

Irregular Passions: Some Comments on the Nature and Origins of Contemporary Populism

Professor Michael Tracey
Department of Media Studies
College of Media, Communication and Information
University of Colorado at Boulder
Colorado, 1511 University Avenue, Boulder, CO 80309, USA

Abstract

This essay notes that in understanding what Hannah Arendt called “the human condition” there is a tendency to draw upon literatures from the humanities, in particular social and cultural theory. This is perfectly proper and necessary. However, the essay goes on to suggest that it is increasingly apparent that these literatures may no longer be sufficient. The roots of this conclusion lie in the emerging findings that place aspects of who we are individually and collectively in the brain, as increasingly revealed by the findings of neuroscience. The essay explores the argument that broadly humanistic literatures need to be supplemented by findings out of brain science by looking at a case study of how the latter may enhance our understanding of contemporary populist political and social movements that have become such a hallmark of life in these early years of the twenty first century.

Keywords: Populism, brain science, anxiety, fear, tribal

1. A Prologue

A basic proposition that lies behind this essay is that in thinking about society and our lives within it we tend to employ literatures that are drawn from cultural and social theory, history, psychology, philosophy, and that this, while perfectly proper, is dogged by the fact that they do not always tell the whole story. There is an ever rising tide of findings from neuroscience with all of their implications for our understanding of who we are individually and collectively. In the introduction to his book, “Tales From Both Sides Of The Brain,” the neuroscientist Michael Gazzaniga refers to the “...over riding question: How on earth does the brain enable mind?” (Gazzaniga, 2015). Here is the classic Cartesian dualism of the materiality of the body and the (presumed) immateriality of the mind, and the assumption that it is the latter that informs our sense of being, our consciousness and our subjectivity, and therefore explains us as individuals and as a collective. One of the odder aspects of modernity is that while we do have a sense of ourselves as social beings living collectively – hence the rise of social science, social psychology and social theory – we nevertheless remain attached to the idea of our individuality, that somehow we are not fashioned by history and circumstance. And now we have the added dimension that whether we wish it or not the fact is that the discoveries of neuroscience are raising, to say the least, profound questions as to the nature of our being, that “overriding” question. Perhaps the greatest issue is one that has actually been unfolding for a very long time, the question of free will, the volitional mind and determinism. Put a touch more pithily, is there an “I,” a “me,” a “self,” that is somehow separate from biology?

For some there is here something that is dangerously close to what has been termed “neuroreductionism.” In her Presidential address at the Spring 1999 meeting of the American Ethnographic Society the ethnographer Emily Martin said: “I see the neuroreductive cognitive sciences as the most dangerous kind of vortex – one close by and one whose power has the potential to suck in disciplines like anthropology, severely weakening them in the process” (Martin, 2000). Suzanne Corkin, professor of behavioral neuroscience and head of the Corkin Lab at MIT, has a very different viewpoint. She is best known for having spent several decades studying Henry Molaison, who in 1953, following brain surgery to try and deal with his debilitating epilepsy, was left with no ability to store or retrieve experiences, and suffered from a total inability to remember and so lived in what Corkin calls the “permanent present.” In her thinking, however, Corkin rejects any idea of dualism, a mind-body split. In an interview with Tim Adams of *The Observer* on the occasion of the publication of her book “Permanent Present Tense” in 2013 she has no truck with esoteric ideas of mind. ‘The mind is the brain in my view.

Your mind is not in your big toe. The brain is a very physical structure, it is like your arm, but it has grey matter and white matter and a huge number of cells we are just beginning to understand called glia. All your mind is contained in there” (Adams, 2013).

In an essay, “The Problem of Consciousness”, in a special edition of the Scientific American called “The Hidden Mind,” the Nobel laureate Francis Crick and his protégé Christof Koch, also argued, a la Gazzaniga, that the dominant question in neurobiology is that of the relation between the mind and the brain. They argue that the mind is not some immaterial entity, separate from but interacting with the biology of the brain, what theology might regard as the soul. Rather, they suggest, most neuroscientists now believe that all aspects of mind are likely to be explainable in a more materialistic way as the behavior of interacting neurons. They note that until recently most cognitive scientists did not address the question of consciousness, partly because the behaviorist dominance of the social sciences made it in effect a “taboo” subject, but also because the problem was felt to be either purely ‘philosophical’ or too elusive to study experimentally, and an area of study unlikely to receive grant support (Koch and Crick, 2002). The question is, what are the humanistic implications of reducing “everything” to a neurobiological process to the point that the very concept of “mind” is vacated. That this is a concern that is ever more resonant is suggested in a recent, 2011, book by Gazzaniga, “ Who’s in Charge? Free Will and the Science of the Brain.” In a very human sense it does not rest easily to imagine that some of the more sublime aspects of being human – loving, feeling, being moved to tears by the beautiful and the sad and the horrific, believing in rights, having a sense of “me” and “you” are “no more” than, basically, biology.

The fact is, however, that while these remain monumentally difficult questions, they do remain questions. It is equally the case that the more one sees the emergent findings of neuroscience the more it becomes clear that in explaining the dispositions and behaviors of the individual and the society the more one needs to start to integrate those findings into more traditional social and humanistic characterizations, where in a sense historically the brain as biology is not allowed for. This is a position that will become increasingly untenable.

The focus of this, admittedly exploratory, essay is a suggestion that we need to think about the neurological, as well as the social, origins of populist movements and moral panics, especially if we regard these as being the expression of fear and anxiety – emotions, to paraphrase Suzanne Corkin, which do not reside in the big toe.

2. Comments on Populism

It is quite self-evident that the phenomenon of contemporary conservative, even reactionary, populism has become an important part of the life of these early years of the 21st century. In the first instance it is important to note that the problem of dealing with social movements, particularly those that are energized and radicalized, is that it is far from easy to gauge their “meaning” from their actions. What they are about, what they are an expression of, is not self-evident, even, indeed especially, to those who are part of the movement. The task then is to get beneath the surface and to explore the underlying dynamics.

With regard to conservative political movements in the United States (though one could also look in many different countries) the question as to their origins and character can be answered in various ways, the most prominent of which is to suggest that political pathologies incubate within social experience. A very basic premise here will be that when one looks at populist, conservative social movements – at Tea Party rallies post-2010, the 2016 support for Trump, the Brexit vote in the UK for example, movements throughout Europe – what one is seeing is emotion, anxiety and fear. The corollary observation, therefore, is that within those political pathologies lie cognitive pathologies, because in the end anxiety and fear are not some kind of metaphysical mood, they are brain chemistry. In a lengthy essay on the biology of fear and anxiety, the clinical pharmacologist Thierry Steiner notes that historically emotions such as anxiety and fear were studied mainly from a philosophical perspective, presumably because they were deemed to be part of “mind,” and therefore in effect immaterial. In recent times, he notes, “(E)volutionary theories and progress in brain and behavioral research, physiology, and psychology have progressively introduced the study of emotion into the field of biology, and understanding the mechanisms, functions, and evolutionary significance of emotional processes is becoming a major goal of modern neuroscience...” (Steiner, 2000). In short, we are hard wired to be fearful and anxious. That fear and anxiety are a function of biology and environment (for example, the negative impacts of a lack of nurturing in the early years of life) is settled science [Gerhardt, 2004]. In an extensive review of the relevant literature Michael Davis points to the evidence that the amygdala, an almond shaped organ in the brain, plays a crucial role in the development of conditioned fear and anxiety (Davis, 1993).

However, it is a biology that can present (a term used in its medical sense) as social movements. In an essay on what he calls “anxiety theory” Alan Hunt points to how various authors have argued that anxiety provides the basis for fascism, moral panics, symbolic politics driven by status anxiety, resentment and moral indignation [Hunt, 1999].

Writing in the Handbook of Emotions, Arne Ohman notes: “In a clinical context, the vicissitudes of fear and anxiety have been understood as keys to the dynamics of psychopathology...fear and anxiety are closely related emotional phenomena originating in evolved mammalian defense systems...” (Ohmans, 2008). Quoting a 1972 essay by Stephen Epstein Ohman adds that: “ ‘Anxiety can be defined as unresolved fear or, alternatively as a state of undirected arousal following the perception of threat’... Basically fear is a functional emotion with a deep evolutionary origin, reflecting the fact that earth has always been a hazardous environment to inhabit...” (Ohmans, 2008). In short, he is also arguing that we are hard wired to be fearful and anxious. He cites research that identifies four factors inducing fear: agoraphobic fears; fear of animals; fears related to death, injury, illness, blood and surgical procedures. The fourth factor is the one that is perhaps most pertinent here. This is fears about interpersonal events or situations including “fears of criticism and social interaction, rejection, conflicts, and evaluation...” (Ohman, 2008). It would seem to be reasonable to suggest that one of the defining characteristics of that part of the population that, for example, became fervent supporters of Trump or backed the Brexit movement or supported conservative, even neo-fascist, parties in Europe was a feeling of being ostracized by the “elites” and rejected as being unworthy, looked down upon, not important, a feeling of abandonment, economic insecurity, unease in a world that is changing – demographically, globally, sexually - a fear of the “other,” a yearning to return to an imagined time before. It is an aggregation of experiences and perceptions that taken together nurtures troubled hearts and fearful moods. The result is a kind of alienation, an existential crisis in which “I” am fearful and anxious about “my” very identity. In many ways, if for example one looks at economic data, these feelings were, and are, not without merit. So what we were seeing was the way in which externalities that defined large numbers of people brought forth pathologies that are *innate*. These groups also appear very, very angry. Anger, Lemerise and Dodge have noted, “serves a variety of adaptive functions. Anger organizes and regulates physiological and psychological processes related to self-defense and mastery and regulates social and interpersonal behaviors. From a functionalist perspective on emotion, when there is an obstacle to goal attainment, anger’s function is to overcome obstacles in order to achieve goals. Despite its adaptive significance, anger poses difficulties for social organisms in that it repels others, incurring long term costs...” (Lemerise and Dodge, 2008). In other words, anger is an almost inevitable consequence of a situation in which the desire to achieve a certain goal - a better job, a sense of identity, respect, not being frightened and anxious – is blocked.

The neuroscientist and Nobel laureate Eric Kandel offered his own view on how to think about angry crowds and the origins of reactionary populism, born out of bitter personal experience, in his memoir “In Search of Memory” (it’s also a scientific treatise on the neuroscience of memory.) He and his family were forced to flee Vienna in 1939 after the Nazis took it over. He points to how there was massive support for Hitler among the Austrian population. He writes: "...the spectacle of Vienna under the Nazis also presented me for the first time with the darker, sadistic side of human behavior. How is one to understand the sudden, vicious brutality of so many people? How could a highly educated society so quickly embrace punitive policies and actions rooted in contempt for an entire people (he's referring to Austrian Jews)? Such questions are difficult to answer. Many scholars have struggled to come up with partial and inconsistent explanations. One conclusion, which is troubling to my sensibilities, is that the quality of a society's culture is not a reliable indicator of its respect for human life. Culture is simply incapable of enlightening people's biases and modifying their thinking. The desire to destroy people outside the group to which one belongs may be an *innate* response and may thus be capable of being aroused in almost any cohesive group..." (Kandel, 2006 – emphasis added). Kandel later addresses this issue from the standpoint of evolutionary theory, in the context of a discussion of the innateness of fear: "...every animal with a well-developed central nervous system – from snails to mice to monkeys to people – can become afraid, or anxious..." (Kandel, 2006). He argues that the key biological fact that Darwin appreciated is that anxiety – fear itself – is a universal, instinctive response to a threat to one’s body or social status and is therefore critical for survival. He distinguishes between instinctive anxiety (instinctive or innate fear), which is built into the organism and learned anxiety (learned fear), “to which an organism may be genetically predisposed but which is basically acquired through experience. As we have seen, instinctive anxiety can easily become associated through learning with a neutral stimulus.

Since any capability that enhances survival tends to be conserved through evolution, both instinctive and learned fear are conserved throughout the animal kingdom... Both forms of fear can be deranged. Instinctive anxiety is pathological when it is excessive and persistent enough to paralyze action. Learned anxiety is pathological when it is provoked by events that present no real threat, as when a neutral stimulus comes to be associated in the brain with instinctive anxiety..." (Kandel, 2006). He points out that anxiety states are the most common mental illnesses and affect 10 to 30% of the general population.

The claim here is that there is an innate human disposition to be fearful and anxious, conditions that can be triggered by externalities such that those pathologically driven mobs in Vienna or the loud and angry Trump rallies are in essence a kind of collective biology. The claim by Kandel, and shared here, is also that we deceive ourselves if we believe that in the end culture can produce civilization and the civilized Being that will neutralize baser, more cruel and brutal instincts, that we are in a constant danger of being possessed by barbarism. In "The Interpretation of Dreams" Freud made much the same point when he argued that civilization is impossible unless the passions that roil within us are repressed and sublimated. Kandel seems to be arguing, somewhat bleakly that, in the end, given toxic circumstance the culture of civilization will not be up to the task of sublimation

The psychologist David Ropelk, writing in a Psychology Today blog, quoted the broadcaster Tom Brokaw who, observing the support for Trump, commented that "paranoia is overriding reason." Ropelk's basic question is why, whenever we are afraid, "does fear so readily trump (sorry) reason?" He notes correctly, that there is now a widespread understanding that most of the time we are not consciously aware of how our brains produce "our perceptions and behaviors," that the process is "subconscious and instinctive. Much of our 'thinking' happens outside the realm of conscious reason, and beyond its control..." (Ropelk, 2015). Citing the work of Joseph LeDoux, a leading figure in the neuroscience of fear, he notes that we know from neuroscience that our brain is wired to favor instinct and emotion over reason, an argument that very much echoes another leading neuroscientist, Antonio Damasio, who said that "we are not thinking beings who feel, but feeling beings who think."

Ropelk's main concern is to understand why we have a disposition to demonize whole groups – the context was Trump's call for a total Muslim ban and the fact that this was supported by two-thirds of likely Republican primary supporters, and one might add that hostility to immigrants has been a key part of the rise of conservative movements throughout Europe and was a major factor in Brexit when the UK voted in 2016 to leave the European Union. He suggests that we know from social psychology that when we are worried – fear and anxiety again - "we tend to band together into groups...tribes if you like. After all, as social animals, humans have evolved to rely on our tribes for our own safety and survival. When we face a threat we can't protect ourselves from as individuals, we metaphorically circle the wagons, and anyone inside our circles – those who share our race, or gender or nationality or socio-economic class or religion or general beliefs and values – is friend, and anyone outside those circles is foe...This instinctive subconscious cultural cognition powerfully overwhelms cool calm objective reason." Rather bleakly he states that we cannot undo these instincts and that reason being overwhelmed by fear is a basic characteristic of human nature.

The Harvard psychologist Joshua Greene, in his 2013 book "Moral Tribes: Emotion, Reason, and the Gap Between Us and Them," makes a similar point. He argues that the "moral brain" evolved in a way that nurtured cooperation *within*, not between, groups, providing difference and thus a location for conflict whether that be racial, religious or national (Greene, 2013).

What these authors are arguing is that, as with fear and anxiety, we are hardwired to organize ourselves into tribes, with all the potential for hatred and conflict with other tribes. If this is correct then social movements might be said to be the symbolic and visible representation of an underlying biology, what Eliot called "the dark embryo" within which the Furies are growing.

We now also have some sense of the biological mechanics of this process, specifically in the actions of what are known as "mirror neurons." These are neurons that not only perform when we undertake an act, but also "fire" when we see someone else undertaking an act – the area of the brain involved in this is the ventral premotor cortex. In October 2012, research published in the journal PLOS ONE, and undertaken by Lisa Aziz-Zadeh, a cognitive neuroscientist at the University of Southern California, and her colleagues, looked at the role of mirror neurons in how we see "others." A summary of the findings, which were based on experimental research, states: "Because mirror neuron activity is thought to be a very basic part of brain function...the new finding supports the notion that our brain is predisposed to distinguish between 'us versus them.' The distinction can be beneficial.

Encouraging caution around those with harmful intentions, or dangerous, further entrenching prejudices...” (Yuhas, 2013). The implications of this are quite extraordinary. One of the great quests in neuroscience is to identify what Francis Crick and Christof Koch called the neuronal correlates of consciousness, that is within what neural structures and brain physiology does consciousness reside. What Aziz-Zadeh and her colleagues appear to be identifying are the neuronal correlates of racial, ethnic, social and national conflict. A very basic point that needs to be made here, however, is that we do not *control* the action of motor neurons, they are beyond our conscious control which is perhaps the most disturbing thought of all.

In light of these findings there is an argument to be made that what we are starting to see is the providing of a scientific underpinning to a concept about the origins of populist social movements that originated in the 19th century, the concept of “ressentiment,” one which is most closely associated with the social philosopher Max Scheler. Elemental to Scheler’s argument, and of the utmost importance here, is that oppressed social classes – or perhaps, better, social classes that feel themselves to be oppressed – are an especially fertile ground from which resentments can burst forth.

The concept of resentment originated with Nietzsche who portrayed it in his seminal work “On the Genealogy of Morals” as: “The remembrance of an injury and the desire to avenge same.” He continues: “ ...every sufferer instinctively seeks a cause for his suffering: more exactly, an agent, still more specifically a guilty agent who is susceptible to suffering - in short, some living thing upon which he can, on some pretext or other, vent his affects, actually or in effigy: for the venting of his affects represents the greatest on the part of the suffering to win relief, anesthesia – the narcotic he cannot help desiring to deaden pain of any kind. This alone, I surmise, constitutes the actual physiological cause of resentment, vengefulness, and the like: a desire to deaden pain by means of affects...” (in: Sugarman, 1980).

Instead of offering a definition Scheler posited a series of characterizations. He saw “Ressentiment” as a “self-poisoning of the mind,” a “lasting mental attitude,” caused by the “systematic repression of certain emotions and affects,” leading to value delusions and corresponding value judgments, including revenge, hatred, malice, envy, the impulse to detract and spite (Scheler, 1961).

In an introduction to Scheler’s work the sociologist Lewis Coser notes: “An understanding of modern mass movements, whether of the fascist, the nativist or the Stalinist variety, as well as systematic research into many forms of ‘middle class indignation’” – a reference here to, among other works, Svend Ranulf’s book “Moral Indignation and Middle Class Psychology” – “profit immensely from systematic use of the concept of resentment. But Scheler has done more: he has located the resentment-laden type structurally i.e. he has shown that particular places in the social structure are peculiarly apt to produce resentment...” (Coser, 1961). Coser adds a comment that seems especially significant given the rise to power and prominence of populist figures in a number of countries: “Ressentiment is the result of a feeling of social identity. Social identity, the ‘social Me,’ is achieved through identification with particular role-models or significant others...Empirical research has shown that adherents of fascist movements and proto-fascist movements are likely to come in disproportionate numbers from just those petty-bourgeois, lower-middle-class strata which Scheler singled out as especially vulnerable to resentment. These are indeed the strata where resentment against a modern order which frustrates their aspirations is the result of feelings of impotence and bewilderment...It is this resentful type whose impotent rage is utilized by the demagogues who create nativist, fascist, and Stalinist mass movements...” (Coser, 1961).

One final vital question that needs to be addressed because it is already a key aspect of the narrative around conservative populism: just how recrudescence is it, and does it have within it the seeds of a new authoritarianism, even fascism? Part of this, in the first instance, is to do with demographics, that on first blush it appears to be a predominantly white, working and lower middle class movement, though some polling shows not inconsiderable support from higher income groups, which inevitably stirs up memories of the disasters of the 20th century in Europe. It is well known that National Socialism in 1930s Germany was essentially a movement of the lower middle class. They were not the only element but they were, according to those who studied its origins, for example by looking at electoral returns from 1930 and 1932, the dominant force. Here is what one leading authority on the NSDAP, Professor Frederick Schuman wrote – not after the event but precisely at the time that the Nazis matured into the dominant political force in Germany – in his book “The Nazi Dictatorship.”

He acknowledges the role of other groups in the rise of the Nazis, what he calls “the maladjustment of other classes...the resentment of pious, thrifty and debt-ridden peasants at urban creditors, bankers, atheists and liberals; the disillusionment of proletarians with Marxist leaders whose promises of revolution, socialization and salvation came to nothing; the disgust of bankrupt Junkers at the State in which aristocrats and soldiers were at the mercy of democratic politicians; the feelings of racial and economic insecurity among the upper bourgeoisie. But fundamentally the disorder was a disease of the Kleinburgertum. The group suffered from acute paranoia, with all its typical delusions of persecution and systematic hallucinations of grandeur. In Hitler it found at last an articulated voice. In the weltanschauung of the NSDAP it found solace for all its woes, forgiveness for all its hatreds, scapegoats for all its misfortunes, and a millennial vision for all its hopes...” (Schumann, 1935).

The issue of what might be called troubled crowds was anticipated by the Founders. In the Federalist Papers Number 63 James Madison commented: “ As the cool and deliberate sense of the community ought, in all governments, and actually will, in all free governments, ultimately prevail over the views of its rulers; so there are particular moments in public affairs, when the people stimulated by some irregular passions, or some illicit advantage, or misled by the artful misrepresentations of interested men, may call for measures which they themselves will afterwards be the most ready to lament and condemn.”

Whatever the noisiness of the contemporary mood it is clear that in the years that saw the rise of fascism in Weimar leading to the triumph of the Nazis in 1932 and 1933, there was never the institutional sturdiness of the political institutions of the US and elsewhere— despite the fact that at the time of writing there is a deep and pervasive lack of faith and trust, by enormous numbers of the public, in American political institutions – a phenomenon which is, one might point out, global as publics everywhere seem to be losing faith with political institutions and governing parties. However, even allowing for this but noting that objective economic, and therefore social conditions, are not those of Weimar and thus of the social origins of fascism, there is one troubling question: what if the economic crash of 2008 happened again, what if it was deeper and more damaging, what if the banking system collapsed and the ATM’s really did stop issuing money, and masses of people were losing their jobs , with families going hungry? Would those “irregular passions,” which as has been argued here are a function of how we are socially *and* neurologically constituted, of which we have perhaps been seeing glimpses, become a monstrous and destructive force across the landscape of America. These are the kinds of questions which one hopes are never answered, even if that doesn’t mean that they are not worth pondering.

An Epilogue

There are two somewhat different concluding points. The core argument of this essay has been that in trying to understand what Hannah Arendt called “the human condition,” which one takes to be the fundamental project of humanistic and social theoretical studies, we need to add a new paradigm drawn from brain science. It is not a replacement, rather a necessary addition. On reflection it feels curious that this is not more widely recognized, though it is clear that more and more disciplines – neuroanthropology, neuroaesthetics, neurophilosophy and so on - are coming to accept the need to borrow from brain science. It is almost commonsensical to understand that we are “hard wired” in all kinds of ways. We know that we are hard wired to love our dogs, for example (Bradshaw, 2017). We know that we are hard wired to be moved by music – not as a conscious decision but as a natural response (Loveday, 2016). We know from multiple studies that trauma – physical, sexual, emotional – becomes “baked in” to our brain chemistry. We know that addictions – drugs, gambling for example - have a powerful neurological dimension. It would seem reasonably plausible then to suggest that political passions are not just social constructions, but a complex coming together of social externalities and neurology. It seems equally plausible to argue that the deeper our understanding of the brain becomes, the more we will need to recognize and accept this.

The second point is a more social theoretical comment, in particular borrowing from Marx. This is that reactionary populist movements have about them the air of a certain derangement, irrationality and sets of beliefs that often feel utterly disconnected from reality. This is the point that Kandel was making. Fascist crowds held pathologically to the idea that all their woes were the work of certain “other” populations, most notably Jews. In the United States conservative populists held pathologically to the notion that Obama was an African who somehow managed to finagle his way into the White House, that Trump can “make America great again,” that Islam is an existential threat to Western culture and democracy and so on. The fact is, however, that even absurdities can “feel” real, expressing a kind of illusion and distress.

When he was writing about religion, which he famously called “the opium of the masses,” Marx nevertheless argued that religious “distress is at the same time the expression of real distress and also the protest against real distress.” What he was arguing was that religious faith represents a real need in a distorted social world. He continues: “...The demand to give up illusions about the existing state of affairs is the demand to give up a state of affairs which needs illusions” (Marx,1975). The point is then that whatever the illusory narratives around reactionary populist social movements may be, they will not change until “the state of affairs” that created them changes. If that happens then one might argue that our instinctive, innate feelings of anxiety, fear, anger and tribalism will, presumably be assuaged. Whether this does happen is something that only history will reveal.

References

- Adams, T., (2013) *The Observer*. 4 May.
- Bradshaw, J., (2017). *The Animals Among Us: The New Science of Anthrozoology*. London: Allen Lane.
- Coser, L., (1961). Introduction, Scheler, 1961. p.24
- Coser, L., (1961). *Ibid*. p.30-31
- Davis, M., (1992). “The Role of the Amygdala in Fear and Anxiety.” *Annual Review of Neuroscience* 15.
- Gazzaniga, M., (2015). *Tales From Both sides of the Brain: A Life in Neuroscience*. New York: Harper Collins. p.xvi
- Gerhardt, S., (2004). *Why Love Matters: How Affection Shapes a Baby’s Brain*.
- Greene, J., (2013). *Moral Tribes: Emotion, Reason and the Gap Between Us and Them.* New York: Penguin.
- Hunt, A., (1999). “Anxiety and social Explanation: Some Anxieties About Anxiety.” *Journal of Social History*. Spring.
- Kandel, E., (2006). *In Search of Memory: The Emergence of a New Science of Mind*. New York: Norton. p.29-30
- Kandel, E., (2006). *ibid*. p.339
- Kandel., (2006). *ibid*. p.339-340
- Koch, C., and Crick, F., (2002). “The Problem of Consciousness.” *Scientific American*. April, 2002.
- Lemerise, E.A., and Dodge, K.A., (2008). “The Development of Anger and Hostile Interactions.” *Handbook of Emotion* 3rd edition, eds., Michael Lewis, Jonathan M. Haviland-Jones and Lisa Feldman Barrett (2008): New York: The Guildford Press. p.730
- Loveday, C., (2016). *The Secret World of the Brain*. London: Andre Deutsch.
- Martin, E., (2000) “Mind-Body Problems.” *American Ethnologist* 27(3). P.574
- Marx, K., (1975). *Collected Works, III*. London: Lawrence and Wishart. P. New York: Brunner-Routledge.
- Ohman, A., (2008). “Fear and Anxiety: Overlaps and Dissociations.” *Handbook of Emotion* 3rd edition., (2008). eds., Michael Lewis, Jonathan M, Haviland-Jones and Lisa Feldman Barrett. New York: The Guildford Press. p709
- Ohman, (2008). *Ibid*. p.710
- Ohman, (2008). *Ibid*. p.711
- Ropelk, D., (2015). “How Fear Makes Us Bigots and Raises Our Risk.” *Psychology Today Blog*. December 15.
- Scheler, M., (1961). *Ressentiment*. New York: Free Press of Glencoe. p. 45-46
- Schuman, F., (1935) *The Nazi Dictatorship*. New York: Knopf. p.111
- Steiner, T., ((2000). “The Biology of Fear – and Anxiety-related Behaviors.” *Dialogues in Clinical Neuroscience* 4(3).p.232
- Sugarman, R.I., (1980). *Rancor Against Time: The Phenomenology of ‘Ressentiment.’* Hamburg: Felix MeinerVerlag.p.xi
- Yuhas, D., (2013). “Mental Mirrors Reflect Hatred.” *Scientific American Mind*, Vol24, Issue 1. March/April.