

Mapping Cause Analytics of Post-Apocalyptic Literature with SDGs: A Systematic Literature Review

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Abstract

Literature has served as a mirror to society and the direction society is heading towards has been conceived by the authors in numerous ways. The United Nations' initiation of setting sustainable development goals holds a variety of concerns that can be correlated with the fears that apocalyptic theme generates. Some apocalyptic writings hold such imagination, that they to a great extent serves as an alarm for society in general, to evaluate their perspectives and ways. This article is an effort to accumulate writings containing apocalypse as one of the major themes. Further, the study strives to systematically review the research conducted on apocalyptic works in the past decade, 2012-2021. Two databases—Web of Science and Scopus — were explored to collect the data, and after collection, the data was further processed keeping the following variables in consideration: country of origin, authors' gender, cause of the apocalypse, and year of publication. Prisma guidelines have been followed to determine exclusion and inclusion criteria. The review allows an understanding of the demographic and gender distribution in relation to the thematic representation of apocalypse in the literary texts. This will potentially pave the path for future researchers who will be keen to study similar types of topics and can also help the facilitators and flag bearers of SDGs to understand the potential positioning of literary expertise for the inclusion of commoners in the cause they initiated.

Keywords: Apocalypse, Post-Apocalypse, Systematic Review, Sustainable Development Goals.

Introduction

Intellect often develops a tendency to identify patterns in society, and conceiving all those observations in the unconscious, leads vision to a state where one can foresee the future meticulously. Unlike a tale that talks of a romance, comedy, or tragedy affecting a limited space and time, if the narrator visualizes the destruction of both mental and physical order, leaving

not even a single one unaffected, that is called Apocalypse. The word ‘Apocalypse’ is derived from the ancient Greek word *apokálypsis*, meaning revelation of knowledge, and is also associated with the end of the world, as described in the biblical *Book of Revelation*, or the idea of an imminent cosmic cataclysm. The relics of the apocalyptic theme are also found in world mythologies from Judaism in the Middle East, Islam in southwest Asia, Christianity in the West, and Hinduism in the eastern parts of the globe, in one or other way carry the idea of apocalypse. According to Hindu scriptures, the nature of time is cyclic, wherein four different cycles exist, known as *yugas*. All the *yugas* (cycles) are titled differently, and at the end of each *yuga*, there is an apocalyptic event that vanishes the existing order to establish new.¹ Such reestablishment comes with a new set of ideas and practices which shape society differently. In the *Bhagavad Gita*, one of the authoritative scriptures of Hindu philosophy, Krishna (eternal soul) speaks to Arjuna (seeker self):

paritrāṇāya sādḥūnām vināśhāya cha duṣhkṛitām dharmasanstḥāpanārthāya sambhavāmi yuge yuge.²

This means that he comes to protect righteousness and destroy evil, but his arrival and execution happen like an apocalypse.

In Christianity, the book of *Revelation 7:1-17* mentions:

After this I saw four angels standing at the four corners of the earth, holding back the four winds of the earth, that no wind might blow on earth or sea or against any tree. Then I saw another angel ascending from the rising of the sun, with the seal of the living God, and he called with a loud voice to the four angels who had been given power to harm earth and sea, saying, do not harm the earth or the sea or the trees, until we have sealed the servants of our God on their foreheads.

In the *Qur’an*, Surah 54:1 talks about various cosmic signs of apocalypse, such as the splitting of the moon. Some of the references in the scripture are quite imminent about the apocalyptic event.³

Mythological considerations related to apocalypse have always been mysterious subjects to be explored but it has also paved the path for future intellectuals to think and explore the future possibilities of human existence on this planet in more distinctive ways. Imagining the world’s end because of a variety of reasons like ecological, social collapse, and so on. Some of the causes of the apocalypse as conceived by the literary figures can be

¹ *Padma Purana* (Delhi: Diamond Books, 2007), p. 7.

² *Bhagavad Gita* (Tomales: Nilgiri Press, 2007), p. 202.

³ The *Qur’an*, Surah 54:1.

mapped with the notion that the United Nations General Assembly proposed in 2015. As a precautionary measure, sustainable development goals were coined and later passed as “a blueprint to achieve a better and more sustainable future for all people and the world by 2030.”⁴ Though in literature, writings carrying apocalypse as a major theme have been celebrated more for entertainment than spreading awareness, some of these texts contain various significant traces of some emerging cultural and mass mental transformations. Such types of observations and their conversion into texts led to one of the significant yet academically neglected movements in the history of literature, the Apocalyptic Movement or the New Apocalypse. It was a loose amalgamation of English, Welsh, and Scottish writers of the late 1930s and early 1940s. Some of the authors who contributed to this movement include Dylan Thomas, Kathleen Raine, David Gascoyne, George Barker, Henry Treece, G. S. Fraser, Vernon Watkins, and Herbert Read. Most of them used mythological and prophetic motifs to convey a belief related to social collapse. A major paradigm shift in terms of the causes of apocalypse in apocalyptic writings may be correlated with the happenings of the time period when the idea was penned. The concerns raised by the authors as cause of apocalypse in their writings include war, technology, ecology, social and political collapse, and so on.

Modern writings have explored many ways to interpret the apocalypse. They leave scope for further psychological and anthropological interpretations of the events as the writings reflect many hidden motifs to be decoded. Some of the works share not only the apocalyptic event but also try to anticipate post-apocalyptic society. The potential of literature to influence people and spread awareness is one such reason that we should integrate the emotion that literature can generate to make SDGs the goal of humanity rather than the objective statements of some institutions.

Methodology and Systematic Review

Conducting a systematic literature review requires an exhaustive and careful understanding of the keywords, which assists a researcher in narrowing down the contribution of others. This process later smoothens the collection of resources and other material to create a comprehensive collection that is

⁴ United Nations, ‘The 17 Sustainable Development Goals’, *Sustainable Developmental Goals*. At: <https://sdgs.un.org/goals>. Accessed 03/03/2022.

further analyzed to connect with the related variables.⁵ A systematic review becomes an imperative contribution for future researchers who wish to pursue their research in a similar direction as it consists of all the significant discourses originating in the particular field in a stipulated period of time. As a result, a systematic review becomes a one-stop solution for a number of possible searches that a scholar initiates his or her research with.

The researcher divided the process of systematically reviewing the literature into two phases. First, it was focused on reviewing the literature produced in the past hundred and twenty-two years, from 1900 to 2022, containing apocalypse or post-apocalypse as a major theme.

Review of Post-Apocalyptic Writings

In the second phase, the review process was focused on the research conducted on the apocalyptic literature in the last decade, 2012 to 2021. For the first phase, an online consolidated dataset of apocalyptic works present on Wikipedia was explored to collect data of various forms of literary works produced in the said time period. In this phase, a total number of 620 literary works based on the theme of the apocalypse were identified, bearing a variety of sub-themes. The entire data contained almost all forms of literature like poetry, drama, novel, short stories, and so on. To organize the dataset, it was tabulated in the excel sheet to process for further investigation. The primary data of 620 literary works, which included a variety of genres, was further filtered to segregate the number of fictional works. After the filtration, a total number of 331 fiction works were identified to proceed further. Before initiating the investigation process, additional information related to the final 331 works was collected, which include the country of origin of the author, gender, year of publication, and cause of apocalypse as conceived by the authors to narrate the event in the particular work. All the works included in the primary data of 331 novels were sectioned based on the cause of the apocalypse as portrayed in the works.

As Figure 1 (flow chart) reflects the same division to elaborate the collection and scrutiny process. The first phase of the systematic review reveals five primary reasons, including war, disease, environmental collapse, alien attack, and technological advancement, which were conceived by the authors meditating on the possibility of apocalypse and its cause. Some of

⁵ Joerg J. Meerpohl, Florian Herrle, Gerd Antes and Erik von Elm, 'Scientific Value of Systematic Reviews: Survey of Editors of Core Clinical Journals', *PLOS ONE*, vol. 7, no. 10 (2012).

the causes of the apocalypse, like war, disease, and environment, as conceived by the authors and reflected in Figure 1, connect so well with the concerns that sustainable development goal (SDG) number 13 refers to. SDG 13 pledges to promote and take necessary actions to combat climate change, and also SDG number 15 to preserve and make life better on our planet. The concerns that the authors strived to reflect on in their novels are attempts to make society understand the severity that they could imagine in the near future.

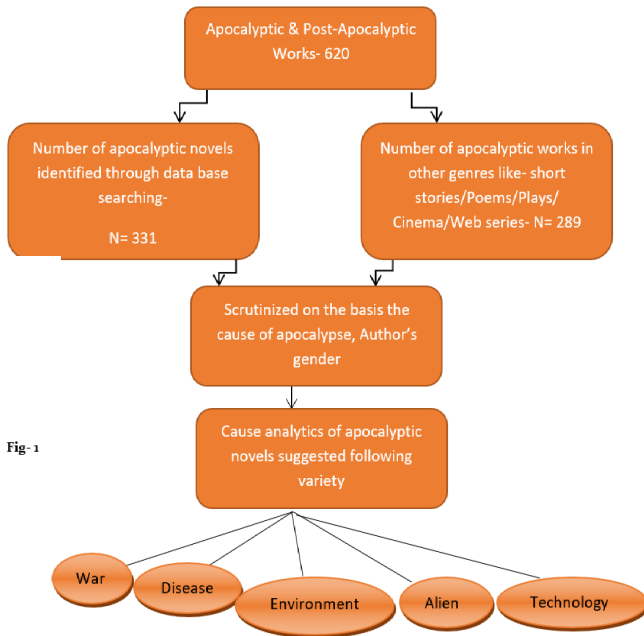


Fig-1

Figure 1: Flow chart analysing the corpus of data

The secondary data, which comprised a number of 331 novels, was further processed to identify various causes of the event of the apocalypse and also their stake in the entire database. War and ecological imbalance were found to be two prominent causes of apocalypse as conceived by authors in different eras. These concerns were considered in SDG number 16, which appeals to ensure peace, justice, and strengthening institutions, and also in SDGs number 13 and 15 to improve life on the planet and take necessary measures to save the climate.

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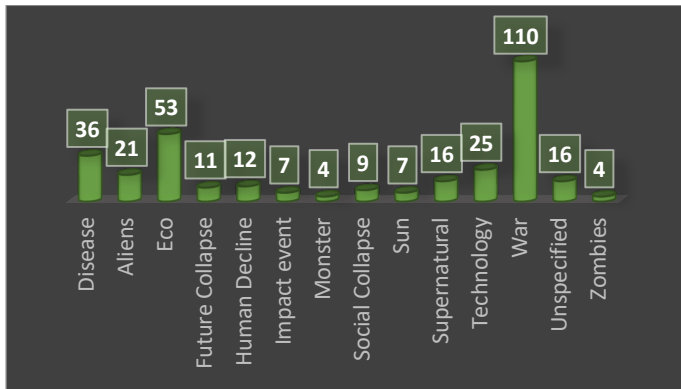


Figure 2: Causes of apocalypse in the selected writings

Figure 2 clearly illustrates that among all the causes of the apocalypse considered by the authors in their works, war and ecological imbalance were recurrently used as the catalyst to enhance the narration of apocalyptic events. The potential of these two causes as experienced by humans in the real world clearly reflects that the perception that apocalyptic narrative presents is not confined to mere imagination but can be understood as a product of great observation and visionary representation. Furthermore, the gender-wise ownership of the literary works was identified, and it was found that out of 331 novels, 287 works were written by male authors, whereas 44 novels were written by female writers.

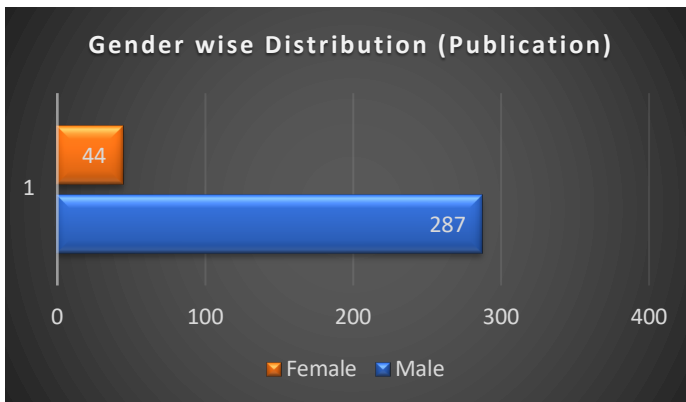


Figure 3: Male and female authors in the selected works

Figure 3 demonstrates the dominance of male voices in the entire data of apocalyptic works.

Classification and Cause Analytics

In the second level of the first phase of data processing, the works were categorized on the basis of the year of publication with reference to the cause of apocalypse to understand the appeal that the contemporary events produced and potentially affected the narration. Classification covered the narrations produced in a period of two and a half decades for first four and twenty-three years for the fourth classification as follows:

Sr. No.	Classification Decades for Cause Analytics
1	1900 – 1924
2	1925 – 1949
3	1950 – 1974
4	1975 – 1999
5	2000 – 2022

Figure 4: Five publication periods for apocalyptic writings

The entire data was filtered to understand the cause analytics of apocalyptic works. Filters were applied to segregate the data into five sections, of which each section consisted of the works written in a period of two and a half decades. Classified data was tabulated separately and graphically reflected to comprehend the dominance of a particular cause in each section. Below shared pie chart Figure 5 portrays the causes of apocalypse as portrayed in the works published during the years 1900-1924.

As reflected in Figure 5, disease was the major cause of the apocalypse in apocalyptic works written during 1900-1924. The dominance of ‘disease’ as a major cause in literary works can be connected with a chain of misfortunes that people witnessed: like the first 1817 cholera pandemic, which affected the lives of more than three hundred thousand people in different parts of the world; the third plague pandemic 1885 which left more than 15 million victims; the Fiji Measles pandemic of 1875, which impacted the lives of more than one-third population of Fiji; and the Russian ‘flu of 1885, which was the first pandemic which started in Siberia and Kazakhstan, travelled to Moscow and made its way into Europe, North America and

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Africa. More than 3,60,000 people died because of this disease.⁶

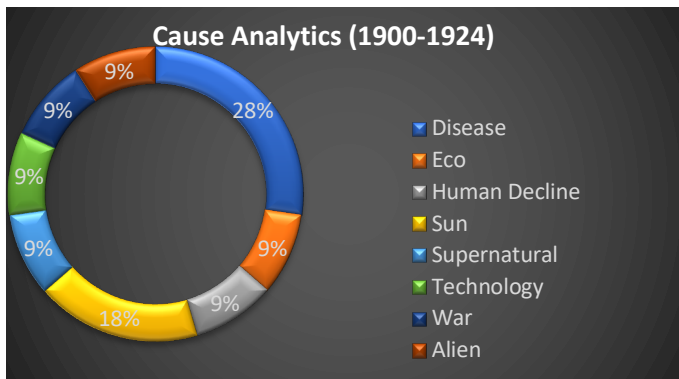


Figure 5: Causes of apocalypse in works published 1900-1924

These adversities potentially influenced the writers, in general, to talk about the concern and imagine in a peculiar way. The learnings from these problems that humans experienced collectively have also been included in the formation of sustainable development goals in which SDG number 3 targets to achieve good health and well-being for all.⁷ Similarly, to pull an alarm and reflect the human experiences, writers also used their literary potential.

World War I altered the face of both humanity and literature. It came as a new possibility that the world never imagined. Clashes, conflicts, and wars were not new to human experiences, but the possibility of the entire world participating in a huge war was never anticipated. The reflection of pain and fear as experienced by the people affected the entire social order. Fear, insecurity, and violence were the general experiences, reflection of which was incorporated in many literary works. Below Figure 6 depicts the cause of the apocalypse as visualized by the authors during 1925-1949. Figure 6 clearly demonstrates the concerns of writers keeping in view the event of World War I. Technology remained the second most repeatedly used cause of apocalypse as imagined by contemporary authors. Literary potential takes the mention from the factual actions and narrates it showcasing the

⁶ Vaclav Smil, 'A Complete History of Pandemics', *The MIT Press Reader*, 30 March, (2020). At: <https://thereader.mitpress.mit.edu/a-complete-history-of-pandemics>. Accessed 06/05/2022.

⁷ United Nations, 'The 17 Sustainable Development Goals'.

imagined possibilities. Anticipating the end of the world through war in their

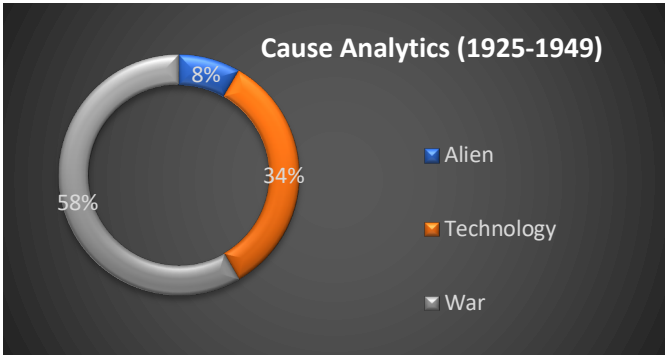


Figure 6: Causes of apocalypse in works published 1925-1949

narration could serve as apprehension for the readers, in general, to make them understand what impact a war can cause. This intent and possible outcome can also be related to the United Nations' address on global issues to ensure peace, justice, and strong institutions.⁸

During the third section of two and a half decades, the major concern that the post-apocalyptic writers emphasized was again war. From 1945-1974, most of the apocalyptic writings revolved around the theme of war. Social conditions were affected by the event of World War II.

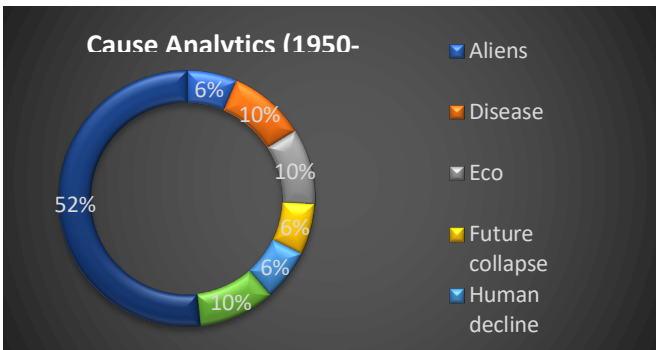


Figure 7: Causes of apocalypse in works published 1950-1974

⁸ United Nations, 'Global Issues', *United Nations*. At: <https://www.un.org/en/global-issues/>. Accessed 01/03/2022.

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Figure 7 evidently reflects that war was the most repeatedly used sub-theme in post-apocalyptic literary works during these two and a half decades. The war affected the day-to-day life of people. It spread a sense of insecurity and fear and broke the trust of people who had the notion that after World War I, another global war would not happen. Novels like *Pebble in the Sky* (1950),⁹ *Red Alert* (1958),¹⁰ and *Dark Universe* (1961),¹¹ are some of the popular works during this period. The other major cause of apocalypse as deliberated by post-apocalyptic writers was ‘human collapse’, which reflected the fall of existing human and social orders.

In the fourth section of two and a half decades, from 1975 to 1999, after ‘war’, ‘ecological imbalance’ was the second most recurrently cited cause to envision apocalyptic events in literary works. The post-traumatic effects of wars and civil struggles for freedom from colonizers were factors that influenced the writers of the era. Moreover, people also started considering ecological imbalance as a threat to the future of humanity on the planet. In 1971, UNESCO started the project *Man and Biosphere* with a goal to spread awareness about the importance of ecology and relationship between man and nature.¹² The discussion about the conservation of natural resources was more often and many government and non-government organizations were formed for the cause and to spread awareness.

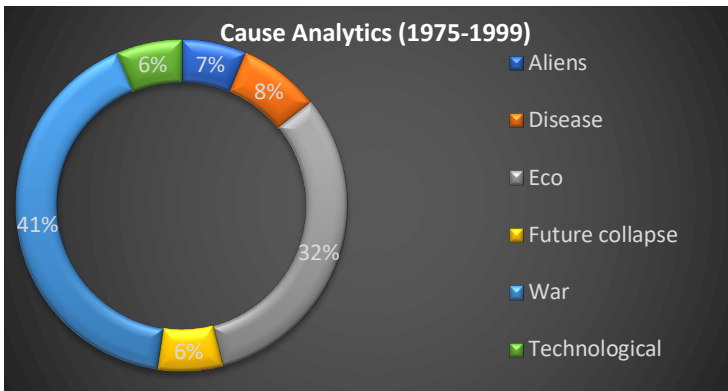


Figure 8: Causes of apocalypse in works published 1975-1999

⁹ Isaac Asimov, *Pebble in the Sky* (London: Harper Voyager, 2019).

¹⁰ Peter Bryant, *Red Alert: A Novel* (New York: Ace Books, 1958).

¹¹ Daniel F. Galouye, *Dark Universe* (Rockville: Phoenix Pick, 2011).

¹² ‘Man and the Biosphere (MAB) Programme’, *UNESCO*. At: <https://en.unesco.org/mab>. Accessed 03/03/2022.

It is evident from the Figure 8 that ‘war’ and ‘ecological imbalance’ were two of the major causes that writers perceived to narrate the post-apocalyptic storyline. Some of the writings delivering the concerns of ecological collapse were *The Quiet Earth* (1981),¹³ *In the Drift* (1984),¹⁴ *The Handmaid’s Tale* (1985),¹⁵ and *Wolf in Shadow* (1987),¹⁶ among others. These writings were also an effort to anticipate the way survivors shall form a post-apocalyptic society after experiencing ecological collapse.

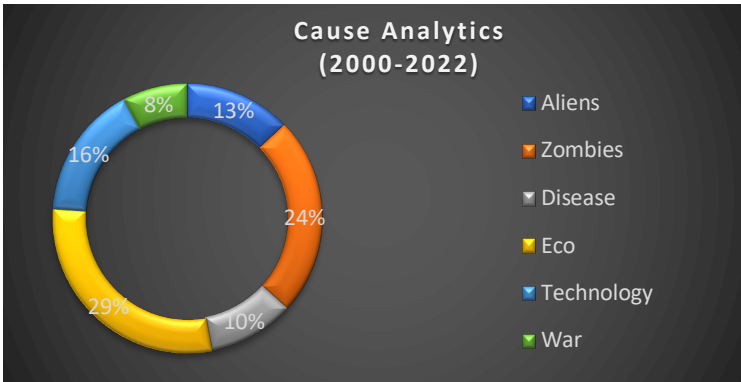


Figure 9: Causes of apocalypse in works published 2000-2022

Figure 9 reckons the genesis of the apocalyptic event as devised by the authors from 2000 to 2022. Three major causes—ecological imbalance, zombies, and aliens—were prominently represented by the authors. *Oryx And Crake* (2003),¹⁷ *The Year of the Flood* (2008),¹⁸ and *The Snow* (2020),¹⁹ are some of the popular fiction works with apocalypse as a major and ecological collapse as a sub-theme.

Apocalyptic Theme and the World

In the next phase of data processing, the data of 331 novels was further processed based on the country of origin with reference to a number of

¹³ Craig Harrison, *The Quiet Earth* (Melbourne: Text Publishing, 2013).

¹⁴ Michael Swanwick, *In the Drift* (New York: Dover Publications, 2017).

¹⁵ Margaret Atwood, *The Handmaid’s Tale* (New York: Random House, 1986).

¹⁶ David Gemmell, *Wolf in Shadow* (Dallas: Little Brown, 2014).

¹⁷ Margaret Atwood, *Oryx and Crake* (London: Virago Press, 2003).

¹⁸ Margaret Atwood, *The Year of the Flood: God’s Gardeners* (Toronto: McClelland & Stewart, 2009).

¹⁹ Flint Maxwell, *The Snow: A Supernatural Apocalypse Novel* (Self Published, 2020).

apocalyptic novels published. Figure 10 showcases data about the country of origin of authors who wrote on the apocalypse theme. The bar graph reflects that the majority of writers who captured the apocalyptic theme in their works belong to the United States of America and the United Kingdom. Other than being a flourishing space for art and literature, these locations witnessed many events which possibly influenced the literary figures to write in the direction where they anticipated such a future of humanity. Those events include World War I, World War II, the industrial revolution,²⁰ England being a colonizer in several parts of the world, the American revolution, and overcrowded cities, among other relevant phenomena. The severity of these events possibly pushed the literary scholarship to pen in this direction.

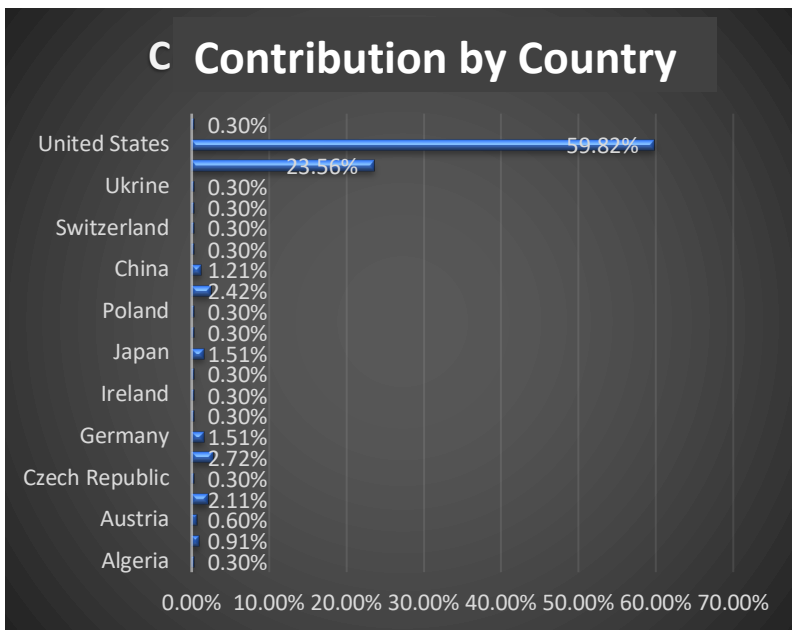


Figure 10: Novels analysed by country of origin

²⁰ Sabrina Soria and Jo Buckberry, 'The impact of industrialization on malignant neoplastic disease of bone in England: A study of medieval and industrial samples', *International Journal of Paleopathology*, vol. 38 (2022), pp. 32–40.

Research on Post-Apocalyptic Writings

In the second phase of the systematic review, the research conducted on the topic of post-Apocalyptic was explored. Two databases—Scopus and Web of Science (WOS), were finalized to investigate the studies. Three keywords—Apocalypse, post-apocalypse, and post-apocalyptic were used to delve into the studies. A total number of 1911 studies were found in Scopus containing at least one of the three keywords in the titles. To scrutinize the data, the search was limited to arts and humanities and social sciences. The studies published in the past decade of 2012-2021 only were considered to crystallize and limit the scope of the present study. Furthermore, the search was limited to conference proceedings, articles, and book chapters with an additional filter of works published in the English language only, whereas book reviews, music performances, radio interviews, editorial materials, and so on were excluded from the database. Following the above-mentioned inclusion criteria, the final number of studies that were considered for detailed exploration was 84.

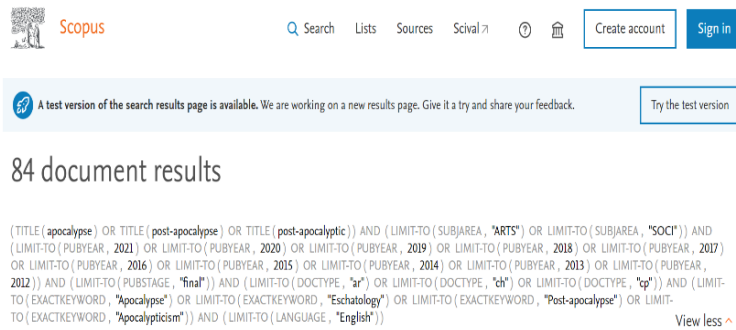


Figure 11: Scopus data results

Figure 11 is the screenshot of the results revealed on the Scopus database after due filtration.

Similarly, the same set of keywords was used to identify the studies in WOS. A total number of 3090 studies were found bearing at least one of the three keywords in their titles. In addition to the inclusion criteria followed for the Scopus database, In Web of Science (WOS), the category was limited to literature, literary theory, criticism, and cultural studies, and the research area was narrowed to literature, cultural studies, and religion. As a result, a

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total number of 113 studies were finalized for detailed exploration.

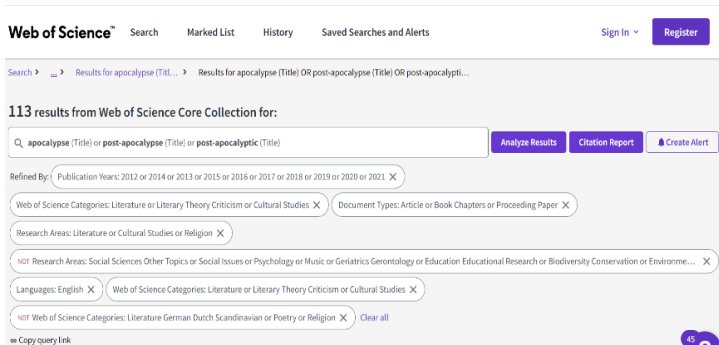


Figure 12: World of Science data results

Figure 13 reveals the search results of the keywords after applying strategic filters. In the process of identification and scrutiny of the relevant studies for further investigation, Prisma guidelines were followed. Figure 14 portrays the step-by-step process followed for excluding or including the studies. Zahava Caspi, in “Trauma, Apocalypse, and Ethics in Israeli Theatre,” identified traumatic experiences of characters as departure elements in Israeli apocalyptic works.²¹ Kristjan Mavri in “Cormac McCarthy’s *The Road Revisited*: Memory and Language in Post-Apocalyptic Fiction” examined ecological, social and psychological changes that occur during and post-apocalyptic event with reference to *The Road Revisited*.²²

Inger-Anne Søfting in “Between Dystopia and Utopia: The Post-Apocalyptic Discourse of Cormac McCarthy’s *The Road*,”²³ examined the relationship between good and evil in the narration to take the storyline to an apocalyptic event. G. Ania (2014), in “Bypassing the End: Three Contemporary Interpretations of Apocalypse”²⁴ examines style, impact and motivation Italian novels titled *l’anno del profeta* (1995), *Una luce*

²¹ Zahava Caspi, ‘Trauma, Apocalypse, and Ethics in Israeli Theater’, *Comparative Literature and Culture*, vol. 14, no. 1 (2012).

²² Kristjan Mavri, ‘Cormac McCarthy’s *The Road Revisited*: Memory and Language in Post-Apocalyptic Fiction’, *Politics of Memory*, vol. 2 (2013).

²³ Inger-Anne Søfting, ‘Between Dystopia and Utopia: The Post-Apocalyptic Discourse of Cormac McCarthy’s *The Road*’, *English Studies*, vol. 94, no. 6 (2013).

²⁴ Gillian Ania, ‘Bypassing the End: Three Contemporary Interpretations of Apocalypse’, *Italian Studies*, vol. 2 (2014), pp. 283–300.

nerissima (2005) and *La ragazza di Vajont* (2008).

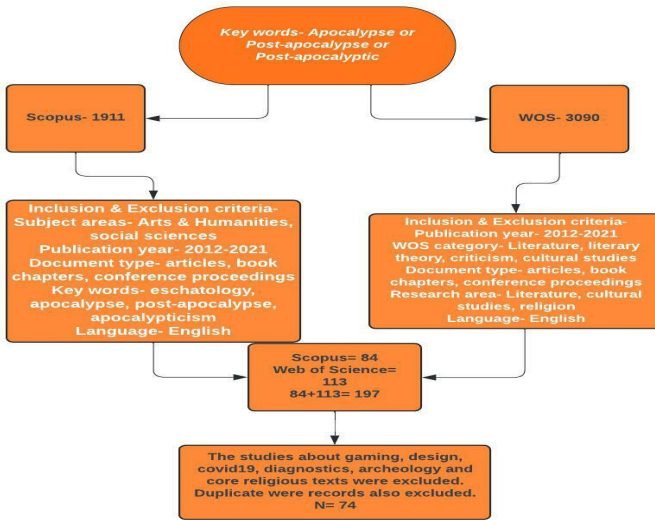


Figure 13: Flowchart of keywords in Scopus and World of Science

Claire P. Curtis analyzes the civic mutual love and attitude that emerges in three post-apocalyptic novels: Marge Piercy’s *He, She and It* (1992), Octavia Butler’s *Parable of the Talents* (1998), and Kim Stanley Robinson’s *2312* (2012).²⁵ Curtis’ research attempted to explore how we might live together in a post-apocalyptic society. Teresa Heffernan explored the significance of the death drive in post-apocalyptic science fiction works.²⁶ She sought to identify the causes of arousal through entertainment in twenty-first century readerships. Erik Larsen explained post-humanistic aspects in Frank Norris’ novel *McTeague*.²⁷ Nai-nu Yang explored dystopian and post-apocalyptic

²⁵ Claire P. Curtis, ‘Post-Apocalyptic Fiction as a Space for Civic Love’, *English Studies in Africa*, vol. 2 (2015), pp. 4–14.

²⁶ Teresa Heffernan, ‘The Post-Apocalyptic Imaginary: Science, Fiction, and the Death Drive’, *English Studies in Africa*, vol. 2 (2015), pp. 66–79.

²⁷ Erik Larsen, ‘Entropy in the Circuits’, *Nineteenth-Century Literature*, vol. 4 (2015), pp. 509–538.

narrative in John Hillcoat's film of Cormac McCarthy's *The Road*.²⁸ Katarzyna Pisarska drew attention to Mikhail Bakhtin's assumptions concerning the literary chronotope; her article explores spatio-temporal relationships in *The Pesthouse* (2007), a novel by contemporary British writer Jim Crace.²⁹ Graham J. Murphy explored apocalyptic survival in Ambelin Kwaymullina's Tribe Series.³⁰ Erica Sollazzo analysed post-apocalyptic concerns and corporate anxiety in Colson Whitehead's best-selling novel *Zone One*.³¹

Eve Nabulya³² explored apocalyptic rhetoric in *Selected Poems* from East Africa. The researcher discussed the employment of fear-evoking images including the characteristics of environmental apocalypse as a means of influencing the attitude of audiences in regard to manifestations of climate change in selected poems from East Africa. Juha Raipola explored visions of post-apocalyptic survival abound in contemporary culture in context with 'comic survivalism' in Laura Gustafsson's *Wilderness Warrior*.³³ Ruxanda Topor discussed William Blake's apocalyptic vision and the revival of British millenarianism.³⁴ Mark Payne explored post-apocalyptic humanism in Hesiod, Mary Shelley, and Olaf Stapledon.³⁵ Andrei-Cristian Neguț³⁶ investigated the transition from the mythological concept of a singular zombie to plural or mass nameless zombies, and the implications for the American post-apocalyptic that this shift represents. Emily Yu Zong

²⁸ Nai-nu, Yang 'Science as an Approach to World Literature: Hard Science Fiction and Post-Apocalyptic Dystopia in Cixin Liu's *Remembrance of Earth's Past* Trilogy', *Fiction and Drama*, vol. 27, no. 2 (2018).

²⁹ Katarzyna Pisarska, 'America of Future Past: The Post-Apocalyptic Chronotope of Jim Crace's *The Pesthouse*', *Roczniki Humanistyczne*, vol. 11 (2015), pp. 275–290.

³⁰ Graham J. Murphy, 'For Love of Country', *Extrapolation*, vol. 57, no. 1-2 (2016), pp. 177–196.

³¹ Erica Sollazzo, 'The Dead City: Corporate Anxiety and the Post-Apocalyptic Vision in Colson Whitehead's *Zone One*', *Law & Literature*, vol. 3 (2017), pp. 457–483.

³² Eve Nabulya, 'A Poetics of Climate Change: Apocalyptic Rhetoric in Selected Poems from East Africa', *Transnational Literature*, vol. 10 (2018).

³³ Juha Raipola, 'Confronting the Apocalyptic Utopia: Comic Survivalism in Laura Gustafsson's *Wilderness Warrior*', *Utopian Studies*, vol. 30, no. 2 (2019), p. 174.

³⁴ Ruxanda Topor, 'Mad Prophets in a Mad World: William Blake's Apocalyptic Vision and the Revival of British Millenarianism', in *The Sense and Sensibility of Madness*, eds Doreen Bauschke and Anna Klammner (Leiden: Brill, 2018).

³⁵ Mark Payne, *Flowers of Time: On Postapocalyptic Fiction* (Princeton: Princeton University Press, 2020).

³⁶ Andrei-Cristian Neguț, 'From Zombie to Zombies, or How The Atomic Era Changed the Post-Apocalyptic', *British and American Studies*, vol. 26 (2020).

examined *Locust Girl*, a 2015 novel by Merlinda Bobis,³⁷ in terms of a critical development of planetarity that prioritizes the ethics of alterity. Stephanie Green explored the theme of obsessive apocalypse in John Logan's *Penny Dreadful*.³⁸ Simon Marsden³⁹ identified the relationship between ecology, nature, and apocalypse in the poetry of Patrick and Emily Brontë. He emphasized the spiritual connection that nature and ecology serve in human life. Michael Scheibach discussed the post-apocalyptic view of six popular novels: *The Shrinking Man* (1956), *Nineteen Eighty-Four* (1949), *A Canticle for Leibowitz* (1959), *On the Beach* (1957), *Shadow on the Hearth* (1950) and *Fahrenheit 451* (1953).⁴⁰ Mohit Sharma and Tanu Gupta⁴¹ investigated the psychological sufferings of the characters in the novel and religious justifications offered by the fellow characters in the narrative.

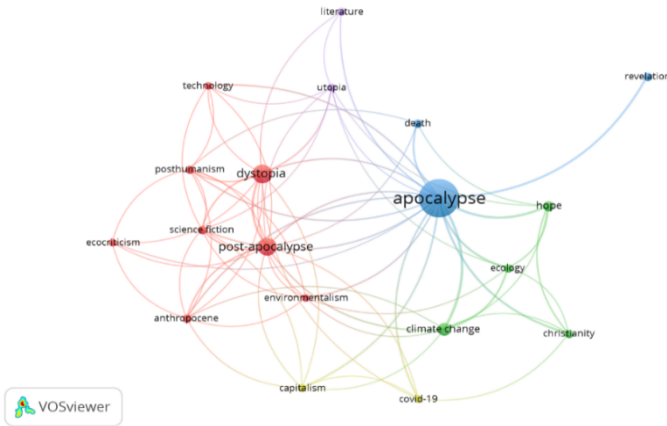


Figure 14: repetition and connection of keywords from the VOS viewer

³⁷ Emily Yu Zong, 'Post-apocalyptic Specters and Critical Planetarity in Merlinda Bobis' *Locust Girl*', *Ariel: A Review of International English Literature*, vol. 51, no. 4 (2020), pp. 99–123.

³⁸ Stephanie Green, 'Vampire Apocalypse and the Evolutionary Sublime: The 'End of Days' in John Logan's *Penny Dreadful*', *Continuum*, vol. 35, no. 2 (2021), pp. 270–81.

³⁹ Simon Marsden, 'Ecological Apocalypse in the Poetry of Patrick and Emily Brontë', *Religions*, vol. 12, no. 7 (2021), p. 546.

⁴⁰ Michael Scheibach, 'Faith, Fallout, and the Future: Post-Apocalyptic Science Fiction in the Early Postwar Era', *Religions*, vol. 12, no. 7 (2021), p. 520.

⁴¹ Mohit Sharma and Tanu Gupta, 'Mental Apocalypse in Margaret Atwood's *The Handmaid's Tale*: Religion as a Tool for Social Coding', *Literary Voice*, vol. 16 (2021), pp. 76–82.

Mapping Cause Analytics of Post-Apocalyptic Literature with SDGs

The entire research data was downloaded from Scopus and WOS and processed in VOS viewer to understand the matrix and connections. Firstly, the keywords which had at least three cooccurrences were identified. Figure 14 (screenshot) exhibits the repetition and connection of keywords as extracted from the VOS viewer. Figure 14 demonstrates that dystopia, climate change, environmentalism, posthumanism, technology, and utopia are some of the repeatedly used keywords with apocalypse and post-apocalypse. This unearths the direction that the researchers broadly followed in their works.

Further, the data was processed in VOS viewer to identify the country-wise contribution in the apocalyptic and post-apocalyptic studies.

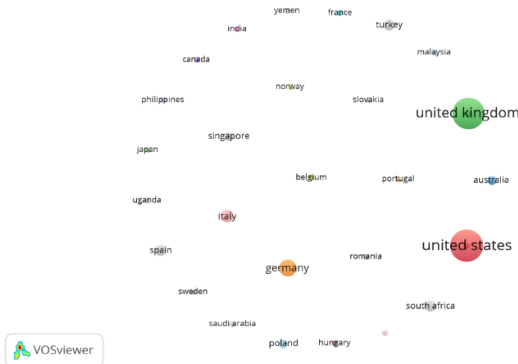


Figure 15: Studies and citations

Figure 15 suggests that researchers from the United States and the United Kingdom conducted a great number of studies on apocalypse and post-apocalyptic. It is also revealed that the studies from the US, UK, and Germany were cited more frequently.

Conclusion

It is evident that various post-apocalyptic writings have strived to represent the concerns of the authors who visualized contemporary events in a particular way. During the two World Wars most of the post-apocalyptic writings like *The Last Continent*,⁴² *The Black Flame*,⁴³ and *The Death*

⁴² Terry Pratchett, *The Last Continent* (London: Doubleday, 1998).

⁴³ Mike Mignola, *B.P.R.D.: The Black Flame* (Oregon: Dark Horse Comics, 2006)

Guard,⁴⁴ focus on social collapse, and the prominent reason remained war. In some cases, authors tried to showcase their concerns about the growing technology and projected technology as another cause of the apocalypse in their novels. The systematic review reflected one more important cause of the apocalypse, which is ecological imbalance. This can be categorized as one of the most relatable concerns which are apt to the current situation. Ecological imbalance is seen as one of the impactful causes that can potentially harm life on our planet. Many modern fiction writings like *The Handmaid's Tale* and *Oryx and Crake* by Margaret Atwood were found to discuss the severity of the ecological imbalance caused by human interventions like radiation, chemicals, and so on, and also visualized post-apocalyptic society. Similar concerns were taken into account in the 2015 SDGs, which widely include all the aspects that policymakers and explorers observed and found affecting life negatively. Ensuring peace, working for life on the planet, and good health and well-being are some of the major concerns that the UN included in their sustainable development goals.⁴⁵ Such inclusion was based on scientific studies but to drive the plan David Hume's consideration of the emotions should also be considered. Hume mentions that emotions and passions are driving forces that keep us motivated to act. Whereas mere ideas and logics take us only to an argumentative flight. So, the emotions, even if reflected exaggeratedly in literature, shouldn't be avoided as they hold a passion delivered to readers, in general, to spread awareness by raising the severity of the impact in the texts.

The studies conducted on the nature of apocalypse as conceived and presented by the authors were also found exploring a variety of angles through numerous literary and interdisciplinary applications like existentialism, psychoanalysis, linguistic analysis, and so on. These studies contribute to unearthing the hidden concerns in the texts. The present systematic review can potentially assist future researchers who wish to pursue their research in exploring the texts containing apocalypse or post-apocalypse as major themes. Sentiment analysis and forensic exploration of the text to identify the traces of the theme presented by the author in her contemporary society can be some of the possible directions for future researchers. For the policymakers committed to ensuring the execution of the plan of action developed for SDGs, it is imperative to consider the role of literature and other forms of arts to include commoners in their endeavours.

⁴⁴ Philip George Chadwick, *The Death Guard* (London: RoC, 1992)

⁴⁵ United Nations, 'The 17 Sustainable Development Goals'.