VIOLENCE AND IMPASSE

Victor MacGill
9B Tuscany Place
Beckenham
Christchurch 8023
New Zealand
University of the Sunshine Coast

ABSTRACT

It is the contention of the author that the roots of violence do not stem from human nature or even animal nature, but that they are even more fundamental, being inherently and inextricably interwoven into the paradoxical nature of complex adaptive systems.

Violence can be defined as the invasion of a boundary or the disruption of a necessary flow across a boundary. In exploring how this might manifest in human interaction, the nature of humans as multileveled systems of systems is investigated. Because we all have different perspectives, priorities and perceptions, there will be times when perceived human needs feel unmet, and there is a risk that abuse or violence will be used as a response to try and meet those needs.

Often violence occurs because the two or more people involved in an interaction are unable to bridge the differences that have arisen between them in a way that allows them to have their perceived needs adequately met. A boundary has been placed between those involved creating an impasse. The person who was previously seen to be operating within a shared boundary is deemed to have shifted to become the 'other', the cause of the problems, and even a hostile enemy. The point of impasse is often used to 'justify' an abusive or violent response. The dynamics of impasse are examined in the case of intimate partner relationships and international politics to demonstrate how the principles developed operate in practice at various levels through society. The final section looks at how systems thinking might help avoid reaching an impasse, or in some case bring a relationship back from impasse to where meaningful authentic dialogue might be resumed.

Keywords: Violence, impasse, boundary, systems theory, needs, threats

INTRODUCTION

Our human willingness to use violence to resolve issues is a major impediment to our evolution as a species (MacGill, 2012). In trying to discover the roots of human violence, human nature or animal nature has consistently been a starting point (Gómez, Verdú, González-Megías, & Méndez, 2016; Peterson & Wrangham, 1997). It is the contention of the author that violence arises at a more fundamental level and arises from the paradoxical tensions inherent in complex adaptive systems.

This paper first explores the nature of complex systems as a foundation for understanding violence from a systems theoretical base. This leads to developing a definition of violence. The focus then moves to human complex adaptive systems and how the theoretical

understanding of violence manifests in human beings. From there we move into the concept of impasse (Batson, 2014), which occurs when the differences between people interacting becomes too great, such that they are unable to resolve the differences between them. Conflict dynamics and impasse and its implications are investigated, within partnership relationship in particular, revealing how it can lead to abuse or violence. This then opens the pathway for strategies to avoid impasse or reduce the negative impacts of impasse.

PARTS AND WHOLES

Systems is about parts which interact to create wholes (Cabrera & Cabrera, 2015). The parts need to maintain their autonomy within their own boundary (Maturana, 2002), while also connecting and co-operating with the parts around them. Flows of matter, energy, and information (Umpleby, 2007) are exchanged between the parts in order that they can sustain their existence and support the coherence of the whole system. Complex adaptive systems are able to adapt their behaviour to improve their ability to maintain their existence and thrive within a constantly changing environment (Stacey, 2011). Maturana and Verden-Zoller (2008) tell us that such a thriving state is the natural state of a complex adaptive system and that love emerges when adaptive systems connect from such a natural state. They also note that aggression occurs as a cultural alienation moving away from our natural state.

Complex systems do not always function in such a thriving state. There are influences outside the system and inside the system that can harm it and hinder its ability to function effectively. For an external factor to influence a system something must impact on a boundary between the system and its environment. For an internal factor to influence a system a boundary between parts within the system must be impacted. A complex system can also be influenced by a toxic flow across a boundary, happening either because the system unwittingly allows the flow to enter, or is unable to prevent the flow from entering. A necessary flow for the effective operation of the system can also be disrupted. Definitions of violence generally revolve around the idea of an action intended to cause harm. We can see, therefore, that violence occurs at boundaries. We can further develop a systems-based definition of violence as (MacGill, 2018):

The invasion of a boundary or the disruption of necessary flows across a boundary.

This definition allows us to look beyond 'human nature' for the causes of violence. Violence is shown to be inherently woven into the very fabric of the interactions within complex adaptive systems responding recursively to each other. That does not, however, mean that the manifestations of violence cannot be reduced and perhaps even eliminated.

We can use this definition to explore how violence arises out of conflict and ultimately find ways to reduce or prevent violence from occurring. Abuse or violence impacting on boundaries most usually arises as a response to a perceived threat, but once used and found to be effective, can become a learned behaviour. We next explore other factors that are relevant to understanding the nature of violence, particularly in human beings.

AUTONOMY AND CONNECTIVITY

Any system needs to have a dynamic balance of autonomy and connectivity. Autonomy ensures that the parts of a system are able to act independently and reflect their individual skills and abilities, perspectives and priorities. They must not be unduly influenced by or constrained by other parts. A healthy system has sufficient requisite variety (Ashby, 1947) within the parts to cope with the range of perturbations the whole must cope with. An individual person in a social system needs to feel that they can express their individuality and be unique. They need to feel that they are not being unduly influenced by other and become a mere robot or a number.

A system also needs connectivity. The parts need to be connected in order that there is sufficient coherence for the whole system to hold together and engender the co-operation that will lead to cohesive behaviour of the whole. The parts need to be willing to modify their behaviour to accommodate the needs of the whole. This means that to an extent increasing connectivity comes at the expense of autonomy, thus requiring a dynamic balance. In a person connectivity is connected to our need to belong to a social group. We must be willing to abide by the social contract and constrain our behaviour sufficiently within the explicit and implicit rules of the social group to which we belong. There is therefore the ever-present tension between being unique and different and fitting in with others.

Violence occurs when this balance is lost. Either one part is invading the boundary of another part, or indeed a whole system, or disrupting a necessary flow across a boundary to a part or the whole. Violence can also occur when the whole exerts too much influence over the parts. Violence tends to be initiated as a response when a part feels like its needs for autonomy are not being met, or by the whole that feels like its need for connectivity is not being met.

NEEDS AND THREATS IN HUMANS

All complex adaptive systems (CAS) (Holland, 1992; Miller & Page, 2007) have needs that must be met in order to maintain their existence and thrive. When those needs are not met there is a sense of threat and the system moves to adapt so as to reduce or eliminate the threat. Threats are perceived at boundaries.

Boundaries necessarily both reveal and conceal. Things that are similar become grouped within a boundary. That which is included is focused on and thus revealed and becomes more familiar. That which is beyond the boundary is placed there because of a difference that makes a difference (Bateson, 1987). It is generally less familiar and less well understood. It thus becomes more easily identified as a threat to be countered and thus the "other" or even the enemy (Midgley & Pinzón, 2011; Milojevic, 2013).

Human complex adaptive systems have many levels of complex interconnected and interacting nested systems of systems (Troncale & Friendshuh, 2012). One simplistic

categorisation to illustrate this is to view a human as comprising four parts: physical, emotional, mental and spiritual. All four are connected such that together they comprise a whole, but also each part is itself comprised of sub-systems as seen in Beer's Viable Systems Model (Beer, 1984). The physical, for example, is further divided into body systems, divided into body organs, divided into body tissues, divided into body cells. An embodied cognitive approach (Bausch, 2010; Damasio, 2000; Maturana & Varela, 1998; Varela, Thompson, & Rosch, 1993) would also see the boundaries usually placed as boundaries of convenience and would see for instance, the mind-body division of the Cartesian worldview as a false boundary (Damasio, 2000). This all means that there is level upon level of boundaries, all linked in extremely complex ways that must all be defended for the healthy functioning of a human being. Violence can occur at any of this multitude of boundaries.

Parts are different by definition and have their own perspective(Cabrera & Cabrera, 2015). Each one has differing needs and priorities and the actions of others will be measured by their impact on the part. Difference implies conflict to be resolved.

The human brain has evolved to respond to situations that arise. Events that are perceived as a threat to the well-being of the person trigger our more primitive fight or flight response in the mid-brain, setting in place a cascade of physiological changes that prepare us for action (Eagleman, 2015). Animals in the wild primarily face physical threats, so we evolved a response under threat to prepare for a physical situation. The major sources perceived as threats by humans are threats to our reputation, sense of self, possessions or other threats not directly impacting on our physical body. We can therefore respond inappropriately to many challenges.

We have also evolved a pre-frontal cortex that enables us to do such things as feel empathy, understand far more complex problems, again an appreciation of the situation with its temporal context. We scan our memory of past events and our interpretation of them that may help us predict likely future outcomes (Rosen, 2012). This allows a more measured response taking more factors into consideration before acting.

This means, however, that there are two brain parts competing for control: the more automatic mid-brain and the more conscious pre-frontal cortex. If the pre-frontal cortex response does not inhibit the mid-brain response in time, the more immediate unconscious fight/flight response will be activated.

RESPONSES TO VIOLENCE

When a system perceives itself to be under threat of violence will respond as it best sees fit to maintain its survival and well-being. Often a fight/flight/freeze response follows (Bracha, 2004). The fight response is to approach the threat and attempt to harm that which is perceived as the source of the invasion and neutralise its impact. The flight response is to avoid and get away from the source of the violence. The fight response often invites another fight response. The freeze response might appear as trying to hide from the aggressor or feigning death (like a rabbit or an opossum), closing boundaries for protection

(like a hedgehog) or to disrupt the flow to the perceived aggressor (like a human refusing to enter dialogue).

SENSING SENSE MAKING AND ACTING

We determine whether or not anything constitutes a threat by sensing and sense making. The meaning ascribed to a situation through sense making then becomes the basis for an action that the system "sees" as being in its best interests. A CAS senses both internally to maintain internal functions and externally to identify perturbations that may have a harmful impact.

Luhmann (1995) tells us that a complex adaptive system is always less complex than the environment in which it finds itself. As system cannot therefore fully understand the environment in which it exists. It must attenuate (Beer, 1984) the incoming information, selecting what is most relevant. Sometimes we do not attenuate as well as we could so any sense making that follows will be flawed.

Being structurally determined (Maturana, 1981), we can only be aware of those things in its environment for which we have receptors. There is considerable error (Rosen, 2012) merely in the process of perceiving a situation, whereby error is in the system even before we try to understand the situation.

Next, we must make sense of the data received. We seek patterns and compare the present situation to previous situations that may have relevance. The quality of our sense making depends on our ability to correctly recognise critical patterns (avoiding Type I – missing a critical pattern- and Type II errors – seeing a pattern that isn't there or is not critical). Our ability to make sense also depends on the nature of our past experiences and the patterns that have been identified as important. Our interpretations of our past events constellate into an internally cohesive set of core beliefs (MacGill, 2017; Padesky, 1994) about ourselves, the people with whom we interact, and the world we inhabit. This forms a mental map created by layer upon layer of metaphor (Lakoff & Johnson, 1980, 1999) arising initially, beginning from our experience of our body (Damasio, 2000) we use to navigate our life journey, just as an explorer uses a map to explore unfamiliar territories. As anticipatory systems (Rosen, 2012), we take patterns we have developed in the past to predict plausible futures and then work out how to act in the present to bring about a preferred future. Anticipation only works as well as our capacity to correctly recognise the patterns experienced in the past and the efficacy of the core beliefs we have developed. If we have incorrectly evaluated our past, our future predictions will be accordingly in error. As well, of course, in wicked systems (Churchman, 1967), the future may well not proceed according to the same patterns as in the past.

When dealing with a very messy (Ackoff, 2004) or even wicked (Churchman, 1967) complex situation, we commonly pick a small, linear, easily comprehendible chain of ideas from within the mess of interacting feedback loops and base our understanding on that small chain. This will almost inevitably lead to unintended consequences. For example, we may choose a chain such as violent offenders wish to avoid punishment, therefore longer

prison sentences will deter them from committing crime. It avoids such obvious problems such as the impact of social isolation, lack of contact with family, and negative influences in the prison itself, that may in fact increase the likelihood of future crime.

Finally, we act based on our sense making. Again, we must act within our structurally determined (Maturana, 2002) being and are limited in our capacity to change the situation. If our sense making is not accurate, our actions will not be as effective.

When a part wants to invade another part, it learns through the recursive interactions, that it has an ability to deliberately deceive (Mitchell & Thompson, 1986) the part and present itself at the boundary in a way that will trick the agent into allowing the toxic flow inside itself. A vicious cycle then develops when the deception is met by more accurate sensing, again leading to the need to develop a more sophisticated form of deception. Internet security is an obvious place where this is observed.

All this creates many places where error can come into the process of determining the level of threat posed by any particular situation. We can fail to notice a threat or respond to something as a threat, which is actually not a threat. Once a threat is perceived a vicious cycle can be activated that leads to impasse as the following section elaborates.

INTERPERSONAL DYNAMICS LEADING TO IMPASSE

When two or more humans interact a relational space (Maturana & Verden-Zoller, 2008) is established, where there are recursive dynamics with each responding to other's responses generating complex outcomes. This is also linked to Thich Nhat Hahn's concept of interbeing (Hanh, 1987).

As they interact their similarities and differences will become apparent (Midgley & Pinzón, 2011). When the amount of common ground and a willingness to interact is greater than any sense of threat between those interacting, a conversation can occur. There must be sufficient trust that it is safe and there will be value arising out of the interaction, but this is difficult without a positive past history of interactions. A willingness to be vulnerable and open to the risk of betrayal is necessary.

Differences or perceived differences spring from different perspectives or errors in the sense making process. Both are recursively monitoring the other and trying to assess their intentions and whether the other might constitute a threat. Both the content of the conversation or the style of presentation of the content might give cause for a sense of threat arising.

Whenever we feel our needs are not being met and our wellbeing is under threat, whether it is justified or not, our response tends to be to restrict our boundaries to stay safe. While it is deemed necessary to protect the system, and it may well be, hardening a boundary limits the flows moving into and out of the system. Connection decreases as the participants disengage from each other.

As two interacting systems withdraw from interacting and view each other as a threat the relational space (Maturana & Verden-Zoller, 2008) between them shrinks until it reaches the point where the space between them is unable to be bridged (Midgley & Pinzón, 2011). At this point an impasse has been reached. The temptation at this point is to demonise the 'other' (Milojevic, 2013). The other system becomes viewed as the cause of the problems and the enemy. Hostile responses are then anticipated. Often having reached this point of impasse gives an agent 'permission' to not only place defensive boundaries, but often 'justifies' an attack.

Blaming others is also common once the other is viewed as the problem or the enemy. All the responsibility for the situation is put on them, rather than a more balanced look at what the person themselves is doing that is making the situation worse rather than better.
The people interacting, are always connected into other networks that have an impact on how they act in the relationship. There will be expectations, constraints, and competing priorities coming from those other parties that they will each be navigating. Batson (2014) cites the conflict on Cyprus between the Greek and Turkish inhabitants on the island. The islanders might have been able to come to a compromise, but the Turkish and Greek governments that the two sides were aligned to were not able to come to an agreement and the island has remained in conflict and divided in two.

EXAMPLES OF IMPASSE AT VARIOUS LEVELS

Galtung (1969, 1990) identifies three types of violence. The first is personal or direct violence, which is obvious and intentional. This is the violence that readily comes to mind when we hear the word violence. Structural violence arises from the social structure. It arises from inequal power and life opportunities. We may not be able to identify the source of the violence because it sits in the organisational structure. Cultural violence occurs when one culture believes it is superior to another culture. Two situations are examined below. The first is intimate partner violence, which is more personal and direct, but it can also be subtle and could include structural or cultural violence. The second example of the US and North Korea is more cultural, which could have personal or structural elements.

Intimate partner dynamics

The dynamics of impasse are often found in intimate relationships (Batson, 2014; Johnson, Makinen, & Millikin, 2001). The two people involved are initially drawn together by a sense of connection that feels like they will each be enhanced by being together. Each shows the aspects of themselves they wish the other to see and tend to hide aspects they think might not be accepted. Over time, however, situations arise where differences are revealed and need to be resolved. For as long as both people in the relationship see themselves as united and see each other within the boundary of the relationship, the means for resolving issues that arise remains generally viable (Gottman & DeClaire, 2001). When either or both feel threatened at any boundary by the other and feel they are not getting needs met, they place a boundary between each other rather than around each other. The

partner thus becomes the other, the enemy, and the cause of the problem. Once in this frame of mind an act of hostility, usually as a defensive tactic, can appear reasonable.

Each act of hostility is an invitation to the other to respond in a like manner. This hostility can get caught in a positive feedback loop, ratcheting the conflict up in a vicious cycle until violence appears. An invitation may be accepted or declined, so the vicious cycle can be broken. Gottman (Gottman & DeClaire, 2001; Gottman & Gottman, 2015) notes that once an impasse is reached criticism, contempt, defensiveness and stonewalling typically enter a relationship, in most cases signalling the eventual demise of the relationship. It is like the adaptive cycle that has moved into a release phase (Gunderson & Holling, 2002). Abuse and violence can become learned behaviours, reinforced as habitual and often unconscious responses, so little or no provocation is needed to start the vicious cycle.

Particularly in intimate partner relationships, it is easy for the partners to only see the situation through their own eyes. Men and women have different psychologies. For example, very often in a conflict, a man will find it better to take a time out to cool down and then come back to the situation later when he is calmer. Women often want to stay and talk through the issue in the moment. Neither is right or wrong, but when the two are put together the result can be disastrous. A common scenario encountered by the author in his work in the field is where domestic violence erupts when the man says he needs to leave, the woman says, “No, we need to talk it over”. She stands in the doorway. The man shifts her to the side to be able to leave and ends up getting arrested. If they each had a better understanding of the psychology of the other, a better solution to the dilemma might be found. The more empathy there is, where the “other” is experienced as being real and valid, the more likely it is that an impasse can be avoided.

Jim Batson (2014), in conversation with the author, discussed the role of difficult conversations. Issues arise between members of a couple where one partner feels the issue to the point of needing to talk about it. There is always a risk that the partner will not react well to the issue being raised or that raising the issue may even make matters worse. They may become defensive and the level of conflict could be increased rather than decreased. The fear of such a response may dissuade a person from bringing up contentious issues in the first place, particularly if it may have significant implications for the relationship. If the initial opposition can be overcome, a pathway is set whereby the issue may be resolved and an impasse avoided, but only after the barrier has been overcome, somewhat like an energy barrier in a chemical equation. Courage is therefore needed to have difficult conversations.

International relations

Similar to the example already cited of the island of Cyprus is the current tension between the US and North Korea. The US has the fear that North Korea has a leader they perceive as unpredictable and if he has access to nuclear weapons could cause enormous harm. The US is greatly concerned by the nuclear tests that North Korea has continued to undertake. The US is by far he more powerful and has the ability to influence other nations around them, particularly China and has used trade sanctions to get North Korea to try to halt its nuclear testing.

North Korea is a small nation ravaged by war against the US in previous decades and fearful of further invasion. It is one of the few remaining Communist regimes seeking support from China. North Korea sees having nuclear weapons as a means of ensuring its safety against what it sees as US aggression.

The level of trust between the two is low and the sense of threat is palpable. Relations teeter on the edge of impasse. "Rocketman" tweets by President Trump have increased tensions. The consequences of the conflict going nuclear would be truly horrific. Each nuclear test is designed to convince the US that the threat is real in the hope that they will be dissuaded from any aggressive action, however, continuing the tests increases the tension, increases the level of impasse and brings the nations closer to the brink.

The conflict between the two countries does not stand alone. China has found itself wanting to support North Korea, because of the past historical ties, but finds some of their actions hard to defend. From China's perspective any war would result in literally millions of refugees on its doorstep that would be a major problem. China wants to maintain good relations with the US, while maintaining its own desires to become a top world power. South Korea and Japan are particularly vulnerable because of their close proximity to North Korea, so they are very cautious of escalating tensions. Russia also has a border with North Korea.

WHAT SYSTEMS THINKING CAN HELP AVOID IMPASSE

An impasse commonly occurs because those involved are seeing the situation from a linear perspective, where wider issues or valid alternative perspectives are not considered. This is particularly so when the issue is seen in black and white terms and people take sides, demonising the 'other'. Systems thinking is full of techniques and strategies for breaking away from restricted linear views lessen the gap of impasse, hopefully to the point where a genuine dialogue becomes possible and violence is averted. The focus of this paper has been in developing an understanding of violence and impasse from a systems perspective. Much has already been written about systems thinking and systems skills, all of which have much to offer to avoid reaching the point of impasse or returning from the point of impasse to a viable relational space wherein dialogue again becomes possible (Maturana & Verden-Zoller, 2008).

Briefly then, some of the systems thinking and systems skills that can be used to reduce abuse and violence are:

Look at the bigger picture

Systems encourages us to look beyond the immediate situation or the small linear chain presented as truth within the greater mess of the situation (Ackoff, 2004; Checkland, 1999). It is much harder to acknowledge the mess than the small, linear chain and solutions are much harder to reach. In the example of the US and North Korea just cited, the complex web of international connections and influenced needs to be taken into account or the conflict could spread to a much greater arena.

Include all stakeholders

Critical Systems Theory (Midgley, Munlo, & Brown, 1998; Midgley & Pinzón, 2011; Ulrich, 2002; Ulrich & Reynolds, 2010) behoves us to look for any stakeholders that have not been recognised. This is especially so if they are disadvantaged in a way that means they do not having a voice or any power to influence their predicament. This introduces an element of social justice. IN a domestic situation, this could include children witnessing violence, other family and friends who will be impacted, right out to support and governmental agencies that might end up being involved.

Seek other perspectives

We all make sense of the world from a base of a set of assumptions, beliefs and values that we integrated into our being so as to enable us to make sense of any situation (MacGill, 2017; Padesky, 1994) but having those beliefs set hides other understandings that could be very helpful in resolving conflict. Checking to see if there might be other stakeholders, particularly any how might be adversely affected by the problem at hand is crucial.

Look for leverage points

Meadows (2008) notes that there are often small points in a complex system that we have control over that can be used to guide the system in desired directions. Consider a small sailing boat. The steersman of the boat has no control over the external environment, only the tiller, ropes to change the angle of the sails and a centreboard and yet that is usually enough for the steersman to reach the destination. Meadows cites a range of strategies that can help identify and utilise leverage points.

Build empathy

Each part has its own perspective on the whole and its place within it, so there will always be difference. The more we have an understanding of the other part with which we interact, and the more we can gain an understanding of how their experience is different from our own, the less likely in general we are to feel threatened by their actions. Empathy allows up to bring the 'other' back within the boundary of the relationship and re-establish a viable relational space for a healing dialogue.

Mindfulness

A part needs to be able to accurately sense, makes sense of and respond effectively in order to cope and adapt to the external environment. If a system is not alert to the data arriving from outside itself and inside itself, or has a poor ability to make sense of incoming data, it will not formulate effective responses. So much of our lives are lived in an autopilot way (Damasio, 2000; Lakoff & Johnson, 1999). Just as our body functions generally operate below our conscious awareness, Emotions and thinking often also run on autopilot

depending on the unconscious habit patterns developed through our lives to enable us to respond adequately to the situations in which we find ourselves. When we are more consciously aware of ourselves and our surroundings we are more likely to notice patterns arising in ourselves and in our lived environments. We will be more alert for errors that may be committed. Every conscious act is an act of rewriting the old script that has been guiding our lives. Increasing awareness enables skills such as empathy or perspective taking to occur.

Bateson's learning levels (Bateson, 1987) remind us to build the skills of being aware of being aware of being aware of our situation. Mindfulness (Hanh, 1995) will also make us more aware of errors in the decision-making process and provide an opportunity for empathy building.

Avoid tipping points

There are clear tipping points (Gladwell, 2001) in human relationships where if difference is not sufficiently resolved, a sense of threat arises that is very difficult, if not impossible, to recover from and destructive positive loops engulf the interactants that can easily lead to violence. It is not always obvious where the boundary of a tipping point lies, but mindful alertness to the potential of overstepping a tipping point boundary can stop situations from collapsing into deep chaos.

CONCLUSIONS

The nature of conflict and violence has generally been studied from a linear perspective. All too often we fall into the trap of "taking sides", making one right, and by implication making the other wrong, blaming and demonising the 'other'(Milojevic, 2013). Taking a systems perspective enables us to step back and acknowledge the wider factors that give form to difference and thus conflict. When that difference cannot be bridged a state of impasse is reached where we feel under threat. At this point hostility can feel justified, and once triggered recursive ratcheting up of the intensity can soon appear as violence. Many systems skills provide tools that can help us to preferably avoid reaching the point of impasse, or to return from a state of impasse to where authentic dialogue can be re-established.
text

BIBLOGRAPHY

Ackoff, R. L. (2004). Transforming the systems movement. Retrieved January 2, 2018, from http://www.acasa.upenn.edu/RLAConfPaper.pdf

Ashby, W. R. (1947). Principles of the self-organizing dynamic system. *The Journal of General Psychology*, *37*(2), 125–8.

Bateson, G. (1987). *Steps to an Ecology of Mind. Collected essays in anthropology, psychiatry, evolution, and epistemology*. Chicago: University of Chicago Press.

Batson, J. (2014). *Working with the impasse in couple relationships while working towards world peace*. University of Otago. Retrieved from https://ourarchive.otago.ac.nz/bitstream/handle/10523/5583/BatsonArthurJ2015MA.pdf?sequence=1&isAllowed=y

Bausch, K. C. (2010). *Body wisdom: The interplay of body and ego*. Riverdale, GA: Ongoing Emergence Press.

Beer, S. (1984). The Viable System Model: Its provenance, development, methodology and pathology. *Journal of the Operational Research Society*, *35*(1), 7–25.

Bracha, H. S. (2004). Freeze, flight, fight, fright, faint: Adaptationist perspectives on the acute stress response spectrum. *CNS Spectrums*, *9*(09), 679–685.

Cabrera, D., & Cabrera, L. (2015). *Systems Thinking Made Simple; New Hope for Solving Wicked Problems*. Ithaca, NY: Cabrera Research Lab.

Checkland, P. (1999). *Systems thinking, Systems practice*. Chichester, West Sussex: Wiley.

Churchman, C. W. (1967). Wicked problems. *Management Science*, *14*(4), 141–142.

Damasio, A. R. (2000). *The feeling of what happens: Body and emotion in the making of consciousness*. Orlando, Florida: Harcourt Inc.

Eagleman, D. (2015). *The Brain: The story of you*. Edinburgh: Canongate Books.

Galtung, J. (1969). Violence, peace, and peace research. *Journal of Peace Research*, *6*(3), 167–191.

Galtung, J. (1990). Cultural Violence. *Journal of Peace Research*, *27*(3), 291–305.

Gladwell, M. (2001). *The tipping point* (2nd Editio). London: Abacus.

Gómez, J. M., Verdú, M., González-Megías, A., & Méndez, M. (2016). The phylogenetic roots of human lethal violence. *Nature*, *538*(7624), 233–237.

Gottman, J., & DeClaire, J. (2001). *The relationship cure: A five step guide to strengthening your marriage, family and relationships*. New York: Three Rivers Press.

Gottman, J., & Gottman, J. (2015). Gottman Couple Theory. In A. Gurman, J. Lebow Douglas, & K. Snyder (Eds.), *Clinical Handbook of Couple Therapy* (5th edition). New York: Guilford Press.

Gunderson, L. H., & Holling, C. S. (2002). *Panarchy: Understanding transformations in human and natural systems* (1st edition). Washington DC: Island Press.

Hanh, T. N. (1987). *Interbeing: Fourteen guidelines for engaged Buddhism*. Berkeley, CA: Parallax Press.

Hanh, T. N. (1995). *Peace is every step*. Chatham, UK: Rider: An imprint of Ebury Publishing.

Holland, J. H. (1992). Complex Adaptive Systems. *Daedalus; Winter Research Library Pg*, *121*(1).

Johnson, S. M., Makinen, J. A., & Millikin, J. W. (2001). Attachment injuries in couple relationships: A new perspective on impasses in couples therapy. *Journal of Marital and Family Therapy*, *27*(2).

Lakoff, G., & Johnson, M. (1980). The Metaphorical Structure of the Human Conceptual System. *Cognitive Science*, *4*(2), 195–208.

Lakoff, G., & Johnson, M. (1999). *Philosophy in the flesh: The embodied mind and its challenge to western thought*. New York: Basic Books.

Luhmann, N. (1995). *Social Systems*. Stanford, California: Stanford University Press.

MacGill, V. R. D. (2012). *Gonna lay down my sword and shield: A complexity perspective on human evolution from a violent past to a compassionate future*. Washington DC: Strategic Books.

MacGill, V. R. D. (2017). Reframing Cognitive Behaviour Theory from a Systems Perspective. *Systemic Practice and Action Research*, *December*.

MacGill, V. R. D. (2018). A Social Cybernetic View of Violence and Some Paradoxes of Working with Violent Abusers. *The Open Cybernetics & Systemics*, *12*, 20–28.

Maturana, H. (1981). Autopoiesis. In M. Zeleny (Ed.), *Autopoiesis: A theory of living organization* (pp. 21–33). Westview Press.

Maturana, H. (2002). Autopoiesis , structural coupling and cognition : A history of these and other notions in the biology of cognition. *Cybernetics and Human Knowing*, *9*(3), 5–34.

Maturana, H., & Varela, F. J. (1998). *The tree of knowledge*. Boston, Massachusetts: Shambhala Publications.

Maturana, H., & Verden-Zoller, G. (2008). *The origin of humanness in the biology of love*. Exeter, UK: Imprint Academic.

Meadows, D. H. (2008). *Thinking in Systems*. White River Junction, VT: Chelsea Green Publishing Company.

Midgley, G., Munlo, I., & Brown, M. (1998). The Theory and Practice of Boundary Critique: Developing Housing Services for Older The theory and practice of boundary critique: developing housing services for older people. *Source: The Journal of the Operational Research Society Journal of the Operational Research Society*, *49*(49), 467–478.

Midgley, G., & Pinzón, L. A. (2011). Boundary critique and its implications for conflict prevention. *Journal of the Operational Research Society*, *62*(8), 1543–1554.

Miller, J., & Page, S. (2007). *Complex adaptive systems: An introduction to computational models of social life*. Princeton, NJ: Princeton University Press.

Milojevic, I. (2013). *Breathing: Violence in peace out: new approaches to peace and conflict* (Kindle edi). Brisbane, Australia, Australia: University of Queensland Press.

Mitchell, R. W., & Thompson, N. S. (1986). *Deception, perspectives on human and nonhuman deceit*. Albany, NY: State University of New York Press.

Padesky, C. A. (1994). Schema change processes in cognitive therapy. *Clinical Psychology & Psychotherapy*, *1*(5), 267–278.

Peterson, D., & Wrangham, R. W. (1997). *Demonic males: Apes and the origins of human violence*. New York: Mariner Books.

Rosen, R. (2012). *Anticipatory Systems: Philosophcal, mathematical and Methodological Foundations* (2nd ed.). New York: Springer New York.

Stacey, R. D. (2011). *Strategic management and organisational dynamics: The challenge of complexity*. Harlow, Essex, UK: Prentice Hall.

Troncale, L., & Friendshuh, L. (2012). SoSPT I: Identifying systems processes of a general theory of systems. In *56th annual conference of the International Society for the Systems Sciences: July 15-20 San Jose, California*.

Ulrich, W. (2002). Boundary Critique. In H. G. Dallenbach & R. Flood (Eds.), *The Informed Student Guide to Management Science*.

Ulrich, W., & Reynolds, M. (2010). Systems Approaches to Managing Change: A Practical Guide. In *Systems Approaches to Managing Change: A Practical Guide* (pp.

243–292).

Umpleby, S. A. (2007). Physical relationshps among matter energy and information. *Systems Research and Behavioral Science*, *24*(3), 369–372.

Varela, F. J., Thompson, E., & Rosch, E. (1993). *The Embodied Mind: Cognitive science and Human Experience*. Cambridge, Massachusetts: Massachusetts Institute of Technology.