The effects of the drought. Predictably, the findings revealed that identified a few psychological responses due to the adverse drought prone city of Queimadas. The results of this study involving 204 samples in which 102 were from drought-free east Brazil. Common psychological responses were studied year period after the natural disaster.

However, they did add that the group who had been exposed to the volcanic eruption were common effects of the traumatic event for both groups. In this study were mainly a comparison of two groups; one being the group that was exposed to the volcanic eruption and the other which was not directly affected. In their findings, the researchers concluded that anxiety and worries were common effects of the traumatic event for both groups. However, they did add that the group who had been exposed directly by the tragedy did show signs of experiencing headaches and sleep disturbances. These adverse effects of mental and physical health problems persisted for up to a three-year period after the natural disaster.

The effects of PTSD and psychological problems post-natural disasters were also studied by Coelho et al. (2017) by examining the effects of a recent drought in Northeast Brazil. Common psychological responses were studied involving 204 samples in which 102 were from drought-free control city of Areia and the remaining half were living in drought prone city of Queimadas. The results of this study identified a few psychological responses due to the adverse effects of the drought. Predictably, the findings revealed that the residents from drought-prone area had significant levels of anxiety and emotional distress compared to the other half sample. They added that “the effects and consequences are not identified immediately and may even accumulate and grow over long periods of time” (101). The signs of PTSD or other psychological problems may not be present immediately after the tragedy but as time progresses, so does the symptoms.

Taking the recent mega-earthquake and tsunami that struck the north-eastern coast of Japan for instance, the prevalence symptoms of post-traumatic stress disorder (PTSD), poor general health and depression were common occurrence in most of the affected victims. In a study conducted by Kukihara (2014) involving 241 earthquake evacuees from Fukushima, it was learnt that almost 53.5 % exhibited clinically concerning symptoms of PTSD while the remaining indicated clear clinical PTSD symptoms. Even though the findings did show that some evacuees managed to endure the traumatic event relatively well by practising resilience, nonetheless the obvious traumatic disorder and depression remained the predominant effects of the catastrophe.

Similarly, various psychological problems were also experienced by another study conducted by Norris et al. (2002) which involved 160 distinct samples comprising of children, adolescents, college students as well as older and middle-aged adults from 29 countries and five continents. These samples experienced almost every imaginable type of...
disasters ranging from earthquakes, hurricanes and floods to wildfires, typhoons and volcanic eruptions. Specific psychological problems; mainly anxiety and depression and post-traumatic stress disorder (PTSD), were the most common traits found in most of these survivors. The study managed to show how different psychological disturbances affected the different aged groups. For example, the young exhibited behavioural problems and hyperactivity while the elders were more vulnerable to depression, on-going stress and somatic complaints. The study was concluded by inserting that the effects of natural disasters are diverse as it affects the psychological well-being of any age group across the globe. The representation of traumatic experiences may have deferred from an individual to another; nonetheless all these survivors surely did possess certain traits of PTSD after their horrific experiences.

Evidently, the effects of a natural disaster can most certainly weigh a person down into immense stress which can eventually lead to psychological trauma. The word ‘traumatic’ can be traced to its Greek origins, referring to “the piercing of the skin and a breaking of the bodily envelope” (Garland, 2018, p.9). However, in Beyond the Pleasure Principle, Freud (2003) elaborates trauma as a painful event not inflicted to the body but to the mind that examines the physical breaking of defenses. This is in line with the findings of Cathy Caruth (1996) who suggests that “trauma is always the story of a wound that cries out, addressing us in the attempt to tell about the reality that is not otherwise available” (p. 4). Caruth adds that trauma is an event which breaks through the protecting shields and overwhels existing defenses against anxiety in a form which also provides confirmation of those deepest anxieties. Thus, the psychoanalytic sense of trauma can be viewed as “the wound of the mind—the breach in the mind’s experience of time, self, and the world (Caruth, 1996, p.3).

The importance for trauma studies started with the study of soldiers coming back from battlefields whose psychological wellness were seriously weakened because of the effects of prolonged pressure they endured in the war or concentration camps. The memory of horrible mishaps is additionally examined in detail to clarify the profound psychological disturbance of the people in question. Kali Tal (1996) observed trauma of the war victims as a life threatening event that brought great adversities to the mental health of the victims to comprehend ideas of the world accurately. The process of re-telling trauma stories emerged to become tools for the construction of natural and cultural myths. The memory of vicious occasions is overwhelming to the point that the unfortunate casualty is left with dissociative issues and identity disorders. The trauma theory has progressed by determining the ideas and concentrates both from Freudian analysis and mental thoughts of Post-Traumatic Stress Disorder. Trauma theory recognizes those occasions which can’t be completely consumed bringing about unspeakable awful encounters.

These occasions stay in the life of injured individual in type of ambiguous recollections, repressed thoughts, visualizations and flashbacks. The unfortunate victims can never totally recoup from these unforgettable experiences of the past and stays caught in an illusory reality. Felman and Laub claimed that trauma survivors don’t live with “memories of the past, but with an event that could not and did not proceed through to its completion, has no ending, attained no closure, and therefore, as far as its survivors are concerned, continues into the present and is current in every respect” (Testimony 69). Collectively, Caruth and Freud agreed that traumatic events remain unavailable to willful recall. This ultimately results to disorienting the victim on the grounds that the mind endeavors to perceive the traumatic event that was never experienced intentionally. Indeed, even time appears to breakdown for the victim as “the traumatic memory persists in a half-life, rather like a ghost, a haunting absent presence of another time in our time” (Luckhurst 2013, p.81). The past declines to return in time making the injured individual re-encounter the agony more than once. This phenomena, according to Freud in Strange and Takarangi (2015), is called a dialectical process as the original trauma is neither incorporated totally by the consciousness, nor by the memory that later creates that experience.

A traumatic event would leave people somehow crippled or paralyzed by fear and hopelessness. Van et al (1994) asserted that prolonged stress and trauma can make traumatized patients’experience emotional reactions merely as somatic states, without being able to interpret the meaning of what they are feeling” (588). In addition, “the severity of traumatic events cannot be measured on any single dimension; simplistic efforts to quantify trauma ultimately lead to meaningless comparisons of horror.” (Herman, 1997, p.33-34) This means that it is hard to estimate how much impact the countries’ history which is full of violence and terror had affected the people. Their reactions will also be unpredictable. Herman added that:

Traumatic reactions occur when action is of no avail. When neither resistance nor escape is possible, the human system of self-defense becomes overwhelmed and disorganized. Each component of the ordinary response to danger, having lost its utility, tends to persist in an altered and exaggerated state long after the actual danger is over. Traumatic events produce profound and lasting changes in physiological arousal, emotion, cognition, and memory. Moreover, traumatic events may severe these normally integrated functions from one another (p. 34)

**Eco-Psychology, Dualism and Human-animal Bond**

Consequently, Eco-psychology is viewed as a developing field of study which helps to comprehend better the role nature plays in negotiating the psychological trauma in humans. According to Roszak, Gomes & Kanner (1995), what lacks in the present-day psychological theories are its’ capacity to live in balance with nature (p. 1). They added that nature plays a pertinent role in human emotional and spiritual well-being; “a view that is consistent with the healing traditions of indigenous peoples’ past and present” (Roszak, Gomes & Kanner, 1995, p. 2). Nonetheless, the importance of nature and its reciprocal relationship between humans and nature has not been given much light in modern psychology so the re-emergence of it into the mainstream psychology is highly anticipated.
The effectiveness of human-nature bond, under the lenses of Eco-psychology, can shed some light on how this bond has therapeutic values which can help individuals to understand themselves better and also overcome psychological distress. As a species inhabiting this world, we must realize that we do not live in isolation and we are ecologically embedded into the larger matrix of the ecosystem. Our inner workings, or also known as the psyche, need to grow an innate emotional bond with its surroundings and a failure to do so may result to a great jeopardy. A close reference to the definition of the concept of Eco-psychology must be scrutinized beforehand in order to comprehend better the deep rooted connection between man and nature. Andy Fisher (2013), a radical Eco-psychologist, defined psychology as “the logos-the study, order, meaning, or speech—of the psyche or soul” (p. 4). He added that the term “eco” hails its origins from the Greek term ‘oikos’ which means ‘home’. In other words, Eco-psychology reconnects man to nature as it studies “the basic shifts in our patterns of identity and relationship that occur when we include our connection to the web of life around us as essential to human well-being” (Shapiro, 1995, p.225).

One of the main struggles identified within the field of Eco-psychology is the idea of challenging dualism by “turning the psyche inside out” (Fisher, 2013, p.9). The soul of a man can only be returned to its natural surroundings if one is ready to locate its mind in the world itself. An avenue that has been identified to challenge the notion of dualism is through the idea of tapping into the ecological unconscious. In The Voice of the Earth, Theodore Roszak (2001) affirmed that ecology and psychology need each other as “repression of the ecological unconscious is the deepest root of collusive madness in industrial society; open access to the ecological unconscious is the path to our sanity” (p. 329). He included that this deep part of the human psyche houses our ecological intelligence and only through the union between our id and ego, our evolutionary success would emerge. Hence, should this awakening fail, our inherent sense of environmental reciprocity may not materialize subjecting to hardship in the survival of the human species.

As discussed above, the attitude of disregarding the pivotal role human-nature relationship play sets a major constraint in the research area of Eco-psychology. An acknowledgement to the psychological status granted to the natural surroundings enables to “conceptualize the natural world in a way that is more satisfying for the purposes of psychological understanding than are the more usual representations of nature as a realm of mere scientific objects, resources, or scenic vistas” (Fisher, 2013, p.7). The personification of nature within the human psyche allows humans to observe the natural surroundings as one unit and “in their own right, as fellow beings or kin” (Fisher, 2013, p.8). This unification would further strengthen the interdependence between humans and its more-than-human natural surroundings.

An immediate avenue to link man with the natural surroundings, and also to awaken their ecological unconscious, is through animals. As mentioned earlier, nature plays a pertinent role in the overall psychological and emotional well-being of humans. Animals, being one of the members of the larger ecosystem, possess certain ‘inherent qualities that facilitate therapy for humans’ (Kruger & Serpell, 2010, p.26). Kruger & Serpell (2010) also clarified that “the mere presence of the animal, its spontaneous behaviour, and its availability for interaction may provide calming effects in humans as well as serve as catalysts for human social interactions” (p.26). This view has also been supported by clinical psychologists, Mims & Waddel (2016), who asserted that animal therapy has been making strides in trauma recovery and has benefited in the treatment of the aged and terminally ill (p.452). The intrinsic qualities that animals possess are surely worth exploring in understanding better how trauma can be healed with the intervention of animals. Human-animal bonding can be a restorative approach which can help people with emotional needs or psychological problems to access to their deep psyches to channel out their frustrations and deep anxiety.

BACKGROUND

Monique Roffey is an award winning Trinidadian-born British writer who has a collection of five successive novels and a memoir. Of the five novels, three of them are set in the Caribbean which explicates on the themes of environment, politics as well as psychological estrangement. Her first novel, Sun Dog was written in 2002 followed by The White Woman on the Green Bicycle in 2009 which ultimately was shortlisted for the 2010 Orange Prize and the 2011 Encore Award. Her subsequent work was a memoir, With the Kisses of his Mouth, was written in 2011 which invited both criticism and positive appraisals as it was a personal account of Monique’s mid-life pursuit for sexual freedom and self-identity. Her most recent two novels, House of Ashes (2014) and The Tryst (2017), were also award winning works which explored on issues regarding military coup and eroticism respectively. Archipelago was written in 2012 and this novel too brought about great triumphs to Monique earning her the OCM BOCAS award for Caribbean Literature and was shortlisted for the Orion Award 2014. Set in the aftermath of a flood, this novel expounds on the life of Gavin Weald and his daughter who embarked on a voyage to escape the devastating effects of the unfortunate natural disaster. Traumatic exposure was apparent from the very beginning of the novel as both, Gavin and his daughter, could not come to terms in regards to the misfortune that just hit them. Consequently, they decided to run away from reality by choosing to sail into the Galapagos hoping that they could make peace with the very waters that caused the whole chaos upon them months before. Through their various encounters along the expedition, Monique was able to show how the characters in the novel were able to negotiate their trauma accordingly.

Henceforth, I am interested in exploring the relationship between human and nature and how this relationship is crucial in helping to heal trauma that is caused by the flood in this novel. To serve as a gap in my study, a specific focus will be on the principles of eco-psychology, namely on the concepts of ecological unconscious and dualism, and how these mechanisms play an extremely important role in overcoming...
trauma that is caused by the aforementioned natural disaster. The role animals play in materialising the effectiveness of these concepts in healing the trauma of the characters in Archipelago will be central to this study.

METHODOLOGY

This study will employ the concepts of Ecological Unconscious and Dualism under the lenses of Eco-psychology by Theodore Roszak and Andy Fisher as well as Trauma studies by Cathy Caruth to elucidate the extent of trauma in the characters and also to see how they managed to come out of it through their various interactions with the animals. A close reading of the text and all the related sources regarding the conceptual framework of Eco-psychology and Trauma will be used intensively in realising this study. The study of Theodore Roszak and Andy Fisher’s Eco-psychology and Cathy Caruth’s Trauma, will serve as the prominent references pertaining to the main conceptual framework for this paper.

FINDINGS & DISCUSSION

Trauma in Archipelago

Archipelago (2012) expounds on the issues of trauma and recovery. From the very beginning of the novel, Roffey portrayed the feeling of solemn and dejection in the lives of the chief protagonists; Gavin, Lucy and their dog, as they were recuperating slowly from the aftermath of the flood that affected their family severely. Despite waiting for a year to get back to his house after the horrific flood to start over, their predicaments did not cease as the new rainy season started and brought back all ill memories of the past. Shortly after the introduction into the novel, Roffey did inject the idea of convalescence through Suzy, their pet dog, when she stated that “she’s making sure everything is all right, that they will get through for the time being” (Roffey, 2012, p.1). Albeit words of encouragement and hope is declared here, the reality is unchanged but simply sets a reminder to the readers of the foreshadowed adversities and psychological disturbances that would be experienced by the characters later in the novel.

In most cases of trauma, symptoms often include “a response, sometimes delayed, to an overwhelming event or events, which takes the form of repeated, intrusive hallucinations, dreams, thoughts or behaviours stemming from the event, along with numbing that may have begun during or after the experience, and possibly also increased arousal to (and avoidance of) stimuli recalling the event” (Caruth, 1995, p. 4). This very concise definition of trauma by Caruth is a perfect fit as it encapsulates almost entirely the psychological issues faced by the characters in Roffey’s Archipelago as a result of the flood. Flashbacks, nightmares and hallucinations loomed around the characters throughout the development of the plot.

Roffey showed how nightmares of the horrifying flood brought about great difficulties to Lucy and Gavin. In one instance, Lucy was seen to be screaming hysterically in her dreams thinking of the flood that affected her family as well as trying to reach out for her mother. Her inner battles with the catastrophe were reflected in her dreams when Roffey wrote “her mouth opens and screams and screams for her mother, where is my mummy, she wails” (Roffey, 2012, p. 17). Like Lucy, Gavin too was having sleepless nights and nightmares thinking of the similar incident. “A decade of fatigue descends on him but his sleep isn’t peaceful […] reminding him of someone or something” (Roffey, 2012, p. 118-119). Vivid dreams of water, animals and cries from his dead son often interpreted his mind leaving him helpless and devastated for not being helpful enough in saving his family.

At any point if the word flood was to be mentioned or if it were to rain, Gavin and Lucy immediately experienced a series of flashbacks. This incident is in line with the thoughts of Caruth (1995) who claims that “to be traumatized is precisely to be possessed by an image or event” (4). Evidences such as “Floods over der. The word alone makes his bowel to squirm” (Roffey, 2012, p.25) and “For a while, she was fine, in the dry season […] but it all came back when the rains returned” (Roffey, 2012, p.53) proved that images of rain or flood haunted both the characters. The repressed emotions of guilt, fear and grief could not be contained resulting to reminding them back of the flood and all the unpleasant memories associated with it.

As mentioned earlier, hallucination is another symptom of trauma and it has been rather prevalent in this novel too. Examples such as “Ocean talks to herself, saying mummy, we got here by ourselves” (Roffey, 2012, p.145) and “he can hear low rumblings from the sea, hahahaha, you foolish man” (Roffey, 2012, p.251) are perfect incidents to show the amount of psychological disturbances the flood has brought upon Gavin and Lucy. Felman and Laub (1990) wrote that our memories repeat to us on issues that we have yet to come to terms with and they continuously haunt us. We begin to see images or hear sounds that remind us of our bitter past and sometimes people start imagining things due to hallucination. Likewise, Lucy begun to hallucinate the existence of Claire, her mother, despite her absence on the voyage while Gavin perceived that there were noises telling him of his poor partaking in saving his son from the flood. These instances haunted them throughout their journey into the Galapagos in which they hoped to find some solace.

Eco-Psychology and Human-animal Bond to Overcome Trauma

Fortunately, the decision made by Gavin to escape into the very waters that once caused the catastrophe upon him and his family did bring him some sort of comfort as the healing of his trauma was progressively initiated. Through the principles of Eco-psychology in acknowledging that humans do not live in vacuum and have an innate relationship with nature, Gavin and Lucy too needed that liberation in order to assist them in finding hope and reasons to survive. Roffey included a very important conversation in the novel to link man and nature directly. The following excerpt is taken from the text to show this association:
“I’m scared, Dad.
Of what?
Nature.
Don’t be silly. You are nature too, we all are” (Roffey, 2012, p.176)

Here, Roffey made it very explicit in showing that the idea of human-nature relationship is indeed crucial and there should be no separation between the two as nature does not only encompass plants and animals but also includes the human species. Searles (1960) justified that the disconnection between human psyche and the nature amounts to endangering their psychological well-being. Roffey, unintentionally perhaps, inserted numerous incidents in the novel that awakened Gavin and Lucy’s ecological unconscious to help them reconnect with nature and also to turn their psyche inside out. This unification of psyches brought about in building a new relationship with nature which helped them to deal with their trauma more effectively.

The immediate avenue that linked both Gavin and Lucy back to nature was surely through the various animals that they encountered with throughout the voyage across the Atlantic. Animals, being part of the larger ecosystem, allowed both the characters to tap back into their ecological unconscious and explore its wide benefits that helped them to understand better the problems that they were facing. Fisher (2013), in Radical Ecopsychology, asserted that the more-than-human world is able to provide a great sense of security to hold one’s stress and distress. He claimed that, through nature, we start relying and ground ourselves more to feel a sense of safety and security. He contended further that the natural surroundings provide a safe space for one to transfer their pain and sufferings upon it as it allows one to move away from their struggles.

Similarly in Archipelago, Roffey affirmed the pertinence played by animals in helping the characters to find a sense of safety in nature. An example taken from the text to illustrate this idea is seen as following:

Ocean is still hiding behind his back. But they are eager to play, like puppies. One jumps straight out of the sea and plants a kiss on her cheek […] like she has got something back, her spirit. Like she wants to chase after the seal” (Roffey, 2012, p. 331).

Through her interactions with the seals, Lucy is seen here to have put back her trust into the wild. It appeared that her worries and grief from the flood had vanished temporarily as she has gotten back her spirit to live her life. She found a secured base amongst the seals as she swam and played with them which helped her better to attain the necessary support. Re-bonding with nature here also allowed Lucy to fight the dualism of psyches which ultimately helped her to feel secured and find a safe space to transfer her sufferings onto. She no longer felt scared with the waters now and started to come to terms with life as she felt much safer.

Ecological unconscious was also awakened to help heal trauma in Archipelago by imitating natural surroundings to improvise family relationships. Fisher (2013) insisted that the natural world provides an avenue for humans the probability for getting in touch with others who have endured a similar experience. He added that through our observations of our natural surroundings, we are able to connect with one another better and come to aware of our own existence. Besides, the well-being of humans is also enhanced when we change our perspectives in life by including our connection to the web of life around us. We start to imitate our surroundings which eventually will help for the betterment of the psyche and to improve our inchoateness. Following is an example taken Archipelago to examine how nature helped in renewing the understanding in Gavin’s family:

“Does everything have a family, dad?
Yes.
Birds?
Yes.
Trees?
Yes. Everyone is related, my love. Everything on the planet is related to everything else.” (Roffey, 2012, p. 327)

From the conversation above between Gavin and Lucy, it can be inferred that interactions and observations with the natural surroundings did make Lucy question a lot about the existence of the animals and trees. What excited her was the ability for nature to have its own set of family similar to humans. This idea was agreed by Gavin as he too acknowledged that humans aren’t that different from its natural surroundings and we can learn a lot from them. Another example taken from the text to show certain traits that can be learnt from animals is when Gavin said that “she always comes back” (Roffey, 2012, p. 305) in response to the question posed by Lucy when she asked whether or not the mother bird will return to feed the child. Both the evidences provided above brought peace to Lucy’s mind as she too could feel that her mother would eventually return to the family and unlike to what her nightmares suggested of being abandoned by her mother.

Through other personal experiences with the natural surroundings, Gavin and Lucy were also able to regain their confidence and negotiate their trauma by finding a purpose to move on with life. Interactions with some animals and also through their observations of the wild gave them a new sense of drive and determination to not be weakened but instead to strive for betterment. One of the best excerpts taken from the text to show how animals have helped to bring a positive vibe and also to provide hope is seen when Lucy said “If fish can fly, maybe I could too […] if those birds can fly with those legs, why can’t I?” (Roffey, 2012, p. 125). Through this incident, Lucy is seen not wanting to succumb to her devastating experience with the flood but instead decided to learn something from the animals despite their shortcomings. She realized that the animals that she saw in the wild struggled a lot in carrying out their daily lives due to the harsh weather conditions. Nonetheless, the weather was not a hindrance for the animals to pursue their goals and this was what made Lucy think that she too could face the extremities and not to give up.

Like Lucy, Gavin too was able to learn something from the animals as he acknowledged that the “white whale is a friend […] the giant tortoise is here to help us too” (Roffey, 2012, p.351). Through this, it can be inferred that Gavin
recognised the efforts taken by the wild in helping him and Lucy to recuperate from all their troubles. His encounters with the wild enabled him to negotiate with the miseries and haunting experiences that he had experienced ever since the flood hit him and his family. He never considered the presence of animals in their proximity as a threat as Roffey did assert in one example that Gavin “trusts the dolphin” (Roffey, 2012, p. 165) with his child as he knew animals bring no harm to them. His observations and interactions with the various animals in the natural surroundings throughout the voyage enlightened him on the beneficial relationship humans have with nature and how this reciprocal union has helped him and Lucy to deal with his struggles ever since the catastrophe hit their home a year before.

CONCLUSION

In summation, Archipelago is a novel of trauma and recovery as a result of a flood that affected the lives of the protagonists; Gavin, Lucy and their family. When everything seemed to be too difficult to be endured, Gavin decided to escape into the waters to help him and his family recuperate from the adversities faced on land. This escapade, fortunately, brought them closer to nature and their various interactions with the wild life opened up new perspectives in life to begin viewing nature through a different light. Gavin and Lucy were able to awaken their ecological unconscious through the various animals they had encountered with throughout the journey. These animals, being part of nature, provided them the medium of safety, a sense of purpose as well as renewed their understandings of family relationships which ultimately helped them to come to terms with the psychological disturbances and trauma that they were experiencing from the aftermaths of the catastrophe. The inherent qualities of the animals possessed allowed the characters to view life from a different perspective which enabled them heal better. The awakening of their ecological unconscious was only possible when they allowed the union of the both psyches; inside and outside. This subconsciously helped them to comprehend that humans do not live in isolation and are part of the wider ecology which enabled them to learn from nature for the betterment of their overall psychological well-being. Human-animal bond that has been established in this novel serves to prove that the therapeutic and healing capabilities that animal possess should not be overlooked as this approach is able to awaken the deep psyche of humans to reintegrate with nature. This process of natural discovery and union with nature helps us to understand better about ourselves and indirectly suggests that the trauma that initially originated from nature (natural disaster) can be healed back through nature itself via interactions with the various animals that is part of the natural world.

REFERENCES


