

Research article

Relearning the Land: Indigenous Ecological Knowledge as a Survival Strategy in *Moon of the Crusted Snow*

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Abstract

This paper will explore the role of indigenous ecological knowledge as a key survival mechanism in Waubgeshig Rice's novel, *Moon of the Crusted Snow*. The novel is set in a secluded community of Anishinaabe people during a sudden societal collapse. It depicts the failure of modern infrastructure and the gradual return to land-based living. Through the lives of the people, the novel depicts the gradual shift from reliance on external living to self-reliance, as informed by indigenous knowledge. Hunting, food sharing, and living in harmony with nature are not only depicted as survival mechanisms but also as reflections of indigenous culture. The study claims that the novel presents indigenous ecological knowledge as a key to living and staying alive in the body and a guide for living with integrity. The indigenous knowledge imparted by the elders is presented as a guide for a sustainable lifestyle in contrast to the exploitative tendencies that have been perpetuated by colonial and contemporary ways of life. Instead of harm and damage, the return to indigenous knowledge is presented as a key to survival and living in harmony with each other. With regard to the larger context of ecological crisis and apocalyptic literature, the study argues that the author, through the novel, presents a decolonial approach to surviving the crisis. The return to the land is not about going back into the past; it is about moving forward into one's authentic self and freedom. The novel presents indigenous knowledge systems as a viable and sustainable approach for living with integrity in the face of ecological and social crisis.

Keywords:

Indigenous ecological knowledge, survival, land-based practices, decolonization

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Introduction

Examples of ecological crises in the twenty-first century are seen in the altered climate, loss of biodiversity, and rapid depletion of natural resources. These issues have led to the exposure of the vulnerabilities that come with the prevailing ways of knowing that have resulted from industrial modernity. Ways of knowing that are heavily rooted in linear progress and extraction approaches have not been able to solve complex ecological issues. That is why people from various disciplines have turned their attention towards IEK or TEK. IEK encompasses not merely a set of environmental practices but a holistic worldview integrating spirituality, ethics, and relationality between humans and the natural world (Berkes, 2012).

Indigenous ecological knowledge is the profound knowledge that Indigenous people have accumulated regarding their surrounding environment over many generations. It encompasses sustainable practices, reverence towards nature, and keen observation of the ecosystem. It is concerned with balance and harmony among human beings, animals, plants, and their environment.

This idea relates to notions such as ecocriticism, in particular those suggested by Cheryll Glotfelty (1996). Ecocriticism is concerned with the relationships between literature and nature, where literary works construct awareness of ecology, critique anthropocentrism, and advocate for ethical interaction with nature. In other words, humans do not possess any land rights; in fact, we are an integral part of nature, not its owner. Speculative fiction within literary studies offers an interesting subject of investigation in connection with such knowledge systems, especially with texts that explore such themes as collapse, survival, and renewal. Such works usually include critiques of the unsustainable infrastructural systems of today in favor of different possibilities of life. *Moon of the Crusted Snow* (2018) by Waubgeshig Rice is a relevant work of literary speculation in this case. The plot of the story describes a rapid collapse of all technological systems and the consequent isolation of a small, remote Anishinaabe community. It has to face the failure of their dependence on outside systems. The described change of perspective corresponds with the notion of decolonizing imperative suggested by Linda Tuhiwai Smith (2012).

This paper argues that the novel reconfigures IEK as a survival strategy that is both practical and epistemological. By integrating insights from Indigenous studies, environmental humanities, and social-ecological systems theory (Berkes & Folke, 1998), the novel subverts colonial hegemonic ideologies and introduces new models of existence based on relatedness and sustainability. The result is that Rice's story places Indigenous ecological wisdom not as an accessory, but as a necessity for survival in a highly unstable world.

Literature Review

Research regarding Rice's novel, *Moon of the Crusted Snow* (2018), has been conducted from perspectives related to the concepts of Indigenous futurism, settler colonialism, ecological crisis, and technological critique. An important line of research focuses on the breaking down of the infrastructure of the settlers and the ecological implications involved in the process. For example, Martens' (2020) reading of the novel through "petromelancholia" reveals how dependence on fossil fuel systems reveals the weakness and violent nature of settler modernity. Likewise, Joakin-Uzomba (2026) focuses on how the novel challenges techno-

extractivism and places technological systems into a larger system of settler colonialism. These studies establish that the novel's apocalypse is not merely a natural disaster but a crisis produced by historically specific relationships between land, technology, and colonialism.

The second approach brings focus away from the breakdown of infrastructure to survival practices that are specifically Indigenous. Siepak (2021) focuses on Indigenous engagements with the speculative landscape, whereas Scott (2024) finds Indigenous practices of reciprocity and land relations as an alternative to extraction-based modernity. In addition, Ciochina (2025) considers survival alongside cultural continuity, environmental conservation, and Indigenous knowledge. Altogether, these approaches illustrate that survival in Rice's novel does not just mean having resources but rather developing relationships.

However, there is a notable gap in the existing literature. Most criticism accepts Indigenous knowledge as one of the factors that contribute to resilience and regards this knowledge as a part of cultural heritage without analyzing the process of relearning. In other words, the process of "relearning the land" should be theorized. This issue is important for our discussion because in the novel, ecological knowledge is depicted not as a stagnant tradition but as a practice of survivance. Ecological knowledge is a form of survival skill which entails observing, remembering, learning through generations, and adapting to the environment. Consequently, the present study helps to expand the discussion about Indigenous futurism.

Theoretical Framework: Indigenous Knowledge, Decolonization, and Ecology

Indigenous Ecological Knowledge (IEK) has been described as "a cumulative body of knowledge, practice, and belief" (Berkes, 2012, p. 7) that develops through adaptive processes and is transferred from generation to generation. This description is significant because it challenges the widely held myth about the unchanging nature of knowledge systems in Indigenous communities. Instead, it focuses on continuity and adaptation. Indigenous Ecological Knowledge (IEK) in this regard can be considered as an adaptive system that responds to the changing ecology and social conditions. The adaptive nature of IEK can be highlighted as one of the key features of the story told in the novel where the Anishinaabe people are not reproducing the practices of their ancestors; instead, they are recalling them and adapting them for the new circumstances of collapse.

Further, Robin Wall Kimmerer (2013) highlights reciprocity as one of the key concepts of Indigenous ecological worldview. According to Kimmerer, the relations between humans and nature are not defined through exploitation but through reciprocative obligation and care. In this case, the concept of relational ontology is totally different from the prevailing concepts, according to which nature is treated as a source of power and is supposed to be subordinated. The fact that the community depicted in the novel starts depending on nature in order to survive makes the concept of reciprocity more prominent. The members of the community do not hunt, fish, or collect berries in order to dominate nature but due to their ethical obligations. Nature itself becomes the active participant in the survival process of the community members.

In the same way, Kyle Powys Whyte (2013) views Traditional Ecological Knowledge as a "collaborative concept," which will allow a dialogue between the Indigenous and Western epistemologies without threatening the sovereignty of the Indigenous community. However, the novel puts forward an image of a scenario in which such cooperation becomes totally

impossible. Consequently, the infrastructure failure on a global scale has led to society becoming isolated from the rest of the world and having to depend on itself entirely for its epistemology. This isolation has shown, first of all, the independence of the IEK system and, secondly, its marginality throughout history.

The colonial knowledge system maintains that Western epistemology is superior to others, thereby subordinating Indigenous epistemology. This system creates educational, scientific, and governing systems, which alienate Indigenous populations from their knowledge and lands. The concept of decolonization, especially as expressed by Linda Tuhiwai Smith (2012), sheds light on the political aspect of this process. Smith argues that colonization has diminished the worth of Indigenous epistemology by creating superiority and universality of western scientific knowledge. This system is challenged by the novel, which shows the inefficiency of the system in times of emergencies. The inefficiency of the system proves its shortcomings and brings forth the need for Indigenous knowledge for survival.

Finally, the socio-ecological system approach, which was formulated by Berkes and Folke (1998), focuses on the connection between the human and ecological system. This framework works well for the Indigenous interpretation of nature because of the fact that, according to them, they are part of the ecological web rather than outside of it. Thus, the storyline is based on the assumptions that it is possible to survive as long as there is an appropriate relationship between the members of the group and their environment. In this context, adaptation does not mean doing things; it means having an appropriate relationship.

Collapse and Exposure: The Fragility of Modern Systems

In terms of the plot, the story begins with a sudden and unexpected power failure and loss of communication channels, which acts as a symbol of disconnection from modernity as well as a plot device. This leaves people with nothing to do but revert to their primal instincts and become leaders of themselves to survive the winter. This is consistent with Anthony Giddens's (1990) concept of modernity that makes people dependent on the complex systems which they have no control over. Rice depicts this state of disorientation through the simple yet profound statement: "The food's all gone. The power's out. There's no gas. There's been no word from Toronto or anywhere else. People are looting and getting violent. We had to get the fuck out of there" (Rice, 2018, p. 60). It draws attention to the lack of electricity; however, it raises questions about the collapse of epistemological certainty. Indeed, there is no way of knowing what caused the blackout; thus, there must be something even deeper hidden behind infrastructure dependency.

Ecologically and system-wise, it is indicative of the rigidity described by Berkes (2012), which refers to the way in which socio-ecological systems are optimized in terms of efficiency and growth. Nevertheless, it does not possess sufficient flexibility to resist an unexpected shock. While Indigenous knowledge systems have adaptability built into it, modern industrial systems rely on networks in which disruption leads to failure. Thus, the blackout in *Moon of the Crusted Snow* is indicative of the inherent weaknesses of infrastructure that is integral to modern existence. The response of the community in the face of this emergency, when it begins, reveals confusion, indecision, and expectation of restoration to the status quo. This corresponds to the description provided by sociologist Ulrich Beck (1992) in his text *Risk Society*, in which he describes how modern populations tend to normalize the risks associated

with the system and remain trusting of the institutions that can deal with it. In Rice's novel, this trust diminishes due to a prolonged period of darkness. However, once it is seen that there is nothing to be expected from outside, then chaos will follow in the social and psychological fabric of society.

As conditions deteriorate, the mask of normality slips off. There is no food, travel is impossible, and there is no more means of communication with the outside world. Deconstruction makes it clear that the process of collapse is not an event but takes place in time. According to Rob Nixon's (2011) "slow violence" theory, infrastructural and environmental catastrophes develop gradually and generate results that are dispersed both spatially and temporally and cannot be noticed right away. The power outage in Rice's novel at first appears as an isolated event. It then becomes apparent that this is just the start of a big problem which needs to be addressed through gradual measures.

More importantly, what stands out in Rice's depiction of collapse is its divergence from the usual apocalyptic story. Here it tends to center around chaos, fear, shock, spectacle, and the breakdown of society through acts of violence. Such an approach to the depiction of the collapse corresponds to the "late liberalism's attritional landscapes" described by Elizabeth Povinelli (2016), in which the crisis occurs not through the sudden interruption of something, but rather through a constant state of uncertainty and resistance. In such a case, the story gives up the dramatization of the disaster and concentrates on how people deal with reality by ordinary means. Moreover, because there is neither any power nor any mode of communication, it becomes imperative that one should shift his perceptual perspective and acquire new senses of perception of the world. In the absence of technological mediators, people can use experiential knowledge, observation of the environment, and communication with each other. Thus, the novel creates a background for the development of a credible form of knowledge, which is Indigenous Ecological Knowledge. And the land becomes more legible, not because of the transformation, but because of the removal of the filters of technology.

The unfolding crisis therefore presents a double process of both the demise of infrastructural certainties in modernity and the rise of new ways of knowing that are based on immediate relations and presence. In the novel, the ability to adapt in this way is dormant at first and eventually awakened as the group shifts from dependency to self-reliance. Through this approach to collapse, Rice offers a view of disaster not as an isolated event but as a process of de-learning and re-learning that unfolds over time.

Relearning the Land: Knowledge as Survival Praxis

As the community faces the inevitability of collapse, the focus moves to the land itself, which is seen not only as a resource but as a repository of knowledge. Hunting, fishing, trapping, and collecting wood for fire become not only important in a practical sense but a way of regaining an attitude toward the land that recognizes its value. However, in the novel, the processes are not only about the techniques themselves. Instead, these processes have been set in the context of culture and spirituality that turns the idea of survival into one of reciprocity with the land, and not its domination. In the novel, the protagonist Evan Whitesky is a character of transformation. Through him, we get to know about the elements of resilience, cultural renaissance, and the significance of community leadership in times of

struggle. Evan goes from surviving on canned food to actually surviving. This corresponds with the concept of decolonization, as discussed by Frantz Fanon (1963), who describes it as a transformative process of reclaiming identity, dismantling colonial power structures, and rejecting imposed systems, emphasizing liberation through resistance and social change. One of the defining moments that mark the beginning of this transformation is the realization by the elders that there is an urgency in returning to the ways of their forefathers. The novel states, "But we always survived. We're still here. And we'll still be here, even if the power and the radios don't come back on and we never see any white people ever again" (Rice, 2018, p. 116). What is vital in this particular statement is not the need for a return to the way of life before modern times but the understanding that survival needs memory. Without a doubt, this approach is reminiscent of Kimmerer's (2013) discussion about the concept of Indigenous knowledge, which is "hidden in plain sight" by virtue of the supremacy of epistemologies of colonization and industrialization. Therefore, learning is not about gaining new knowledge but about reactivating those relational knowledge systems that were marginalized beforehand. The relearning process presented in the novel is, therefore, a very practical one, as well as a highly transformative experience. Young people are required to master survival techniques that had long lost relevance under the regime of technological dependence. Actions like following animals, preparing game to eat, and recognizing environmental clues require the invention of new ways of perceiving things. Meanwhile, the old become important once again as keepers of knowledge, restoring their marginalization caused by the educational system imposed during colonization.

Significantly, the land acts as a dynamic pedagogic force in the novel. Learning is achieved by paying close attention to the movements of animals, changes in the weather, changes of seasons, and ecological interconnectedness. This method of learning is a product of an epistemological approach based on active involvement in the process of learning rather than passive observation. Such an approach stands in opposition to Western scientific approaches to knowledge. As Kyle Powys Whyte (2013) argues, Indigenous knowledge systems are fundamentally relational, emphasizing responsibility to place and non-human beings as co-constitutive of knowledge itself. In this way, the environmental epistemology is strengthened further through the use of environmental signs in decision-making processes by the community. The weather determines movement, while animal actions direct their hunting techniques. In this way, the environment is seen to become a communication mechanism for the people. This idea is reflected in Rice's story, where survival depends upon responding to environmental signs.

Moreover, the return of the importance of the elders stresses the significance of intergenerational transfer of knowledge. The education system, as well as IEK in general, was broken and disassembled in colonialism and modernity. However, the crisis presented in the novel gives an opposite direction of development of these processes in favor of the power of the bearers of ecological knowledge. Lastly, the process of relearning in *Moon of the Crusted Snow* indicates that IEK is not only a traditional but rather a living system of knowledge. It integrates practical skills of survival together with moral and spiritual aspects of life, focusing on balance, reciprocity, and interconnection. Thus, IEK turns the landscape into the agent of knowledge production.

Elders, Memory, and Oral Knowledge Systems

The significance of the role of elders in the novel should not be overlooked. Actually, it is the elders who embody the stability of Indigenous Ecological Knowledge, because unlike any other type of knowledge, it is not an institutional one. Expert knowledge is typically institutional, being related to formal education and bureaucracy, while the knowledge of the elders originates from their interaction with the land and people. The more the situation in the novel deteriorates, the more important such authority becomes. Elders' presence in the novel helps to emphasize the value of knowledge, which had been ignored for centuries under colonial modernity. The main medium for disseminating such information comes from oral traditions. Tales, lessons, and practical advice pass from person to person, cementing communal identity and ensuring that traditions are preserved from one generation to the next. For example, in the novel, Aileen and other elders preserve knowledge through “old Nanabush stories,” and “memories of the old days” (Rice, 2018, p. 115). Walter J. Ong (1982) explains that oral cultures depend heavily on memory, repetition, and spoken transmission of knowledge. It plays a vital role in shaping thought patterns, communication styles, and cultural preservation in the absence of writing. This emphasizes storytelling and aligns closely with Linda Tuhiwai Smith's (2012) argument that narrative practices are central to decolonial knowledge production. According to Smith, storytelling is a way not only for expressing culture but also for ensuring the preservation of Indigenous epistemology, which was actively marginalized through colonial education system. Thus, speaking about oral tradition, it can be said that it becomes a form of resistance, which guarantees the survival of Indigenous epistemology, which is actively marginalized by written and scientific knowledge.

The authority enjoyed by the elders within the novel does not result from any hierarchical system but from the elders' life experiences. Their life experiences serve as a form of knowledge that can be authenticated through their experiences. In Rice's story, the elders end up becoming encyclopedias of such knowledge that help them deal with unfamiliar situations. Jan Vansina (1985) underscores that oral traditions play a fundamental role in ensuring the preservation of cultural memory in societies without written records through the transmission of history, values and identity through stories. It becomes easier to preserve cultures in societies where there are no written records. In the novel, it is noted that the previous generation of Aileen “kept the old ways alive in secret” (Rice, 2018, p. 45) while preserving stories and language despite the assimilation processes. However, the novel reveals the vulnerabilities of such knowledge system. The colonial invasion, residential schools, and forced assimilation over many years have resulted in poor intergenerational transfer, resulting in the loss of ecological and cultural knowledge. As Whyte (2013) highlights, colonial histories have not only dispossessed Indigenous communities from land but have also affected their ability to maintain continuity of time necessary for ecological knowledge systems.

Rice's story thus captures the contradiction between resilience and vulnerability. Firstly, IEK resists erosion as elders, narratives, and traditions still impact communal living. Secondly, it is still vulnerable to erosion because of the past suppression of culture. Such a paradox calls for the necessity to protect and preserve IEK in light of the current environmental crisis. The plot accelerates the recognition of such need by illustrating the results of the lack of connection

to ancestral wisdom. In this sense, it is worth noting that the novel shows how oral traditions are dynamic and evolve according to the conditions that exist. In other words, as information is conveyed from generation to generation, it must be adapted to the specificities of the moment in question. Therefore, in the novel *Moon of the Crusted Snow*, it becomes clear that elders and oral traditions become crucial not only for the survival of culture but also for the ecological aspect, since their information allows the connection between the past and the present. Thus, even during periods of extreme turmoil, it is possible to guarantee access to this ancestral knowledge.

Community Ethics and Collective Survival

Perhaps one of the most remarkable things about this particular book is the focus on communal survival as a source of resilience in a situation where collapse occurs. Unlike many works of dystopian fiction, Rice chooses to show that there is no chance for an individual to survive alone. It is only logical to say that the strategy of surviving any adversity requires cooperation and teamwork. This is illustrated by the process of sharing food, assigning roles according to ability and need, and reaching consensus when making decisions.

It can be seen clearly through the way they handle the resources. Instead of hoarding the reserves to themselves, the Anishinaabe people continually remind each other of sharing their food supplies. The idea of resource sharing is conveyed to the reader through the group efforts undertaken in activities like hunting, cooking, and decision-making. One such instance comes when Walter states: “Nobody’s getting any kind of special treatment. And we’re not gonna keep any food or supplies from anyone. This is a goddamn crisis! We have to act like a community. We’re going to support each other until this all gets sorted out” (Rice, 2018, p. 91). The need for urgency and collaboration becomes clear in this case. It is a call for unity in times when community support and cooperation are crucial. In this regard, the message portrayed in this particular instance conforms to the idea that during tough times, it is important for people to unite to assist each of them to obtain everything required for their survival. Collectivism is demonstrated here, and it is part of larger Indigenous ways of knowing where ethics are based on balance and reciprocity. Survival is, in part, a joint effort, and it has to be done through collaboration between people and with nature.

In this novel, resilience cannot be traced back to scientific development or any other form of external interference but rather to the development of closer connections among the community members and the restoration of their Indigenous knowledge systems. Resilience in times of adversity comes from going back to one's culture and the knowledge of one's ancestors. It comes from unity among the members of the community in terms of interdependence and social cohesion. One's culture and identity come to act as one's strength and guiding force, and through oral tradition, one stays connected with one's community, heritage, and culture. This connects us to Ngũgĩ wa Thiong'o (1986), who talks about reclaiming one's Indigenous language, culture, and knowledge as a form of resistance against colonial oppression.

The collective survival is even more emphasized by the contrast that can be drawn between the arrival of the outsiders at the end of the narrative. The outsiders introduce into their world a hierarchy, exploitation, and individualism that disturb the previously existing social system in the community. In opposition to the members of the Anishinaabe community who base

their interactions on consensus and reciprocity, the outsiders live by coercion, competition, and accumulation. One may view this contrast in relation to Whyte (2013) and his theory that Indigenous knowledge systems do not fit into the colonial governance systems due to their nature as relational accountability systems. The failure of the outsiders to relate to the relational ethics of the community highlights the epistemological gap. Apart from being an obvious physical threat to the community, the intrusion of the outsiders constitutes an ideological threat since different survival ideologies clash directly. The inclusion of the outsiders demonstrates the instability of non-relational systems in light of environmental catastrophe. While the Indigenous population relies on cooperation and the exchange of information, the outsiders are dependent on exploitation and intimidation, making them unstable in their own right.

Additionally, the communal structure depicted in the novel resonates with ecological anthropology, particularly the work of Ingold (2000), who emphasizes that human survival is fundamentally embedded in “dwelling” within environments rather than exploiting them from a distance. In Rice's story, dwelling takes place in the form of community engagement with land-based activity, thus suggesting that it is only possible for one to survive when they are deeply rooted within their surroundings and not removed from them. Ultimately, it is important to recognize that the novel depicts the idea of communal survival not as a fantasy but as something that needs to take place in the context of a crisis. In particular, by highlighting the ideas of reciprocity, communal accountability, and relational ethics, the book provides an alternative paradigm of survival through which we can understand the crisis at hand.

Conflict and the Limits of Western Paradigms

The arrival of the outsiders marks a definitive change in the plotline that accentuates already existing conflicts and serves as a criticism of Western survival paradigms. The perspective that defines these characters is characterized by dominance, scarcity, and competition. It is based on the assumptions that all the available natural resources should be acquired and defended from others because they cannot be freely shared. This perspective challenges the balance that the Indigenous people maintain because of the fundamental differences between their way of living and their view of the world.

In contrast to the community that has already started reorienting itself toward Indigenous Ecological Knowledge (IEK) as a relational and adaptive process, the outsiders continue relying on extractive principles derived from settler-colonial modernity. In the novel, Mark Phillips and Justin Scott appear as outsiders, the introduction of whom upsets the delicate balance maintained in the Anishinaabe community. Phillips appears as a refugee motivated by desperation born out of scarcity and acts as a catalyst in upsetting the balance of the community, whereas Scott is an embodiment of the coercive nature of the colonial mindset based on the principles of conquest and domination. Thus, the outsiders appear as symbolic representations of settler-colonial power dynamics. This reflects postcolonial theory, especially Edward Said (1978), who explains how dominant knowledge systems construct hierarchies, produce dependency, and marginalize alternative ways of knowing, reinforcing cultural power imbalances and shaping perceptions of non-Western societies. Primarily, Justin Scott comes across Evan for the first time in an encounter which involves a handshake that is

“half goodwill, half intimidation” (Rice, 2018, p. 82), showing right from the start how he combines what appears to be co-operation with dominance through force.

This gap in the knowledge and understanding of the world surrounding the two communities is portrayed by Rice as the realization of the outsiders’ inability to adapt to the changing conditions of the ecosystem. The outsiders try to introduce an order that does not exist in the destroyed world anymore; at the same time, the members of the Anishinaabe community are learning to read the signs and act according to the land-based knowledge system. This shows the outsiders’ incapability of realizing the ecosystem as a living thing that requires interaction. This is reflected when Jeff adds: “But we don’t like to do this much, hunting them in the winter. It’s kinda like cheating. It’s not the Anishinaabe way to take more than you need” (Rice, 2018, p. 99). This symbolizes their reverence for nature and also their cultural values. It represents their philosophy of sustainability, which emphasizes the need to take just what one needs and the sacrifice that the animal had to make for this. It highlights the significance of possessing some morals while hunting and appreciating the life they are taking away.

On top of all this, the scarcity mindset held by the outsiders only goes to make them disconnect from one another. Rather than appreciating the abundance and cooperation that exist both in nature and in the communities around them, they see their environment as scarce and threatening. As opposed to that, the Indigenous community adopts the concept of reciprocal practices and stewardship of the environment as a community, following the concept of the “gift economy” that was described by Kimmerer (2013). As explained by Rice, the collapse of this system can be noted in the efficiency of the system since it relies on certain conditions that will become weak when separated from any infrastructure. On the contrary, the IEK is resilient since it exists in ecological interactivity.

Furthermore, Berkes (2012) argues that resilience in socio-ecological systems depends on the ability to learn from disturbance and reorganize accordingly. The inability of the outsiders to participate in the process of adaptive learning is indicative of the failure of the epistemological approach that they adopt. The epistemological approach that is best suited for use in stable and industrial environments proves ineffective when the latter are no longer available. Finally, the introduction of the outsiders into the story becomes the literary device through which Rice highlights the weaknesses of Western thought models in a setting where ecological and infrastructural structures are in a state of collapse. In this regard, the outsider’s failure becomes a structural one, showing the detachment of Western epistemology from relations.

Temporality and the Cyclical Nature of Indigenous Knowledge

The structure of the book and the understanding of time are greatly influenced by Indigenous understandings of time being circular, season-based, and relational rather than being linear. The title of the novel itself demonstrates this understanding of time through its use of specific seasonal terminology that places human experiences within the context of ecological cycles. The phrase “Moon of the Crusted Snow” is a reference to a time when snow has become crusted on the ground, making it difficult for humans to move around. Here, therefore, time is seen as ecological time as opposed to linear or chronological time.

Time in this case has played an important role in organizing activities in society to help them live. Activities performed under this include hunting, storage of food, wood gathering, and moving around the land depending on seasons, not time. As the situation becomes difficult,

the Anishinaabe people rely more and more on nature in organizing their activities. One moment in the novel reflects this as: “We’ve dealt it with before. These things go out all the time. It’s just been a while since all of them were down at the same time” (Rice, 2018, p. 33). The way in which Terry inspires Evan demonstrates the key tenets of resilience and the cycle of adversities in life. Yet, there is much more to this than just an observation. It marks a shift in the conditions of the environment, which will have ramifications for mobility, hunting, and safety. The land is its own time-teller, passing on messages that should be taken seriously. This cyclical understanding of temporality contrasts starkly with the linear approach to time that governs our society, which is driven by the concepts of development, accumulation, and growth. Unlike linear time, the Indigenous perception of time is one of repetition and renewal. As Whyte (2018) puts it, the Indigenous notion of time usually entails a responsibility to the past and future at once. In *Moon of the Crusted Snow*, the relation-based understanding of time becomes crucial to survival, since individuals have to adjust themselves to the logic of the land, abandoning their hope for technological redemption.

Furthermore, Indigenous cyclical time is closely connected to what Kimmerer (2013) describes as “circular reciprocity,” a principle in which human activity is embedded within recurring ecological relationships. Indeed, food foraging is not an act of exploitation but a give-and-take relationship between humans and their environment. This is reflected in the story as they revert back to hunting, hence understanding the importance of synchronizing their actions to nature's rhythm and not to artificial ones. In addition, another criticism against linearity in terms of the flow of events in the story is seen during crisis times. When people believe that the system will get back on track after some time, this shows that they are thinking along the lines of linear time because they assume things will be as normal after solving their dilemma. However, this notion fails them every day as things continue changing.

The concept of cyclical time also holds significant importance when it comes to survival tactics. Since people have synchronized their actions according to environmental time frames, they are now in a position to prepare themselves in advance for any potential issues, rather than trying to resolve their problems later on. Activities related to food storage, hunting, and movement are planned and conducted on the basis of environmental time frames. This creates more resiliency since humans will be able to adapt themselves to the environment because their actions follow environmental time cycles. In conclusion, Rice uses the concept of cyclical time as a means to promote the idea of survival in addition to showing that it can be used as a tool to make oneself reconnect with nature in the absence of technology.

IEK in the Age of Climate Crisis

The *Moon of the Crusted Snow* presents a profound commentary on modern ecological problems, situating the climate crisis not just as a problem of ecology but as an epistemological and ethical crisis. The climate crisis can only be solved by rethinking the nature of human-environment relationships instead of relying on technological innovations and building infrastructures that will withstand any changes. The novel shows that one cannot live comfortably in a new reality unless a person is willing to reorient their attitude towards nature. People have to abandon extractive approaches to human-nature relations and develop relational approaches characterized by reciprocity and responsible attention to ecological limits. Indigenous Ecological Knowledge (IEK) becomes crucial in the process as it

helps rethink the notion of survival. According to the story, IEK should be considered an important aspect of sustainability because it promotes sustainable ways of human-nature interaction. The novel depicts a community that learns to survive in the new conditions by changing its approach to natural resources. For instance, hunting and food distribution can be considered sustainable practices under certain circumstances.

Reciprocity and relationality emerge when the community becomes aware of the need to engage with the land not as something that is merely extracted for profit but something that is living and requires attention and respect. The idea that the only way to survive is to ensure that one's actions are in harmony with the natural ecological cycles rather than trying to control them in any way whatsoever becomes clearer and more relevant. The other vital aspect of Indigenous ecological knowledge is that this is not only a theoretical aspect, as the culture-specific aspect of IEK should be analyzed through the lens of the novel. Knowledge is deeply connected with the stories, traditions, and ceremonies, and the essence of the significance of this type of knowledge is not the preservation of life, but the relational accountability within the ecological system. The last thing to be mentioned concerning the discussion of the idea of survival in the novel is the future of knowledge. The disruption of the ecological balance makes the sustainability of the current systems of global infrastructure, communications, and governance questionable. Also, it shows that the marginalization of Indigenous knowledge systems cannot be tolerated anymore.

To put it simply, Rice's tale serves not only as a warning but as a rallying cry. First of all, it is a warning of the intrinsic precariousness of modern institutions that rely on the outside infrastructure but fail to make contact with their own ecological sources of knowledge. Secondly, it requires the re-establishment of Indigenous modes of knowledge as essential instruments for overcoming the uncertainty that is waiting for us in the future. At this juncture, the plot of the novel is perfectly aligned with what is currently being discussed in the discipline of environmental humanities. Rice's novel implies that any form of ecological survival in the twenty-first century cannot happen without epistemological shifts. The book argues that the appropriate way of dealing with climate crises should involve not only technical solutions but also the revival of Indigenous ways of thinking about ecology, which give priority to reciprocity, sustainability, and relationality.

Conclusion

In *Moon of the Crusted Snow*, IEK is explored as both a means of survival in harsh conditions and a revolutionary philosophy that radically redefines human interaction with land, time, and community. The concept of survival in Waubgeshig Rice's writing is not confined merely to human endurance or improvisation but rather is rooted in land-based practices and community-centered philosophies that encourage relational interactions rather than isolation. By examining IEK in relation to dominant Western philosophies of survival, the author proposes a completely different model for dealing with crisis based on reciprocity rather than technology.

Hunting, fishing, food preservation techniques, and observing seasons are examples of activities on the land that are critical for the community's adaptation after a disaster. However, these practices are not only based on skills but reflect a specific epistemological approach of seeing the land as a living body of knowledge. Knowledge transmission across

generations becomes an additional factor supporting this epistemology because elders become keepers of ecologically rooted memories that help youth to rediscover lost practices and skills. Communal ethics will ensure that the community continues to survive as a whole since well-being and continuity cannot be separated from each other. In this context, the concept of "relearning the land" becomes a metaphor reflecting the process of epistemological and practical renewal of Indigenous communities. While it may sound like going back to the roots, relearning means engaging with indigenous knowledge systems that are still alive despite years of colonialism and the current modern world order. In this case, "relearning" means bringing back knowledge that is dormant and waiting for its time to come again. As Smith (2012) argues, decolonization involves the reclamation of knowledge systems that colonial structures have historically marginalized or suppressed.

In this regard, Rice's novel makes a contribution towards the decolonization of environmental thought and practices by placing emphasis on Indigenous ways of knowing as central, not additional, to the understanding and resolution of environmental issues. This idea entails the notion that technological progress alone will be unable to help cope with ecological problems but that a different perspective is needed for humans to survive in this world. In other words, there is a need for recognition of interdependence between people and nature and the ethics involved in such interactions. Given the growing scale of challenges on a global scale that involve climate change, depletion of resources, and the state of ecological instability, the role of IEK as outlined by scholars like Berkes (2012) and Kimmerer (2013) becomes even more crucial. Specifically, the ability of IEK to adapt to environmental changes based on lived experience and interactions with nature is seen as essential for the development of resilience. In the end, it is clear that the novel's message on survival goes beyond being able to endure in times of hardship. It is more of a change in the perception of man's relationship with his surroundings. This novel stresses the significance of the community, cooperation, and respect for nature. The idea of Indigenous ecological knowledge is not portrayed as rigid and romanticized traditions of the past but rather as a way to understand relations between man, his surroundings, and his duties. Through this process, the novel presents both a criticism of prevailing worldviews as well as a future for ecological utopia built on the principles of reciprocity, continuity, and survivance. Resilience does not lie in the ability to control nature; instead, it relies on the willingness to learn from the wisdom of their ancestors, work together, and change with the times. Through the juxtaposition of Indigenous knowledge systems and the instability of settler infrastructure, it becomes clear how any system rooted in the exploitation of natural resources and the isolation of its citizens will fall apart during times of crisis. At the same time, the novel envisions a new future where survival is contingent upon sustaining connections to the earth, culture, and each other.

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