TRIBAL REALISM

THE PROBLEM WITH TRUTH

This blog is focused on how to understand the current, what’s been called the “post-truth,” era and the prevalence of what many believe are fact-free “news” sources. We contend that the recent US Presidential election is more than yet another success of a well-tuned propaganda machine, plenty examples of which exist throughout history. It seems as if the digital world has moved from the famous “All the News Fit to Print” type of journalism to an “All that is not-necessarily-true but is what you want to believe” media environment. It has been widely reported that people search for and find sources that say what they want to believe independently of the truth and then pass references to these along as if they are the truth. Face Book and other media environments have been recently criticized for blindly allowing this to happen. Simply labeling such widely passed messages “viral memes” doesn’t explain why they spread and why they are so effective at “locking-in” large numbers of people to certain beliefs. What makes them viral in the first place has to be explained.

We believe that this phenomenon is more than simply “confirmation bias” where people tend to look for information that supports what they already believe, as has been claimed by psychologists. We claim that there is also a broader bias toward seeking out groups and “subscribing” to those who promote what one wants to hear. Therefore, before one can propose what to do about what has been identified as a world-wide problem, we need to understand the cause of the problem, just like the process of finding a cure for a disease involves first understanding its cause or its mechanisms. The cure can then involve transformation of the cause or mechanism into something more benign.

WHAT HAS MORE EFFECT THAN TRUTH

“Tribal realism,” the title of this blog, is the term that we will use to capture what we believe is the cause from what anthropologists and other scientists have come to regard concerning human and cultural evolution. (Note: If you are already a science-denier, then this blog is not for you.)
It’s important to start with a recognition that genetics works very slowly, over many generations and eons of time. For this reason, we can assume that human brains were mostly genetically determined 100’s of thousands of years ago and are still not much different from those of hunter-gatherers. In the pre-literate, hunter-gatherer world, knowledge was held in groups and communicated orally or through demonstration among members of the same group or tribe. Different groups likely had different, but overlapping, knowledge, which allowed some to be more successful than others. In hunter-gatherer times, oral history was the only means for determining what one should do to survive, and there was no other means of passing along learning. Most of what hunter-gatherers needed to do to survive was not hard-wired in the brain because it had to change with climate, migration, encounters with other groups, and many other factors. Scientists assume that there were genetic modifications to the proto-human brain that allowed hunter-gatherer learning to be efficiently passed on to future generations and that this ability triggered the further development of humans toward the civilization we now know.

Culture, as a relatively stable pattern of interacting with each other and with the world, was created in this way and the significant advancement of culture, plus language, is what most distinguishes humans from other species. Culture is, however, Lamarckian rather than Darwinian, which means it evolves by means of acquired characteristics rather than by random variation and selection. Thankfully, culture can change far more rapidly than can the genetic makeup of the species.

Even today, a beneficial “economics of decision-making” is seen all the time where the beliefs of the social groups to which we belong (be they religious, family, brand-centered, sport teams, etc.) are adopted and followed rather than going through the process of rational decision-making involving all the important features of each alternative before taking any action.

TRIBAL MANIPULATION

What has changed radically in recent times is that social media enormously increases the probability of finding your “tribe”, or any tribe, no matter your current beliefs, and no matter how nefarious. Journalists are today under the gun for allowing a US Presidential election to take what many consider to be a disastrous turn. Campaign managers have even stated publicly that it doesn’t matter what a candidate says or even whether it is the truth or not. They say that what really matters is making statements, regardless of their “truthiness”, that capture the largest number of people, or, as we call them, the largest tribe. What was unique in the recent US Presidential election is that the tribe so captured was not the largest, but the one holding the most Electoral College votes. The targeted tribe in this election was more rural, less diverse, and thus more likely to experience around them people of like beliefs, reinforcing what they encountered in the media to which they paid attention. The rest is history.

REFERENCES

TRUTH, BELIEF AND TRIBES

It was a very interesting coincidence to watch the movie “Arrival”, just the other day. I had no idea that it was not so much about aliens coming to Earth as it was about the Sapir-Whorf hypothesis. This is the conjecture that language determines world view. A common example that everyone is familiar with is how the Eskimo language has a large number of words for snow allowing them to make fine distinctions in different snows that other people cannot make. The movie, however, went way beyond what Edward Sapir and Benjamin Whorf intended by demonstrating how the Hexapod (the alien) language determines alien experience of time as it did for the main, human character as well.

In our first blog, we laid out a plausible argument about how the tribe that one belongs to goes a long ways to determining one’s beliefs and likely what is valued as true by tribe members. We also argued that this effect is based upon some kind of inherent, biological determinism that may have made hunter-gatherers 100’s of thousands of years ago able to survive and start to develop culture.

One need not go far to see that current-day tribes really do determine ones beliefs, often in spite of contrary scientific evidence. Many religious groups are the best current-day examples of this effect.

My chief anthropology advisor at Michigan, Roy Rappaport, wrote that the concept of the sacred in tribes refers to the immutability of the tribe and its tenets. Unfortunately, he is no longer with us, but he was also very interested in my work among the many New Religions of Japan that developed after WWII. While the Meiji Era is often referred to as the opening up of Japan to the world, it may have taken until their loss in WWII for them to fully confront the global world outside Japan. I often think that, here in the US, there are forces going on in reaction to globalization just like those that played out in Japan at the end of WWII and that are leading to a religious-like revival, where beliefs contrary to scientific evidence are taken as sacred by members of some groups.

The rejection of science by many supporters of the current President-elect, including his own rejection, is very hard to understand by scientists. While the florescence of science is a recent cultural invention in
human history, it has always been opposed by one religious group or another, sometimes to disastrous
effect on the life of the scientists targeted, especially prior to the Renaissance.

While some scientists hold that they “know” what truth is when they see it, one can be too smug about it. In my years as a scientific program manager within the Federal Government, I saw over and over again how science too relies on tribes, called peer review groups, to determine truth, so science is also a tribal phenomenon. While I worked mostly in the area of computer science, I found that the anthropology side of me was often more useful in understanding and managing scientific tribes in an attempt to get the diversity needed to result in funding recommendations that were most useful to the world.

As mentioned above, I believe that humans are wet-wired to accept decisions made by others rather than learning everything by themselves and that this effect can be, and often is, exploited by others to affect what people believe. In the next posting, I will try to do a riff on existential cognition where we try to go into more detail on this effect.

EXISTENTIAL COGNITION

For the reader who wonders where the opening part of the last post was going, that thread resumes here. The previous post observed that the movie “Arrival” was not so much about aliens as about the Sapir-Whorf hypothesis, and I briefly described what that hypothesis was really about, rather than what the movie version proposed. Given my opening, I now go even further to supply my own version of the S-W hypothesis: Sapir and Whorf weren’t quite right in stating that language determines world view, I believe that language represents social interaction, and that social interaction determines world view. More specifically, language represents things and actions so that we can communicate with each other about them. It is, however, the selection of language that we use in communicating that determines what we believe, rather than the totality of the language or its lexicon. Furthermore, it’s that use which others accept or ignore that determines their beliefs. This is a pretty strong statement, but one I’ll come back to.

Existential Cognition, as defined by McClamrock, challenges the internalist view of mind, arguing that intelligence, thought, and action cannot be understood in isolation, but only in interaction with the outside world, both physical and social. Andy Clark, another in the same vein, proposes that people push cognition into the environment whenever possible so as to lessen the load of internal processing that would otherwise have to be done. This likely allows rapid decision-making which improves survival, especially at times that require rapid responses. For humans, with hunter-gatherer brains, the concept of survival in the current world may be less dire than it was in the hunter-gatherer era, but the function is the same – rapid, efficient decision-making. It’s important, however, to recognize that the “environment” into which cognition is “pushed” is as much social as it is physical, perhaps even more so.

In hunter-gatherer days, the era when we propose that human brains were pretty much determined genetically, there was as yet no agriculture and only very primitive tools. The environment consisted of the physical world and others of the same tribe. As we suggested in prior posts, the social world had an extremely important role to play because, through interaction with others, what to do to survive in the physical world did not have to be learned anew by each individual, but could be passed on from one to another.
As we currently struggle to understand why people believe things that are patently untrue, or why false “news” captures so many individual’s belief, we have to look at issues at multiple historical scales. The historical/evolutionary scale is currently under-appreciated, because part of the explanation is due, we believe, to the human brain itself and when it was more or less genetically determined. It is the set of conditions under which it was determined that inform us about innate human biases as well as weaknesses.

Having a child who is partially autistic, I also believe that there may be a link between some forms of the autism spectrum and the inability to perceive and react to others in ways that are considered “normal”. Theorists have postulated that autism involves the inability to form “mental models” of others’ beliefs, wishes, or intentions. I believe that some forms of autism are possibly due to the lack of expression of the genetics that determine the social brain of the hunter-gatherer.

THE WORDS WE USE

In the last post, I said that the selection of language that we use in communicating with others determines what we believe, rather than the totality of the language or its lexicon. To begin with, I offer a few examples: main-stream media, liberal, alt-right, retarded, and many others not fit to list here, but you know exactly which ones I mean. These are words that are loaded with innuendo, bigotry, and are meant to identify a group of people that the users hate, and intend to offend. To start, there is no main-stream media, unless you pick outlets like the Communist News Network (CNN). In the era of social media, all sorts of sources have become our personal “main-stream.” In the past election, local ads labeled their opposition as “liberal”. Since when did being open to new ideas and opinions become a bad thing? Alt-right is an interesting word because it is a way for media to refer to white supremacists without actually calling them that. What a way to do journalism! Make up a word so you might decrease your chances of being sued, but in the meantime, you make being of the alt-right persuasion an ok thing. A spade is a spade. One word I have not heard much recently, thank goodness, is retarded.

We now hear the word disabled most of the time. Maybe there is some hope that language use will change in other, more pejorative cases. Even in that case, the proper term is “person with a disability,” to recognize that these people are really people first.

The words not listed above, and which you know which ones they are, are probably the best examples of the point I am trying to make here in support of the conjecture that language use determines world view. These words are meant to classify a group of people, likely very diverse, with a pejorative term that exemplifies, if anything xenophobia. To use one term that Americans will not likely know or be offended by, I will give an example from my PhD field work. That is the Japanese word “gai-jin”. The two Kanji characters that make up this word mean outside, or “other than,” and human, or person. This term was used constantly to identify me while I was in Japan. When I asked about how the term came to be, there was embarrassment followed by a lame explanation that it really was an abbreviation for “gai-koku-jin”, where “koku” refers to country. In other words the reference to being one from outside the country (a foreigner) was shortened to refer to one being outside human, or non-human. This is xenophobia at its best. Perhaps modern Japan is changing in popular use of this word. I hope so.

There are two points I wish to make regarding this topic. The first is relatively easy, and that is for all journalists (and none is immune to this) need to carefully use the language that is the core of their job.
Each word needs to be free of innuendo, bigotry, or misstatement of fact. “Alt-right” is just one example.

The other point is more related to the main topic of this blog. The past election was filled with uses of loaded words intended to create beliefs in voters that are false. Words like criminal, political-correctness (as if that is a bad thing!), and liar. In all cases, these were used by people who themselves redefine criminality (after all, it is white-collar, so no one gets hurt, right?), who bash others, including the disabled, in order to make themselves seem important enough that there is no need to take care in use of words, and who lie so much that they can’t even recall themselves saying the opposite in the very recent past. Lying has become not only OK, but it shows that the speaker can define the world in whatever way he wants to and it’s OK to do so. For those of us who have an immune system for this kind of communication, the anger is difficult to manage.

SO WHAT TO DO?

A plausible account was presented in previous posts of what we believe to be innate social stereotyping in humans as well as its manipulation by some to gain power and influence. While these behaviors may have resulted in adaptive advantage for hunter-gatherers who had no recorded history, they have turned into a serious problem—a “social disease” if you will, in modern times. As mentioned in the initial post, the hard part in dealing with this is identifying the mechanism of this social disease and suggesting a way to influence that mechanism in order to create at least a modicum of a cure.

An argument was made in previous posts that the mechanism for these behaviors is inherited in the human genome for most people. The basis for my argument was that the human genome is very little different in the current human genome from that of the hunter-gatherer of 100's of thousands of years ago when social groups were the only repository of knowledge. Therefore, there is no likelihood of changing this factor anytime soon. The solution is going to be either changing the players in other ways or changing the playing field itself. The former is something I've had experience with.

As mentioned previously, science depends upon peer groups, and it works well when those groups are well-selected. “Well-selected” means diverse, in my experience. Diversity in scientific peer groups tends to lessen the effects of top names in the field influencing the beliefs of those who are less well-known. It also helps to challenge assumptions of individual members who may be in the same field and who hold the same views. Many times I have observed peer groups stating opinions as if they are given truths, when, in fact, they are just beliefs currently held in the field. Sometimes these beliefs are so ingrained that they go unchallenged. Involving reviewers from different fields, where such beliefs are not held in common, helps immensely to bring unchallenged assumptions to light.

Even in peer review the playing field can be changed as well as the players, as in highly interdisciplinary programs. Such programs require a diverse review group by their very nature. During my tenure at the National Science Foundation, there were many, highly interdisciplinary fields, some of them beginning under our own eyes. One example is the field of bioinformatics. It transformed during my time at NSF from a field where computer scientists helped medical scientists build and access databases to a field wherein information processes of cells required expertise in both computing and biology. Now the field embraces the notion that life is based on information processing and that understandings in computing have a great deal to do with understanding life itself.
To get back to social stereotyping and changing the playing field there, we recognize that this is far more difficult. There are social groups for nearly any belief, and truth often has very little to do with individual choices as to groups they want to identify with. As mentioned before, social media is likely a great amplifier of the problem, especially as seen in the last US Presidential election.

A brute-force “truth police” is not in the offing and is far too Orwellian. There are other approaches. We give one here. Some major email services, like GMAIL, already filter emails into spam folders if they are spam. Why not generalize the concept to include filtering search results from search machines like Google? This isn't censorship because the results are still available, just in a separate file labeled “spam.” Perhaps some truthful results will end up in the spam folder and some spam will leak out as truth, but, with perseverance, useful filters can be built. The artificial intelligence that goes into filtering emails is a start, and there are many possibilities to explore. Those who build search machines should be encouraged to spend research dollars in this direction. Call it "AI for democracy".

ARTIFICIAL INTELLIGENCE IN THE SERVICE OF DEMOCRACY

There was a rather cryptic line at the end of the last post, “AI for Democracy.” This post aims to clarify what that was intended to convey. A shallow meaning of that phrase is that there is a need to use computers to filter what is on the Internet, identifying what is blatantly false and labeling it such. However, there is a much deeper and more important meaning that we will get to later in this post.

As has been reported widely, Facebook and other providers are already working on means to identify postings that are false and either filtering them out or at least labeling them as false. There are many ways to do this sort of thing. Washington Post calls it “fact-checking”, but the techniques that can be used are far more powerful than that. If the postings contain statements that are not about things that are already known and posted somewhere else, then fact-checking will not be sufficient because there is nothing to check the so-called facts against.

Natural language processing scientists typically use computer algorithms called classifier systems to sort texts into different classes. FBIS, now called the Open Source Center, is a government intelligence service entity that examines, by computer, all foreign broadcast (or published) texts in order to filter and classify them into various important categories for human analysts to look at. Each year, the National Institute of Standards and Technology runs a competitive Text Retrieval Evaluation Conference to evaluate algorithms that, among other things, classify texts. When I worked for the Defense Advanced Research Projects Agency, my program was the primary government funder of this conference.

Part of the problem of classifying texts, whether for truth value or any other objective, is finding the right features that discriminate between categories. To do this, researchers often need to use training sets of known cases, both positive and negative, in order to search for features and algorithms that are good discriminators among text classes. In my experience, the features thus found can be surprising. I suspect that, in the current social media environment, features dealing with racial bias will turn out to be obvious discriminators. More generally, xenophobia can be expressed in any number of ways grammatically and these may also be important. Features such as these are not historically-unfounded claims of the sort Washington Post talks about in fact-checking. Often they are general assertions that
are not tempered with caveats, or ways in which the claim may not be true. Scientists, on the other hand, must write into their publications ways to determine or further prove their claims. It's part of the methodology of science. Absence of these caveats is an important clue to the existence of patently false statements.

It is our claim that democracy relies on truth, and that computers can be critical tools to identify when it is being abused. Now, we return on to the second, deeper meaning of the “AI for Democracy” phrase. A thread going through all the posts of this blog is that humans are their own worst enemy, in that they rarely make decisions using rational thought, but rather do so through habit or, more often, through following the practices of one or more groups to which they subscribe. The important thing about developing computer programs to sort out truth from falsity is that computers and the AI software they run are not human and therefore, unless programmed to do so, are not susceptible to group bias. This can make truth-checking by AI more intelligent than what humans can do. Whether or not AI systems will become more intelligent than humans some day and take over the World is a constant theme of science fiction writers. While we aren’t taking a stand on that conjecture, we are claiming that AI can, and will ultimately, be better able to classify the truth value of text because it is not biased by a primitive human disposition to rely on groups. Computers do not have hunter-gatherer brains wired to excel at oral tradition. They are capable of logic and reason, as well as being fast enough to determine a rational basis for any action.

**PRESERVING CULTURE AS A SET OF MESSAGES IN A NOISY ENVIRONMENT**

In my doctoral thesis of long ago, I took an information processing point of view regarding culture. I took the view that culture is a set of messages that are passed on from a group to individuals within the group, as they move through generations of individuals. This is consistent with my experiences regarding the development of the scientific field of bioinformatics, wherein cellular biology is studied as an information processing system. Biology is, at base, an information process.

When looking on the Internet for current views of tribalism, the topic of this blog, I found that there is a ton of stuff written about it from Ayn Rand to Robert Reich, two who couldn’t be farther apart politically. Most of it is wrong, in my opinion. Tribalism is usually presented as a choice that people can make or not. It is proposed that it is made by insecure, weak-minded individuals who can’t decide things for themselves. This is the part I totally disagree with. Tribalism is part of the fabric of human consciousness. It’s in the genetics. It cannot be overcome.

From an information processing point of view, there is an "error-correction" on cognition imposed by the social group that maintains the cultural "messages" that a group has learned over time and which the group passes on through generations of its members. Without such "correction", culture could not stabilize and become a useful, relatively standardized environment to the life of our species. There would be no "norms", no useful passing on of knowledge, in fact a not very useful language if people were to use it differently all the time, which, however, does happen to some extent.

Social cognition theorists (another group found on the Internet talking about these issues) don't grasp the degree to which the social environment determines cognition either. Tribalism is not a choice.
Perhaps affiliating with a particular group is a choice, but the resulting effect on cognition is far more than a conscious choice. It explains why individuals can join cults that, from the outside, seem totally irrational. This is the way we choose to interpret the Sapir-Whorf hypothesis, as stated in an earlier blog. While the totality of groups (and language lexicon) does not determine world view, in our view, the choice of group affiliation (and words one uses) do.

As we also mentioned in an earlier post about existential cognition, consciousness is internally under-determined until it is completed by external, mostly social, interaction. Evolution of the human brain has resulted in enormous flexibility of human behavior as well as openness to passing on acquired knowledge along with the development of culture. Unfortunately, the disadvantage of this is that this critical social dependency can go off-track if the group is led off-track by influential leaders, charismatic persons, or shamans.

It is difficult to see how it could have been different if hunter-gatherers were to survive in a changing environment. The overlay of a Lamarckian evolutionary system on top of a Darwinian genetic system as seems to be the case with humans is really fascinating. It may be more of a common "genetic algorithm" (apologies to the late John Holland, also one of my PhD advisors) than just in the human case.

THE THREAT OF ANONYMITY AND FANTASY IN A TRIBAL SPECIES

The main theme of this blog is to talk about the innate dependency of humans upon tribes to provide knowledge acquired over time and the implications of this dependency. In the modern, technological world, this innate feature (or bug, if you will) of the human species becomes a problem. The problem arises because social media provides anonymity and insulation from real-world testing and feedback while at the same time providing anonymous, fantasy tribes with which to affiliate. This insulation from true feedback provides an ability for humans to act without direction or control from tribes that are constituted and tested by long-term real-world learning. In other words, social media and similar technologies provide the ability to create false tribes, tribes that can create their own lore afresh, without having to test it in the real world, and the consequences of such uncontrolled, virtual action, without having to suffer the consequences of real world feedback can be extreme, as we’ve seen recently in the recent US Presidential election.

While massive multiplayer on-line games are an ideal example of where false tribes are created and play out, fact-free news sources and their followers are as well. In multiplayer on-line games, players can combat each other and die many times without real loss of any kind. This is the ultimate of lack of real-world feedback. While on-line game-playing can be seen to be innocuous, so long as such behavior is confined to the game world, fantasy news sources, such as Fox News and the ring of AM radio commentators of the same ilk are not so innocuous. The framers of the 1st amendment likely did not foresee the existence of fact-free news reporting and the huge effect that can have on tribal humans.

On-line tribes that create and propagate fiction can meet virtually and share interactively in their tribal fantasies via social media. One such fantasy propagated along these lines is where members assure each other that there is no such thing as global warming. There is no testing of this claim using real-world data. The line between fantasy and reality becomes blurred by constant denial and by the innate, unconscious acceptance by humans of tribal dictates, no matter which tribe they adhere to. The growth and virality of fantasy digital activity indicates that such sources are perceived as indistinguishable from
that of true tribes that preserve knowledge in an oral tradition, and whose knowledge has been tried and tested over time through real-world feedback.

**MULTIPLE TRIBAL REALITIES**

A recent news story on NPR interviewed an evangelical who did not support the current US President-Elect due to his immorality. Their report stated, and I quote, "Support for Moore also comes from Darrell Bock, a professor at the Dallas Theological Seminary and former president of the Evangelical Theological Society. Bock worries that many evangelicals are too quick to vilify those who dare to expound a critical view, even those who share their own religious background, as Moore does." "For some people," Bock says, "there is so much tribalism in the divisions that we have to speak against your tribe is to be seen as defecting from your tribe." (NPR News 12/20/16 "Anti-Trump Evangelical Faces Backlash" Tom Gjelten)

As evidenced here, tribes that persist often have feedback mechanisms to ensure their survival. For example, it is often claimed that the two main US political parties use threats of negative campaigning against those who would vote against party lines. It has been reported that the strength of this pressure is starkly demonstrated by the willingness of politicians to forgo their supposedly strong morals to support a party candidate who wallows in immorality. While we are initially unable to comprehend the scale of the hypocrisy in such actions, the real culprit, we believe, is neither turning one's back on immorality nor hypocrisy but the strength of the feedback to maintain tribal cohesion. It's as if tribal pressures override all. In fact, it is merely another example of how tribes determine reality for their members.

Those who read popular books on modern physics and interpretations of quantum behavior, such as quantum indeterminacy, have read claims, including by the noted Stephen Hawking, that there are infinitely many universes that constitute reality. More relevant to us here is that we believe tribes create multiple realities even in our mundane lives, to say nothing of the realm of quantum physics. What's real to one person may seem like total fabrication to another who is not in the same tribe, and vice versa. It takes immense effort to appreciate that others actually believe that their reality is the one true reality rather than just being stubborn or ignorant in their beliefs.

Human history is filled with wars fought by one tribe against another where each side felt their reality was the only true one and that the other side was constituted by infidels or even worse. Whole programs of ethnic cleansing have been waged to rid a country of an opposing view of reality. It's not just brutality, we believe, that motivates such actions, or even tribal hegemony. It is one tribe asserting what it holds as true reality over threats of alternatives. This belief often results in defining others as not human, as we suggested may be indicated in holdovers from older Japanese Language.

While not all tribes hold such a rigid and extreme view of reality, we believe that the degree to which a tribe determines one's reality is very much under-appreciated in modern culture. People are often too quick to judge tribal beliefs of others as simply the result of poor education or strong religious belief. In actuality, it may very well be due to a powerful tribe that defines the world in a very different way than that of the observer, and that enforces such beliefs with extreme sanctions. Furthermore, we claim, no person is tribal-free, even this author. Tribes must be judged on their long-term value to the survival of the species.
A lingering question from the last post concerns how tribes can create different realities. Some readers might also say that reality is clearly out there and independent of tribes, for example, stepping into traffic would likely get you hit or going out in the rain would get you wet, and these are not debatable realities. Those about which we are concerned, however, are not such immediate, physical realities as those, but are more abstract, such as climate change, a belief in life after death, how the economic system works, or social equality, to suggest just a few. These "realities" can also become just as powerful motivators of human behavior as can traffic or rain, but they are also manipulable precisely because they are not immediate and tangible. Furthermore, people generally agree that different people do have very different beliefs about abstractions such as those we listed.

One way that tribes can control perception of "realities", such as we listed, is by control of attention. The "feature integration theory of attention" (cf. Anne Treisman) states that the multitude of features that make up a perception are temporarily unified in consciousness by the "spotlight of attention" that we give them when we look at them. Once we move our attention to some other focus, those features or others may be reused in the new thing or event to which we pay attention. This principle of feature re-use through recombination is one reason why the brain can represent so many different things. What is real to a perceiver are those things and events that hold together as one pays attention to them, uniting the many features of things or events into a unified perception.

There is also a limit to what we can pay attention to at any one time, including in short-term memory (cf. Miller's 7 plus or minus 2 "magic number") and over an even longer time. This limit exists because attention in the brain binds representational activity such that all the different features of something are active in synchrony. Our minds are rarely able to focus on more than one thing at the same time because, if more than one focus is active at the same time, different things or events can interfere with each other and cause improper bindings. It appears that evolution has worked to prevent such occurrences in normal perception, although studies of rapid serial visual presentation (RSVP) show that attention's benefit can be thwarted under severe conditions. As we move our attention from one focus to another, the pieces of the next focused object or event are brought into synchronous activity in consciousness and those of the previous one are turned off. That is how the brain works. The role of time and re-usable features of things and events play a huge part in the ability of our brains to represent so many different things. The world is far more complex than we could ever store in our brains and we can only represent a small part of it at a time, especially the more complex, abstract things and events in our environment.

Since attention is the glue of objects and activities in conscious awareness, Tribes focus attention on specific abstract things of importance within a group of people in order to cause them to have significance in that group and to motivate the members to take action of one sort or another. It is this mechanism by which tribes create different "realities", by selecting those specific things to which members are to pay attention, whether they be social equity, the "afterlife", or some other abstract concept.

It is critical in our line of reasoning in this blog to note that we have not mentioned truth in outlining the mechanism by which tribes create different "realities". It doesn't matter if the foci of attention are true
or not, so long as our attention is brought to them at the same time. Repeated attention over time leads people to learn new abstractions, but also to give such abstractions significance whether or not they are true. Therein lies the problem with a hunter-gatherer brain in a modern world. When an oral tradition is no longer the only, or even primary, means of passing knowledge to new generations, a more scientific method of knowledge-passing must be employed. Modern, civil society no longer relies on subsistence skills for survival, where false abstractions lead to death.

TRIBES AS INFORMATION SPECIES

Earlier we mentioned, briefly, how biology is actually an information science as we described the synergy between biology and computer science in the field of bioinformatics. Now, we take a step further and make the claim that tribes are like bioinformatic "organisms" that evolve through competition, except that the mechanism of evolution is Lamarckian rather than Darwinian.

Just like biological species evolve by means of mutating and recombining genes, tribes evolve by means of developing memberships and adjustments of belief systems. Tribes combat each other using their members as the players in their struggles. They also change as members develop new ideas. Ideas are the "genes" of tribes. Scientific fields are the best examples of these and the processes to which we refer, but all tribes have methods by which they consider and either reject or adopt new beliefs.

Some tribes develop immunity against change and have strong defensive mechanisms against "infections" from other tribes. A recent Salon article (http://www.salon.com/2014/11/17/6_reasons_why_religion_does_more_harm_than_good_partner/) notes that religions "discourage or even forbid the kinds of friendship and intermarriage that help clans and tribes become part of a larger whole. At worst, outsiders are seen as enemies of God and goodness, potential agents of Satan, lacking in morality and not to be trusted." These are words that these days can be applied to US political parties as well.

While such mechanisms may serve to maintain tribal identity, sometimes over 100’s or even 1000’s of years, tribes evolve, as well as go extinct. When they go extinct, it is for the same reasons other types of species go extinct - they lose their niche and the resources within it necessary for survival. Such losses may be due to over-exploitation by the tribe, or through domination and marginalization by other tribes with "genes" that are more fit.

TRIBES, WORLD MODELS, AND SELF

What astonished me most since my DARPA days is my discovery that biology is really an information science. Biology actually works by the passage of information, the derivation of “meaning” from information, and the codings by which information is stored. It’s exciting to discover that information principles work at all levels of biology, from that of the cellular to that of the species. In fact, when commonalities are found across such an enormous range, it is almost always an information science principle. Take for example the issue brought up in the last blog posting which described tribes as information species whereby self-identity and its protection are found just as they are at the cellular level.

In order for any biological entity, whether tribe or cell, to identify when protection is called-for, there
needs to be a standard against which to measure what is being detected as potential threat. Let’s call this standard “self”. Self/not-self discrimination and defenses against the latter are common in both the human immune system as well as in tribes. Such self-identification depends upon a model of self so that comparisons can be made with what is being analyzed. At the cellular level, when not-self is detected, a whole immune system is called into play to defend the cell against the challenge posed by the intrusion both now and in case of future encounters. The immune system is able to learn about new “infections”, or not-self entities, so that, in the future, a defensive reaction can be more swiftly brought into play.

At the tribal level, science fields, religions, and political parties all have self models that are closely tied to methods that create them. Science employs the scientific method to generate and maintain the model of reality it creates as new world knowledge. Religions have their own methods for creating the models that they maintain. In religions of all types these are the rituals of the practitioners or those who wish to become practitioners (e.g., baptism). My anthropology thesis advisor, Roy Rappaport, wrote extensively about how rituals work to maintain rigid belief systems of religions the world over. Interestingly, both science and religion have special rituals called “rites of passage” by anthropologists. These rites serve to usher members of the tribe through a model of the development of self until full membership is achieved. In the science world, the most important rite of passage is the award of the PhD degree, which serves as a license to be an expert in a specific field.

Many writers believe that political parties in particular are not the same as science or religions. They tend to believe that political tribes are created and maintained by media and/or propaganda espoused by candidates or incumbents. It is certainly true that there are significant relationships between the different political tribes and their own media; however these aren't necessarily causal relationships whereby the media determines the tribe. Although media and publications may influence subsequent memberships, the origin of political tribes is, we maintain, more basic in human nature. In order to support that claim, we need to address what causes tribes in the first place, particularly political tribes. Furthermore, we need to explain how and why these tribes are exclusionary, which indeed they are.

Let’s return to the claim that tribes control their boundaries through information processes that detect “infections” when they are contrary to a concept of self associated with the tribe. This concept is a unified model that creates the coherent belief system by which the tribe is recognized and differentiated from other tribes. Just as at the personal level, or even that of the cellular level, biology abhors multiple selves, except in rare, pathological cases which often become the subject of fiction or biography when applied to individuals. Cells differentiate into organs within the body and use cellular control networks to maintain these differentiations, just as the body differentiates itself from potentially pathological biological entities and employs an immune system to deal with such incursions to maintain its identity.

At the human level, the development of a conscious self relies on a unified world model that allows thoughts to cohere (in most cases) and evolve into unified courses of action that we call behavior. Humans need controlled conscious thought processes in order to behave with a unified goal, let alone behave at all if competing models for one’s self were to prevail. Hunter-gatherers may have been the first evolutionary humans to have a conscious sense of self because of the need to develop goal-directed behaviors appropriate in a changing environment that can be passed on to successive generations orally. It might be productive to look at primitive art for indications of a developing sense of self among primitive humans.

The need for such a unified model in the brain may also be a cause for tribes. Another, more
appropriate question for this blog is to ask, what happens when the self model of a tribe becomes too strong, inflexible, or exclusionary? What we believe is that a narcissistic demagoguery is developed that attempts to alter interpretations of external reality to match its voracious need for confirmation. In such a situation, truth will be the first victim.

**TRIBALISM AND COMPETITION**

As already discussed in this blog, tribes maintain mechanisms for their own preservation, and several examples were already given. In the domain of political tribes, those mechanisms can have extreme consequences. This posting concerns the gerrymandering of election districts in the United States, which has created the current state of polarization in the United States government. The government we now have is one that not responsive to the electorate, as evident in the differences between popular and electoral results. At the more local levels of states, gerrymandering has resulted in the creation of election districts that guarantee a specific party will win, in this case Republican, no matter who runs since there is no competition.

Without competition in gerrymandered districts, those with extreme, often irrational and immoral, views can be and are elected. No one is able to mount a meaningful campaign to counter these views because the election results are already determined according to party lines. When this happens in many states, it results in a national legislature unwilling to compromise on anything with members of other political tribes and even become willing to break rules and long-standing traditions of government to get what they want.

This is an example of tribalism with extreme consequences, where the dictates of a single tribe overrules even science and rationality. The long-term consequences are deleterious even to the protection and security of the tribe’s own descendants. In this example, what the tribe wants is instead claimed to be true, inerrant in the face of reality. The tribe becomes the new reality. As we mentioned earlier in this blog, actual truth is the victim.

What enables this fiasco is the lack of competition in the election process. Competition in a democratic fashion subjects different tribes to judgments by voters on the basis of claims and counter-claims made by candidates. When there is no competition because the voters are largely of the same party, there is no judgment. Human history is filled with examples of what happens when a single tribe acquires hegemony. There is no longer any control system for some tribe’s goals, which can then become ruthless in the hindsight of history. This isn’t just a serious problem for the United States. World wars have been fought due to some tribe seeking domination beyond the borders of the country that spawned them. Sadly, in most cases, there were minority tribes in the instigator’s country, but, due to one reason or another, they lost the ability to participate in competitive discussions that would result in a more democratic competition among tribes.

**QUANTUM CONSCIOUSNESS**

Quantum indeterminacy is considered by some to be the basis for the expression of free will in individuals. In this view, the brain’s neurons simultaneously compute states of mind where the final state is determined out of a huge number of possibilities by means of a competition among all the contingencies. The actual state experienced is an “observation of state” that collapses the wave function
of the indeterminate quantum state. The observation occurs when the "self" interacts with the wave function, causing it to collapse into an observable state.

Whether or not quantum effects are the cause of consciousness, we do experience consciousness as an observation of our own thoughts. These observations are often accompanied by internal images or silent verbalizations. We often make decisions only after some time being "lost in thought", or in making such internal observations. Some have argued that this activity is reasoning, but, in actuality, that only feels like a small fraction of conscious experience. The tapestry within which we "observe" our thoughts can also include things that sometimes just "pop up" to grab our attention, and any associations that may have led to them are lost to us.

The argument that this is all based on quantum phenomena may, in part, be based on the internal experience that consciousness appears to "select" through observation from a probability distribution of many possibilities, some seemingly random. Once this selection is made, most of the other possibilities disappear, and the process starts all over again, over and over, continuously selecting through internal observation from an ever-changing cloud of possibilities.

So, what does this have to do with tribes, you may ask? Our belief is that tribes offer a short-cut to consciousness by biasing which ideas are to be selected so that we don't get caught up in a continuous train of wandering in our own ideas. In one way, they offer a way out of the insanity of an internal prison of indecisiveness. In another way, they provide a path toward a quick solution when one is called for, especially in a survival or even subsistence setting as we argued many postings ago in this blog. For some, unfortunately, consciousness is a struggle with poorly-established associations where the effort required or the time needed to reach a satisfactory result is too much to tolerate. For most scientists, however, this time is looked upon eagerly, especially when it is coupled with a rational control over the internal processes that can result from years of training and an active curiosity.

It's no surprise to me that most Republicans and the President are anti-science because I believe they are caught up in a lazy tribe that proffers quick, biased "solutions" as opposed to taking the required time and effort to train their minds to control consciousness. Their version of education is also tribal indoctrination rather than learning skills of thought. We can only hope that the population at large begins to see the vacuum of leadership that they brought into being is actually resulting in a concrete worsening their own lives.

**TRIBAL SCIENCE**

Even science is organized tribally. So, what makes it different from, say, religions or political parties? It's not just that it has a scientific method. Other types of tribes have their methods for acquiring knowledge. Although the scientific method pushes actual knowledge development through a dependency upon replication of results, other tribes also have their own ideological support systems. So what makes for the difference between science and other tribes that is as real a difference as many of us believe?

As we mentioned in the previous blog, science progresses because scientists have learned to control their thought processes through a long training that results, in most cases, with a PhD degree. Doctorate holding scientists and others have learned to cast aside preconceptions and other biases to be skeptics. They have learned to require proof that is repeatable by others as well as by themselves before
accepting anything as new knowledge. If, for example, they cannot predict a result based on the conditions they believe to hold, then they will not accept it. More than just a correlation, they look for mechanisms that lead from conditions to results. Often, such mechanisms involve mathematical equations that reflect the transition function from initial conditions to results.

Without the control over conscious thought that is required to be skeptics in this way, scientists would, like most other types of tribal members, accept for true whatever their tribe already tells them is so and reject other streams of thought as fake. They can do with without guilt or worry for reasons already stated many times earlier in this blog. It is as difficult to become a good scientist as it is to become a good athlete because of the intense training and possibly the initial talent that is required. Not everyone will have the talent to become a scientist as not everyone can become a professional athlete, although most everyone can train themselves to some extent to be like a scientist.

The dark, republican side of the current political situation in the US is based in part on an organized reaction to science and to scientists’ tribes, a reaction that is full of hate as well as fear. The other side is not without fault. The Democratic Party Machine has, until now, overlooked almost half of the US citizenry, a half that does not possess either the interest or the motivation to train their minds to think like scientists. Partly this is also the fault of scientists who tend to ignore such people, thinking them expendable and lower-class, preferring to enjoy privilege and the use of Latin in their graduation ceremonies and on their diplomas*. The problem with not communicating about science is that non-scientists also vote and recently, feeling empowered by media catering to their fears, have started to vote in greater numbers - a practice not yet appreciated by those on the opposite side.

* It was disconcerting to hear, at the Princeton University graduation ceremony, the class of 2017 valedictorian talk about how important it is to talk to the underclass, to say “hello” once and a while, and to try to treat them as humans too. All I could think was “My, God! This person was selected to give a talk representative of the class she represents!”

**A SOCIETY OF STEPFORD WIVES**

A number of postings ago in this blog I referred to the concept of "existential cognition", that is, the tendency of humans to push cognition into the environment. To repeat, what this concept means is that humans structure their environments in ways that prevent them from having to remember when to act or even what is the appropriate behavior in different circumstances. Cognitive environments vary from the simple, such as traffic signs, to the complex, such as the way an author arranges the work area around where they do their writing. In the latter case, they often only need to look at a book on the shelf to remember its contents.

In the last posting of this blog, we suggested that scientists are like athletes in that they have to train themselves to be able to think skeptically and to question everything before deciding what they believe to be true. Science was described as a learned behavior requiring intense practice, leading, in most cases, to the PhD degree.

We also suggested that people may not all have the talent or the desire to endure such training successfully. More than that, we suggested that those who are not scientists typically depend upon their
tribe or tribes to help them determine how to behave or even to think in various situations. Such people prefer to simply follow a tribe rather than attempt to analyze facts, evaluate their sources, and struggle with making decisions. For sure, blindly following a tribe is easier than what scientists do, but more so, it pushes their cognition into the tribe rather than reserving the bulk of it to themselves. What their tribe proposes that they do is simply and painlessly adopted.

Perhaps the complexity of the modern world or the dismal quality of US education, or both, is to blame for what we see happening more and more with the decisions that people make. Nevertheless, the result is a population of "Stepford Wives" who are more robotic and less human than those who value learning, are willing to put in the required effort to learn, people who want to be more independent, and have choices in their lives. To summarize this entire blog to this date, we believe humans are generally no longer adapted to live in this complex modern world. They still have brains that are adapted to a pre-literate, hunter-gatherer world that was much simpler and where tribal "solutions" were the only way to bring prior knowledge to bear on problems. There was no time to do experiments, consider alternate hypotheses, or ask others to verify conclusions. They would starve or be eaten before being able to do these things. Besides, there were no written sources of knowledge to draw upon, and only tribal elders or possibly shamans had the experience or the desire to derive new knowledge from the world.

We believe that, as society developed over time, became more complex, and offered far more social interaction with people of diverse tribal backgrounds, science developed as a method to deal with the diversity of knowledge. This was not just because any new knowledge was more useful, but because a new skill for living was required for humans to continue to exist. This was a skill that sorted through the various forms of knowledge and established methods to assess its ultimate value to the largest number of people. Unfortunately, this skill is still beyond the ability of many and our current cultural war is the outcome.

**HURRICANES, MEMORY, LOCALITY, AND TRIBES**

People normally don’t remember the destruction that powerful hurricanes can cause, and they persist in constructing dwellings in, and living in, coastal areas that hurricanes tend to cross. Partly, this is because the time periods between strong, destructive hurricanes are long, often several decades or more in length.

Other than scientists or historians, there are few other “tribes” that maintain a history of these events and the dangers they present. And, although extreme events are written up in journals and books, the educational system in the US does not have a focus, except perhaps in a brief lesson or two, on these events. In part, this is due to educational resources being too general and not focussed on specific localities and their risks. Educational resources are normally developed and marketed nationally for economic and business reasons. This is why the Texas Board of Education has such sway over educational textbooks in the US, often to the disadvantage of science and evolution in particular.

In hunter-gatherer times, when tribes were the only method for passing on acquired knowledge, tribes were confined to local geographies, climates, and the threats that would occur locally, even if such events were rare. There was no long-distance communication or knowledge passing. Even human immune systems adapted only to local diseases and were vulnerable to the incursions of early human long-distance travel, bringing diseases never experienced into new areas.
In the modern world, the effects of destructive events are even further ameliorated by insurance benefits or government assistance that softens the blows of large-scale weather or seismic events. The result is to make the population even less likely to retain and act upon the knowledge of what the Earth can do to them in specific places.

As the sea level rises through continued melting of polar ice and glaciers, previously thought safe areas along coasts will prove to be uninhabitable. Whole states of the US may disappear. This is not to say that people should avoid living in Florida, or even New York City, but that the Earth is a dynamic system, not a static given. The time-constants of Earth events are often longer than generations and often specialized to certain areas of the Earth. Therefore, what’s needed is a human memory program other than tribes that provides knowledge of the risks and benefits that the Earth can provide, some of which have everything to do with continued human existence in an area. Right now, we do have one such “program”. It’s called science.

**TRIBAL ROLES IN THE REVOLUTION**

The revolution has begun, and it is far bloodier than any kinetic war. As the corporatists battle the humanists, many more lives have been lost to date in the opiate wars, for example, than in the entire Vietnam War. Petro-corporations are taking private land and citizen resources to enrich themselves. Elon Musk has it wrong; we should not fear androids taking over the world, but rather corporoids not only taking over control via lawful monopolies, but actual lives of those classes of people who do not belong to corporate tribes. At this juncture, the corporatists are winning handily. Students of history know, however, that the greedy excesses of the aggressors will, in the end, bring them down. WWII is the best, most recent, example.

Much has been written in this blog about the corporatist tribes, their excesses, their fact-free propaganda, and their control over tribal members. In this posting, we focus on the rebels rather than on the Empire and how they will eventually regain the world. Of course, Mother Nature would eventually do this anyway, but humanists need to accomplish a revolutionary win in human time, not geologic time. We will discuss how humanists will use the tribal force to overcome those who have turned to the dark side.

To begin, there are two factors that will enable the humanists to win: numbers and allies. Humanists outnumber corporatists, and not just by a 99% to 1% economic comparison. Secondly, the US is the fatherland of corporatists, but humanist allies overseas are ready and preparing to repay the US citizenry for saving their world in earlier times. It was heartening even today to read of a German soccer team taking their knees in solidarity with those oppressed in the US.

While humanists far outnumber corporatists, they have no common tribe as do corporatists, which is the US Republican Party in all its disarray. The Democratic Party, on the other hand, is not representative of humanists, as witnessed in the last major US election. Historically, one of the strongest enablers of tribal formation is discontent, even hate, of those in control. All revolutions started this way. This one will be no different. The Republican Party built themselves up on hate, but did nothing to resolve it, in fact added fuel to the fire with a moronic president. When the tide turns, it will be fast and furious, but hopefully not out of control. The dangers are just as great of a strong, fascist leader on either side, when emotions are as strong as they are now.
What will likely govern the chaos of the revolution will be allies. Having lived, in many cases, through such revolutions of their own, and because this is now a globalized planet, our country’s allies will play a major role. Unlike what is commonly believed, the US is not as powerful politically and economically as it believes it is. China is already light-years ahead in providing renewable energy. Canada is a shining star of health care reform. Astoundingly, Germany is now the driver of the free world. Interestingly, Brexit in the UK is already showing their experiment in “making the UK great again” to be a looming failure of epic proportions. More than leading by example, these and other allies will bring world awareness, even condemnation, on US corporatism. Witness the huge fines imposed on US-based internet corporations for ignoring basic principles of humanism, especially the privacy rights of citizens.

Knitting the rebellion together into a coherent tribe will be a renewal of democracy. The word democracy will be snatched back from those who define it currently in corporate terms. Corporations will no longer be “people”. Democracy will be restored to its original ideals of freedom and human rights, with recognizable terms of membership. All this sounds, however, like wishful thinking without supporting evidence for why this will happen.

The enabler of democracy as a more global tribe will be the disappearance of religion as a driving force in the US. The massive number of different religions that strive to differentiate themselves from each other will lose their driving power in the US, and will enable the re-unification of a larger, democratic tribe. This will happen because of generational turnover. Most young people are not religious or see religion only in more generic terms as a catchall for the unexplainable. As the older generations die off, religious tribes will lose more and more support. Reasons to hate each other will diminish. It’s no wonder many young voters don’t currently vote. There are rarely any real choices on the slate. It’s still unheard of for a candidate for office to claim they’re not religious or, even worse, an atheist. This, however, is changing. Those seeking to bring a god into politics are now seen as lunatic, except in the darkest, most regressive reaches of the country, like Alabama.

Of course removing obstacles alone will not cause a democratic tribe to form. What is more likely to seed reform in this way is response to crises. The public outcry toward government laxity regarding the disaster in Puerto Rico is an example. Crises such as this will intensify and become more frequent as climate change influences the frequency and severity of storms. Nothing draws people together more than helping each other in disasters. Fewer and fewer parts of the country will be immune to such events, some of which are even corporate-made, like earthquakes and contaminations due to fracking. While terrorist events, such as mass shootings, also unite people in horror, they also bring into sharp relief the horrible principles of corporatism and their utter disregard for human life. Even these heinous events will bring more and more people into a humanist tribe, as more and more people are affected.

In sum, the war is waging, the corporatists are in control, but forces are changing as corporate greed cannot control itself, even as it destroys the ground it needs to retain its power.

UNDERSTANDING PHASE CHANGE BEHAVIOR

When at MITRE, I was the recipient of an internal source of funds to explore what we called “phase change behavior” in social groups (Lockheardt, 2009). We were of the opinion, apologies to the late Stephen Hawking, that there are not instances of ourselves that continually bifurcate into multiple new
universes with each of our decisions as multiple-universe theorists believe. However, we do need to explain how the seemingly random phenomena underlying our neural activity becomes resolved as we observe our own mental activity and that this resolution often has the effect of a change of behavior akin to that of phases in physical materials. The personal experience in many cases is as if there is a conclusion to numerous, seemingly random, lines of thought as we focus attention on our inner mental activity (Jan 6, 2017 Blog Post). Our consciousness appears to be observing the possibly quantum distributions of our neural activity (April 13, 1027 Blog Post & Oulette, Nov 7, 2016), causing a collapse of an indeterminate quantum field into an awareness of our own thoughts and often a decision to act in some specific way. Some people feel that this sudden experience of clarity is what’s behind what is called “free will.” It’s no wonder that this gives rise in some people of a feeling of being externally-guided, perhaps by a supreme being. We hope to offer a more mundane, if you can call it that, explanation that may someday actually be testable.

The part that we believe may be inhibiting scientific exploration of personal decision-making of the sort we are proposing is that the tribal factor is not included in any of the studies. To repeat what has been mentioned several times in this blog, the human brain evolved over a very long period of time when there was no recorded history, except in memories and oral traditions. Furthermore, these were passed down by members of the same, interdependent, local group. There being no reason or method to reliably test such lore, and usually no time to do so, humans brains developed to accept such lore as truth. The only “test” was whether or not the lore increased or decreased the survival of the group, and the “economy of decision-making” inherent in this process ensured quick action at times when it was needed. We know, being the descendants of groups that survived, that there was some factual knowledge within that lore, or we would not be here today. We also know that our descendants believed and followed that lore for the same reason.

What we need to explore scientifically is how the tribes with which we identify determine the process of attention and its focus on underlying mental activity such that decisions are made. It may be that the still vaguely understood “mirror neurons” that have been observed in primates are the mechanism for such influence. According to Wikipedia, a mirror neuron is “a neuron that fires both when an animal acts and when the animal observes the same action performed by another.” This is the “operator” representation, as opposed to object representations, that we postulated in our doctoral thesis back in 1981. We believe that such representations are crucial in understanding group behavior and the effects of groups on people as we observed and reported among the Japanese people in our doctoral field work. Clearly more research is needed that involves group effects in trying to understand how human decisions are made.

Jennifer Oulette, CAN QUANTUM PHYSICS EXPLAIN CONSCIOUSNESS? Nov 7, 2016 The Atlantic

QUANTUM CONSCIOUSNESS, April 13, 2017 Blog Entry

THE ROLE OF TRIBES IN FOCUS OF ATTENTION, January 6, 2017 Blog Entry


“Mirror Neurons.” https://en.wikipedia.org/wiki/Mirror_neuron
The question is: “Is it possible to program the behavior of human beings like you can program computers or even individual stem cells?” While it feels ethically wrong to do so, I believe the answer is “yes, it is possible and has been done many times throughout human history.”

If it has been done already, then we need to know how to recognize when it has happened. That’s actually not very hard. One merely has to take a more general view of events. The last US presidential election is a huge example already mentioned several times in this blog. Another current-day example is police killing of unarmed black men and the inability to get a jury to convict murderers who are part of law enforcement. Historically, one also has only to look at any widespread nationalistic movement.

What is common to all such events is playing out of a bias that already exists and is strong enough to override empirical, evidence-based reasoning. A theme of this blog is that such biases are held within tribes. We have earlier claimed that these biases are simply a part of the cultural “genome” that enabled humans to survive in pre-literate times. In the modern era, when some tribes control a major slice of social information exchange, then it becomes fodder for large-scale human behavior programming.

Recall our earlier blog postings where it was pointed out that the recent presidential disaster in the US was due to gerrymandering and the structure of the US Electoral College System. These features led to the ability for a less-diverse, less-educated, more rural portion of the population to override the majority vote of the population. I claim that this minority segment of the population is a tribe. It follows a common social medium - mostly FOX News and conservative AM radio personalities - and has less experience with the growing diversity of the US population. These media have fed the fears of the rural population, particularly the fear of the decline of status of the white American male.

While Russian involvement in the US election appears to have taken place, it only succeeded because it recognized this rural tribe and exploited it using a political handmaiden sociopath who strives to increase his own wealth and self-view. But, that is not the topic here. The focus here is on how to program human behavior, and the answer is to identify a large, existing tribe, enable it, such as increasing the value of their individual votes, find an elder who will represent the tribe, and force that elder to propagate tribal lore that leads to people deciding to act as you wish.

It’s clear that living beings are information machines whereby body cells process the informational tasks of life. It is also the case, we believe, that tribes are information machines as well. Tribes as information species was discussed in an earlier posting in this blog (“TRIBES AS INFORMATION SPECIES”).

In the last posting, it was suggested how to program human behavior at a group level, using tribes as the mechanism. Here, we will discuss how to hack into the information processes of tribes to force them to change and to act in a new way.
I’m currently reading “The Truth Machine” by Casey & Vigna (St. Martin’s Press, 2018). They describe blockchains, such as the one behind Bitcoin, as mechanisms to record truth, what they call “ledgers”. Blockchains require communities of “miners” who, for a small reward, compete using computers to solve difficult math puzzles associated with new blocks. Winning solutions allow a block to be added to the blockchain, which is considered unbreakable because it is both strongly encrypted and copied many times across each of the distributed miners.

It is just a small leap to consider the blockchain as a metaphor for tribal knowledge, except that tribal lore is not encrypted in the typical way, but rather through an often dense symbology. This means that, in order to hack the knowledge, or what is true for a tribe, one has to win at solving the “puzzle” presented to the tribe that is associated with a block. So, what is the corollary to a blockchain block and the puzzle in a tribe, who solves them, and how are they “solved”?

Recall from earlier discussion that tribal knowledge is what members use to make sense of the world and to decide how to act WITHOUT having to work out the rational decision-making process for themselves. Also, a function of tribal lore is the focus of attention on what matters to a tribe so that relevant behavior can occur (also a topic of an earlier posting in this blog, THE ROLE OF TRIBES IN FOCUS OF ATTENTION). So, to add to tribal knowledge, one has to both provide a focus of attention, which can be new, and a way to act, given this focus. This block of new knowledge will be accepted by the tribe if a tribal “miner” successfully solves the required hard problem.

In the past, tribal “miners” were elders in the same tribe. Solving the “puzzle” was providing a symbol or ritual that fit with the existing symbol system but expanded it to apply to the new focus of attention. In this way, a shortcut mnemonic was created and tied to existing lore in a way that enabled the new block of lore to be remembered and passed on. Remember that these were oral tradition, pre-literate tribes.

In the modern world, tribal miners are still popular “elders” and sources of tribal lore, but have evolved into all different types of media to which the tribes have access. Therefore, in order to add to, or hack, tribal lore, a popular elder has to create a new focus of attention, such as immigrants, and solve the “puzzle” of how this fits with existing symbol system or ritual of the tribe, such as hyper-nationalism.

Successful modern tribal hackers are able to add to a tribe’s lore (I hesitate to call it knowledge anymore, just what a tribe considers “true”) by both promoting a specific focus of attention AND a “solution” that ties it into existing tribal lore through its existing symbology or ritual behavior.