

Necrosymbiosis

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Abstract: *Necrosymbiosis is the phenomenon which occurs when a symbiotic relationship decays through all of its various stages to the point where one group within the relationship, or in extremely hostile case both groups, are willing to destroy itself or themselves to prevent the other group in the relationship from prevailing or existing. To properly look at necrosymbiosis we must first look at the symbiotic relationship in general and the mutual dependence which this creates among its parties. Further, we must also examine the phenomenon of anti-symbiotic relationships, the case where the two parties to a relationship dislike one another or disdain one another but regardless are still dependent on the other. Necrosymbiotism is dangerous and this article argues that some of the most famous conflicts in modern history, the Cold War and the Israeli-Palestine conflict are based off of a necrosymbiotic model.*

1. Introduction

Do you remember those grainy old news images where the monk from Tibet walks out into the middle of a town square, pours gasoline over himself and his cloths and then lights himself on fire, sits down and waits for death to come? If you do this is the essence of necrosymbiosis, when one party will destroy him or herself to make sure that damage is done to the other party. The conflict in the monk case is the struggle of Tibet to gain independence from the government of China. The monk's death did bring a lot of attention to his cause and monetary support from the international community; however, if that monk were alive today teaching others peaceful resistance, would the Tibetan struggle be going any different? Since he destroyed himself, we will never know.

Necrosymbiosis is a derivative of the symbiotic family of relationship styles which exists due to a degradation of the relationship structure to the point where the destruction of one's opponents is more important than one's own victory in the struggle. It is a truly negative conflict style, one that is highly dangerous as it is prone to draw others into the

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downward spiral of the struggle. The symbiotic relationship, the relationships style from which necrosymbiosis gets its name, is developed from the meaning of mutual dependence. The *American Heritage Dictionary* defines symbiosis as “A relationship of mutual benefit or dependence.” This mutual dependence is the foundation for the interdependence which makes up the symbiotic family of relationships in conflict, symbiosis, anti-symbiosis, and necrosymbiosis. Necrotic, the root of the prefix necro, means “to make dead, from nekros, corpse.” (American Heritage Dictionary, 2009) When combined, which is the meaning of necrosymbiosis in this paper, the term means a mutual dependence which causes the death of a conflict relationship. As with anything which necrotizes, necrosymbiosis is dangerous to the area surrounding the problem as much as it is dangerous to the problem itself. (American Heritage Dictionary, 2009)

The theory, around which this paper is wrapped, is that necrosymbiosis is an entity outside the normal entities which are normally analyzed in conflict analysis. While symbiosis can be seen as receiving some analysis from the psychology community, the members of the symbiosis family, anti-symbiosis and necrosymbiosis are often simply ‘lumped’ in with their symbiosis genesis. This provides a theoretical landscape which does not fully analyze the intricacies of necrosymbiosis because the factors which divide it from its roots in symbiosis are not fully examined or sometimes even ignored. Professionally, the development of the symbiotic relationships family is important to conflict resolution professionals because there are differing styles of analysis which should be used even between a necrotizing anti-symbiotic relationship and a necrosymbiotic relationship. These caveats are likely left unexplored under the normative regime because their distinguishing factors have not yet been explored!

This paper will approach this problem from a critical standpoint. Part I will examine the symbiotic relationship structure and look at several published pieces from the psychological and social sciences fields. Part I will also look at several symbiotic relationships and apply them to the presented elements. Part II will then expand the discussion

of the symbiotic family to include anti-symbiosis, sometime called negative symbiosis. After looking at the negative relationship which creates mutual gain's elements, Part II will discuss the abortion debate in the light of an anti-symbiotic relationship. Part III will introduce the elements of necrosymbiosis, discuss its relevance, and then discuss two cases where necrosymbiosis is visible in modern society. Through these three analytical steps, it is the goal of this paper to show why necrosymbiosis needs more research and needs to be an applicable area of study in the conflict analysis field.

Part I: Normative Social Symbiosis

Symbiotic relationships are natural occurrences. Family groups, herds and schools of fish are all examples of individual members accepting, whether through instinct or agreement, that they are better off working together for their own individual survival, along with that of the group. Humans have adapted the symbiotic model for their own survival whether consciously, as through trade agreement, or subconsciously, through the development of natural law. In fact, so central to our species is the symbiotic imperative that our societies are large scale symbiotic relationships acting in matrix with one another. The Random House Dictionary defines symbiosis as, "any interdependent or mutually beneficial relationship between two persons, groups, etc." and more specific to social analysis, "a relationship between two people in which each person is dependent upon and receives reinforcement, whether beneficial or detrimental, from the other." (Random House, 2009) Whereas the initial definition fits that analysis later in this part, the second definition points out where common usage of the symbiotic idea has become so broad that the concept of anti-symbiosis or negative symbiosis is synonymous with symbiosis.

The most basic forms of symbiosis are not limited to the human realm. As noted above, symbiosis is a natural occurrence. Perhaps the most famous example of a symbiotic relationship is the relationship between the remora and the

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shark. The remora which is a 'cleaner fish' attaches itself to a shark and eats the parasites from the shark's skin. In return for this service, the shark keeps predators away from the remora. While not symbiosis from agreement, such as occurs in human society, this is symbiosis from necessity. The remora is naturally defenseless in the wild without the shark to keep predators away and the shark runs a risk of infection from parasites if the remora is not there to clean the shark. Another natural example of symbiosis occurring naturally can be seen in Mazmanian, Round & Kasper's 2008 study on the effects of microbes in the digestive tract. The study states that the existence of certain microbes in the digestive tract can aid in the digestion of food along and assist the body's natural defense systems in the prevention of disease. (Mazmanian, Round & Kasper, 2008) Further, the reason this study is relevant to this matter of necrosymbiosis is the fact that Mazmanian, Round & Kasper argue that the microbes which are in the symbiotic relationship with human can be manipulated to regulate problems that are already occurring in the digestive tract, hence even natural symbiosis can be altered for mutual benefit. (Mazmanian, Round & Kasper, 2008)

Symbiotic relationships between two individual humans is often predicated on the manner in which the relationship was build. In a 2009 study, Fallace states that paternal influence often triggers a symbiotic relationship in those that they are controlling. (Fallace, 2009) This analogue translates as far as the complex matrixes of societal relations as the Fallace study showed this interrelation at the group level. Another study which supports the symbiotic relationships developed by those under the same parental guidance can be seen in a study by Lijtmaer who noted that in sisters there was a symbiotic reliance on one another. (Lijtmaer, 2009) These symbiotic relationships are reinforced by group mores which focus on interdependence in society.

At the societal level, government administers the symbiotic relationship between people at the macro-level while individual people are responsible for our interactions at the micro and personal level. Currently we are seeing the

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result of a macro-level failure in the symbiotic relationship of the United States, namely the economic crisis. Gershuny argued in a 2000 study that to maintain a positive symbiotic relationship within an economically reliant society that there needed to be an ever increasing number of high skill/high reward positions opening up to society. (Gershuny, 2000) Ravenscroft and Gilchrist elaborated on this in their 2009 paper stating that in a positive symbiotic relationship there is a strong correlation between production and consumption; whereas in a negative symbiotic relationship the relation shifts toward welfare and consumption. (Ravenscroft and Gilchrist, 2009) Another example of government involvement in symbiotic societal relationship can be seen in the health care field. Arguments are currently being forwarded by scholars such as Balog that compulsory vaccination schedules for children should be expanded to include new developing diseases, in the case of Balog's specific study the Human Papilloma Virus (HPV). (Balog, 2009) This study seems to support the idea of a symbiotic relationship in society, based on the idea that individual responsibility should be born by the society as a whole, a viewpoint discussed and challenged by Twenge and Campbell. (Twenge and Campbell, 2009) In relation to the symbiotic relationships within society it is the government's job to ensure economic, medical, and national security for its people.

When this breaks down, people begin to make new bonds. When society becomes dangerous, people will chose to make bonds which allow them the protection which they need. When society puts one's wealth in danger, the people will make relationships which protect their investment. These deficiencies in government can make micro-level symbiotic relationships which benefit the people involved in the relationship but are to the overall detriment of the society at large. For instance, Justino's 2009 study on armed conflict groups stated that in several cases armed groups created a symbiotic relationship with the families in the area in which they were operating. (Justino, 2009) The farmers in the area would provide support for the armed groups initiatives and strategic plans while the armed group

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would provide protection for the people against violence and against theft. (Justino, 2009) Whereas this relationship benefited both the farmers and the armed group, it was operating at the detriment of the national society. (Justino, 2009) The genesis of this conflict, interestingly enough, was the failure of the government to meet the needs of the people.

Further, even when the societal bonds are being respected, people can find ways to create new relationships outside the perceived realm of societal control. In a 2009 study, Karatzoggianni & Michaelides discussed the creation of cryptohierarchies and their effect on cyber-relations at the commerce level. (Karatsoggianni & Michaelides, 2009) However a simpler analysis of cyber-relationships can be seen in Twenge and Campbell's book, *The Narcissisms Epidemic*, in which they state that the availability of social networking sites, along with the ease of using UTube, is creating a society of itself based around self promotion. (Twenge and Campbell, 2009) This is a symbiotism which is counter-productive to the normative societal bonds.

These scenario analyses provide for a clear view of what makes up a symbiotic relationship. These elements are:

- 1.) Mutual benefit drawn by each party based on their interrelationship
- 2.) Mutual dependence on one another by the parties to the symbiosis based on the need or perceived need for the benefit derived
- 3.) A knowledge or acceptance of their interdependencies
- 4.) Positive or neutral acknowledgement of one another

Each element is pivotal to the survival of the symbiosis; if one fails the symbiosis breaks though the relationship may be maintained for other reasons. A mutual benefit is one of the key factors in the entire symbiosis family of analyses (Symbiosis, anti-symbiosis, and to some extent necrosymbiosis). The reliance, which is the second element, is founded on the idea that there is a perceived mutual benefit in the relationship between the two parties, as can be demonstrated in Justino's example of the armed gangs

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working together with the farmers in occupied areas. (Justino, 2009) Further, it is vital to each group that the parties have a positive or neutral opinion of one another for the symbiosis to work and not degrade to anti-symbiosis or fail altogether. Finally, there must be the acknowledgement of the interdependence so that actions taken by either part are framed in the context of the symbiotic relationship. Occasionally, an outside factor forces the symbiotism upon two groups which have a normative non-symbiotic relationship. A good example of this is two medieval villages that are located near one another. If an outside who is greater than either of the villages individually should attack them, they can form a symbiotic reliance to repel the invader. As long as the invader remains they will need to maintain this relationship.

These factors can be applied to any social scenario which is a symbiotic relationship. An example of this is a fight promoter and a boxer. Without the promoter, the boxer is likely to only be able to fight in low grade fights and without the boxer the promoter is without a source of income. In a vacuum both the boxer and the promoter would starve without one another. Therefore, each party draws a benefit from the arrangement. Next, the parties have a mutual dependency on the agreement to get that benefit. While either could go out and get a new counter-part they would still have to have the symbiotic relationship to make money in their pursuit of this type. They both also acknowledge their dependency on the other. The promoter knows the boxer is his 'cash cow' and the boxer knows that the promoter is his 'big ticket.' Finally, for the relationship to work there must be a positive or neutral acceptance of the other party for the arrangement to be a success. Once all of these elements are met, the symbiotic relationship is formed.

The analysis of the symbiotic model is paramount to the understanding of the following two models. Both anti-symbiotism (sometimes called negative symbiotism) and necrosymbiotism are founded in fundamental variations from the symbiotic model. Both have an aspect of negativity which interacts with the elements of symbiotism in a disparate manner creating a new social structure with

individual benefits and weaknesses. Symbiotism is a positive factor in societal structure. Symbiosis which benefits the society can encourage new symbiotisms based on the successful models. Symbiosis which is detrimental to society can point out failings in government programs and allow for new programs to be designed to confront the problem to which the symbiotic relationship is a symptom. (Justino, 2009)

Part II: Dependant Anti-Symbiotic Relationships

Moving one step away from normative symbiotic relationships; the phenomenon of negative symbiosis, or anti-symbiosis, manifests. Being one step away from symbiosis, anti-symbiosis manifests with several of the same elements as symbiosis; however, there are fundamental differences which could mislead an analyst if the wrong model is followed. Negative symbiosis is predicated on the primary factor that both parties to the relationship are dependent on one another, this is true throughout the symbiotic family of conflict relationships. The key differentiating factor in negative symbiosis is the perceived notation of the other party. Whereas in a symbiotic relationship the parties know the other party exists and the parties have a positive or neutral acknowledgement of the other party, the key factor in a anti-symbiotic relationship is that one or both of the parties has a negative perception of the other party. In some cases the perception can be neutral on the surface but show a negative implication when closely examined. While this may seem semantic in nature, the relevance is penultimate to the acknowledgement of the analyst that the parties are interrelated.

Psychology presents an example of the way in which a negative symbiotic relationship can be formed. Negative symbiotic relationships can begin in a positive symbiotic relationship, in this case the psychologist/patient relationship. In a 1999 study, Boadella discovered that at some points a psychologist can over-treat his or her patient. In these cases, the co-dependence of the parties upon one

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another translates into a, for lack of better word, psychological need for the other party. (Boadella, 1999) The psychologist needs the patient to need him or her and thus convinces the patient that he or she needs treatment. (Boadella, 1999) The patient, believing that the initial problem is still present, has a psychological need for the continuance of the treatment. The result is a negative symbiotic relationship. While the first reading of the Boadella study indicates that the psychologist has a neutral or positive perception of the patient, deeper analysis indicates that the psychologist perceives the patient is unable to continue without the treatment and is thus inferior in some way. This is a negative perception. The symbiosis, while perceptual, is real and needed for the continuation of the relationship. Should the need for treatment dissipate, the relationship would likely end or at least change forms.

Another example of a negative symbiotic relationship can be seen in the relationship between the pro-life and pro-choice lobbies to the abortion issue. This example shows the mutual benefit element of the symbiotic familial stem. Pro-life advocates have a negative view of the pro-choice lobby, and the same is true in regards to the pro-choice lobby towards the pro-life lobby. This negative perception draws the relationship away from the normative symbiotic protocols. Additionally, both cases are funded millions of dollars from private donors to support their pursuits; this is a clear advantage of a benefit, as people have built careers supporting the lobbies' initiatives. The mutuality of the benefit can be seen in a hypothetical termination of the debate. If one party wins or loses in a definitive manner, such as a 9-0 Supreme Court ruling, the need for both parties ceases to exist. If there is no pro-choice lobby, then there is no need for a pro-life lobby and vice versa. If the lobbies cease to exist, then the funding would end and the relationship would be terminated to the mutual detriment of both parties, this could cost hundreds of jobs. Ergo they are negatively bound at the hip.

A similar situation can be seen internationally in the relationship between the National Party of South Africa and

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the African National Congress of the same nation. The parties were bitter rivals in the 1980's and 1990's and struck at one another until apartheid was finally ended. (Ottaway, 1993) Both parties perceived that the other party was negatively affecting the national interests of South Africa. (Ottaway, 1993) Further, both parties benefited by the support of persons whose interests they represented. This benefit manifested in an interdependence which was shown upon the completion of apartheid, where the National Party disintegrated and the African National Congress, while taking power, had to find new political allies to maintain its existence. (Ottaway, 1993) The analytical process for analyzing a conflict based on the negative relationship differs from a model used to analyze a normative symbiotic relationship which shows the need for the distinction. Therefore, the elements of Negative Symbiosis are:

- 1.) Mutual Dependence
- 2.) Negative acknowledgement of the other party or a positive/neutral acknowledgement which is predicated on a negative view expressed upon the other party.
- 3.) Knowledge of the interdependence, whether internal or external
- 4.) Mutual benefit from the relationship

These elements differentiate the phenomenon of negative symbiosis from the normative symbiotic relationship and preclude the elements that make up the model for necrosymbiosis. Ideally, a negative symbiotic relationship draws on its strengths, such as in the psychological example from Boadella, and regresses into a symbiotic relationship or the relation ends completely. However, as this is not always the case as anti-symbiotic relationship can build on the negative and devolve into a necrotic symbiosis.

Part III: Necrosymbiosis Explained

Having established its foundations, necrosymbiosis is a simple formulation of a symbiotic relationship which has degraded to the point where a party or both parties invests

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more time or interest in the failure of the other party rather than its own success. This formulation of symbiosis is detrimental not only to the parties directly involved in the matter but also to the groups which may have interests in the periphery. Necrosymbiosis has the potential to necrotize the entire area surrounding the conflict. Further, where there is a general ideological difference between the two groups, there is more of a threat of necrosymbiosis. Whereas logic would dictate that the further the ideologies are apart the more conflict that should be generated, if you look at the following Israel/Palestine example, and to a lesser extent the internet piracy issue, you will see similar value system generate more conflict in this scenario.

The key difference between a symbiotic relationship and a necrosymbiotic relationship is the fact that a symbiotic relationship is based on a positive or neutral interaction and the necrosymbiotic relationship is based on a negative interaction. This viewpoint changes the relationship dynamic in such a way that enmity develops and there are detrimental repercussions. Further, there is a second slight distinction that in a symbiotic relationship there is an acknowledgement of interdependence whereas in a necrosymbiosis relationship there is simply an acknowledgement of interaction.

Additionally, distinctions must also be drawn between necrosymbiosis and anti-symbiosis. Both have the potential for the relationship to be viewed as negative by one or more of the parties; however, the distinction between the two is founded in the resolution structure to the conflict. Whereas parties to an anti-symbiotic relationship will often follow the legal courses of action to resolve the problem, (See the abortion example above) parties to a necrosymbiosis style relationship will often adopt a "win at any cost" attitude. This mentality escalates along the Structural Change model coined by Pruitt and Kim until one group is disbanded or destroyed and the other group is left crippled due to the effort, most often able to be consumed by another more powerful group. (Pruitt and Kim, 2004) Further, there is risk of drawing other groups into the conflict in the necrosymbiotic relationship; whereas, the conflicts related to

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an anti-symbiotic relationship mostly polarize viewers. (Justino, 2009) The final difference between necrosymbiosis and anti-symbiosis can be seen in the mutual dependence issue. As the groups struggle against one another they begin to build up reserves to protect themselves from the other, this building of reserves can create self-sufficiency and weaken the mutual dependence element of the relationship. When analyzing a necrosymbiotic relationship, therefore, it is always important to look at the genesis of the relationship.

Prior to the analysis of examples it is constructive to identify the elements which are present in a necrosymbiotic relationship. These elements are:

- 1.) Mutual dependence
- 2.) Negative Acknowledgement by one party
- 3.) Knowledge of interaction and acceptance of negative interaction
- 4.) Mutual Detriment drawn from relationship
- 5.) Benefits drawn from the conflict related to the relationship
- 6.) Ideological differences between parties
- 7.) Movement towards or acceptance of "Win at Any Cost" attitude.

When these seven factors are met, the relationship is necrotic and there is an increased risk that the conflict will infect other groups.

The most visible example of a necrosymbiotic relationship in the media is the relationship between Israel and Palestine. Both ethnic groups have been struggling against one another officially for the better part of a century and unofficially for the better part of two millennia. This has created a deep seated hatred between the groups at the administrative level, and at the local level a severe distaste or fear. Both parties have developed their relationship over the years and have created bulwarks to prevent the aggression of the other parties (The Israeli walls and settlement plans, the Palestinian attacks on checkpoints) The detriment in both cases is very clear, both parties have lost lives because of the negative interactions. However, the benefits are more

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masked. The Israeli administration gets support and military contracts from the United States as a result of the conflict; this provides millions of dollars and arms to the Israeli government. (CIA Factbook, 2009) Palestine receives similar support from the Arab Community. Both groups have drawn in other parties because they have convinced others that they have a right to exist exclusive of the other party. These rights to exist are predicated on their religious identity, which barring semantic differences, the religions in the Judeo-Christian-Muslim format are basically the same in their message of protect others. The acceptance of the win at any cost mentality may be most clearly demonstrated in the lunacy of suicide bombers, who give up their lives –the ultimate cost—to ensure the destruction of the other side. The Israel/Palestine conflict has necrotized the region drawing support from both the Arab Community and the European Community making the Israeli/Palestine conflict one of the most dangerous examples of necrosymbiosis in modern times.

A simpler example of necrosymbiosis can be seen in the relationship between the computer software industry and the internet pirating community. Both parties receive benefits from the relationship but one party wants to destroy the other even at the cost of its own image. When a company possesses a copyright on code for a product, they have the ability to exclude the knowledge and use of that code from other parties or they may sell licenses to use the code at retail. The piracy community disapproves of the injustice buying a product only to get home and see that it is actually a license to use the product and you have actually bought nothing. The industry has resolved to use the legal system to battle the problem; the piracy community uses the media. (Barret, 2009) The detriments which are received from the relationship are strong cases for the necrotizing symbiosis of the relationship rather than a full blown necrosymbiotic relationship. The industry loses money every time a piece of software is copied; whereas, individuals who are members of the piracy community go to jail or are fined if they are caught. The benefits drawn from the relationship are the free advertising for the industry and free

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sampling for the community. (Barret, 2009) There is a slight ideological difference between the community and the industry on the proper way for dissemination of the product. Finally, the industry has adopted a “win at any cost” attitude, which has cost them public image in their quest to stomp out piracy. Viewing this dispute through a necrosymbiotic lens, the industry is willing to destroy its image to eliminate the threat of piracy. The clearest correlation to the in the media is the music industry which took sever hits when suing children for downloading music. (Fox News, 2003; Go Petition, 2006) This destroyed the industries credit and also hurt the image of several musicians when the problem spread to include to practitioners in the field.

Necrosymbiosis is the most dangerous member of the symbiotic family of conflict styles. The key elements which makes it so dangerous is the visibility of the pain one party inflicts upon another and the ability to use this pain as a mode to draw others into the conflict. Necrosymbiosis has the ability to necrotize the area in which it operates, this means that the conflict can spread and cause greater harm to a greater region. The cold war is an example of how parties can be drawn into an ideological conflict and end with an agreement of “Mutually Assured Self Destruction.” This is a danger which all conflict analysis professional must be aware of and strive to prevent.

Part IV: Conclusion and Comments

The symbiotic family of conflict scenarios is common in both nature and in our ever advancing society. Whereas bonds of friendship and familial bonds are created through healthy emotional collaboration, symbiotic relationships are built on unhealthy mutual dependence when they are exposed to the social and societal levels. Where positive symbiosis can sustain itself in nature for long periods of time; in a social context symbiotic relationships will eventually break down to an anti-symbiotic dependence or a necrosymbiosis which not only hurts the parties but can also draw in other parties to escalate the conflict. These three

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conflict typologies, symbiotic, negative symbiotic, and necrosymbiotic, must be analyzed carefully to prevent outbreaks of major international problems such as another Cold War or the Israel/Palestine conflict.

The analysis of each member of the symbiotic family begs a slightly different analytic model. Specific models must be developed for the benefit of proper analysis of each type of symbiotic conflict. The mutual dependence between the groups makes conventional models (Such as the spiral model or the escalation model) not directly relevant to the analysis of the conflict structure. (Pruitt and Kim, 2004; Mitchell, 1981) Like with any conflict, if an improper style is used in the analysis and that analysis is used to manage the conflict there can be detrimental results in the conflict management scheme. These developments could be based on current conflicts, such as Israel/Palestine, or on past conflicts, such as the Cold War. Overall, it is imperative that a style to deal with these highly transmissive styles of conflict must be developed.

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Reference

Journals

Balog, Joseph E., (2009). The Moral Justification for a Compulsory Human Papilloma Virus Vaccination Program, *American Journal of Public Health*, 99:4, 616-623.

Boadella, David, (1999), Transference, Politics, and Narcissism, *International Journal of Psychotherapy*, 4:3, 283-312.

Boyd, Gary & Zeman, Vladimir, (2007). Designing Cybersystematically for Symviability, *Kybernetics* 36:(9/10) p. 1255-65

Cable, Sherry, Shriver, Thomas E. & Mix, Tamara L., (2008). Risk Society and The Contested Illness: The Case of Nuclear Weapons Workers, *American Sociological Review*, 73:3, 380-402.

Clinton, Asha (2006), Seemore Matrix Work: A New Transpersonal Psychotherapy, *Journal of Transpersonal Psychology*, 38:1 95-117.

Fallace, Thomas, (2009). Thomas Dewey's Influence on the Origins of the Social Studies: An Analysis of History and New Interpretation, *Review of Educational Research*, 79:2, 601-625

Justino, Patricia, (2009). Poverty and Violent Conflict: A Micro-Level Perspective on the Causes and Duration of Warfare, *Journal of Peace Research*, 46, 3-.

Karatzogianni, Athina & Michaelides, George, (2009). Cyberconflict at the Edge of Chaos: Cryptohierarchies and Self-Organization in the Open-Source Movement, *Capital and Class*, 97, 143-160.

Lijtmaer, Ruth M., (2009). The Patient Who Believes and the Analyst Who Does Not, *Journal of the American Academy of Psychoanalysis and Dynamic Psychology*, 37:1, 99-111.

Mazmanian, Sarkis, K., Round, June L. & Kasper, Denis L, (2008). A Microbial Symbiosis Factor Prevents Intestinal Inflammatory Disease, *Nature*, 453:7195, 620-626.

Ragan, Charles L, (2006), Comparing Apples to Oranges and Making Fruit Salad (Mixing Psychodynamic Science and Neuroscience): A Review of Clay C. Whitehead's "Neo-Psychoanalysis: A Paradigm for the 21st Century", *Journal of the American Academy of Psychoanalysis and Dynamic Psychology* 34:4, 629-650

Ravenscroft, Neil & Gilchrist, Paul, (2009). The Emergent Working Society of Leisure, *Journal of Leisure Research*, 41:1, 23-40.

Shepherd, Mary, (2001), Anaclitic Considerations in Severe Negative States, *Modern Psychoanalysis*, 26:1 77-87

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Books

Bolander, Alyce & Bolander, Donald (1986). Time Medical Dictionary. Lexicon: New York

Gershuny, J. (2000) *Changing times: work and leisure in postindustrial society*. Oxford: Oxford University Press

Pruitt, D.G. & Kim, S.H., (2004) *Social Conflict: Escalation, Stalemate, and Settlement*, McGraw Hill: New York

Ottaway, M. (1993) *South Africa: The struggle for New Order*, Brookings: New York

Twenge, J.M. & Campbell, K.W. (2009), *The Narcissism Epidemic: Living in the Age of Entitlement*, Free Press: New York.

Web Sources

Fox News.com (2003), 12-Year-Old Sued for Music Downloading, Last Visited June 8, 2009, available at <http://www.foxnews.com/story/0,2933,96797,00.html>

GoPetition.com (2006), Petition to prevent Suits Against Our Children, Last Visited June 8, 2009, available at <http://www.gopetition.com/petitions/congress-stop-the-riaas-lawsuits-against-our-children.html>

Random House Unabridged Dictionary, 6 June, 2009, retrieved at <http://dictionary.reference.com/browse/symbiotic>

American Heritage Dictionary, 12 June, 2009, retrieved at <http://dictionary.reference.com/browse/symbiotic>

Interviews

Ronald Barrett, M.A. (June 5th 2009) Telephone discussion on subject of music piracy and software piracy