetic values and their opposites. In that gap the technologies of social agendas produce consumable items in increasingly heterogeneous registers. Anyone, regardless of their political, social or moral stripe, can achieve presence on the internet. Cable television has expanded the boundaries of home viewing almost to those already present on the internet. And, of course, the traditional visual media of painting and sculpture, augmented by photography, magazines and videos now allow anyone to view anything.

This expansion of the visual emphasizes the values of efficiency, uniformity, accessibility, speed and flexibility. This emphasis in turn signifies the emergence of connections among human beings that may be considered groups. Emergent groups in all social registers and across all kinds of visual media are productions and reproductions of attentional activities that come and go with the brevity of commuters queuing for a train and the longevity of college alumnae. Groups signify reciprocal and communal processes of attention, memory and expectation. Groups create their own pasts, presents and futures by getting and holding attention.

The visual in post-visual group emergence now becomes exceedingly complex. All groups insist on certain kinds of concrete uniformity. But uniformity can signify uniforms with matching colors and cuts as well as deliberate diversity and informality in dress. Uniformity can signify gestures that punctuate group processes as well as deliberate efforts to do away with all vestiges and descendants of Roberts Rules of Order. Uniformity can signify images that repeat like the Nike logo or evanesce like fireworks displays. The visual in the age of the post-visual thus signifies and is signified by attentional processes continually creating and recreating presents whose agendas require the transparency of the visual, the fluidity of the visual, and the disposability of the visual. The qualities of contemporary visual signifiers increasingly train us to keep moving, not to get fixed, to be fluid, mobile and responsive. We are to be able to consume and release large quantities of diverse data and we are to be able to skim

and scan quickly without commitment and commit quickly with minimal hesitation. The Visual in the Age of the Post-Visual signifies our power to adapt our attention to a world in which the order, chaos and complexity of imagery invites and reinvites the causation and creation of the present.

For example, I can attend to everything as light or as solidity or as energy. Or, I can attend to everything as each thing separated by its own boundaries, differentiated by its its own qualities and individuated by its own spatiotemporal actions. Since I can construct reality in ways that differ but are the same, as artifacts of attention – my attention, your attention, anyone's attention – I cannot claim ontological priority for any of the artifacts. They exist in the relations determined by the manipulations of attention. There is thus no ontological ground for privileging any version of reality over and against any other version. Stripped of our transcendental justifications, we meet in the post-visual nakedness of our own feelings: What can we do? What can we accept? What can we tolerate? We cannot step outside these skins to declare that one skin is better than another, that skin is irrelevant or that skin is relevant. We can pay attention to skin or not. We can pay attention to skin or not in many different ways. But still we are choosing, deciding, willing our attention to a visual experience that returns just the measure of what we put into it. This is not an equation. It is a reality of how we use our attentional power.

What happens when someone changes their attention? There is a phase, a transition, a space, a gap in which focus changes. Is there semiosis in this gap? Certainly there is neurophysiological adjustment that can be analytically decomposed in terms of changes in distance, brightness, contrast, musculature, pupil dilation, focus and central nervous system activity. But all of this happens below the threshold of spatiotemporal imagery. I cannot draw or paint a change in focus. Why can't I? Because there is nothing there. There is only an inarticulate flux. When the attention rests again then subject and object again appear and exist. Subject and object. In that transition, in that gap, there is nothing and no one.

I close with the observation that the competition for human attention is fierce. More and more rapid changes of attention are required in all kinds of venues – educational, commercial, artistic and governmental. A consequence of the increase in speed of attention change is that all of us spend more and more of our waking hours not existing. We are not here as subjects and nothing is there as objects. It is flux.