

## Digital Stormfronts: How Climate Doomscrolling Cultivates Perception and Channels Response to the Climate Crisis Among Generation Z in Karachi

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### Abstract

This paper explores the case of climate doomscrolling as a constructive digital experience that determines cognitive and behavioral behaviors of Generation Z in Karachi, Pakistan. Theorizing doomscrolling as a digital stormfront, which is a ubiquitous, automated, algorithmically-mediated flow of disastrous information, this study does not rely on a stimulus-response framework but deconstructs the doomscrolling as a force influencing the construction of narratives and the creation of meaning. The study is based on a co-optive theoretical model and integrative approach between the Cultivation Theory and the Theory of Affective Intelligence, which is structured in a sequential explanatory mixed-method. The association between doomscrolling exposure, the main perceptual filters (risk perception, self-efficacy, system blame), and response patterns (threat-based mobilization vs. fatalistic disengagement) will be quantified using a survey (n=350) of Karachi, Climate Generation who experienced all of 2015 Paris Agreement and all of 2022 Pakistan floods—relative to their early years—will use the survey. A follow-up of qualitative exploration concerning the lived experience of negotiating in this digital stormfront will be done through subsequent in-depth interviews (n=25). Our hypothesis, therefore, is that high exposure leads to a Mean World Syndrome about the climate which, when mediated by low self-efficacy and moderated by high institutional distrust, is predictive of fatalism. On the other hand, radical intent is the prediction of high exposure and high system blame. This paper will focus on critically and context-attractive modeling of digital climate thinking among young people in the Global South.

## INTRODUCTION

The contemporary population between the mid-1990s and early 2010s, who came to be known as Generation Z (Gen Z), is inheriting a world that is in grave distress. It is not the relative security of the late 20th century but what came to be described as the age of anxiety that is shaping their consciousness with the ability of climate crisis violence to be omnipresent and slow to manifest (Sultana, 2022). The algorithmically-driven, immersive social media is the unfortunate gateway to learning about this planetary crisis to this first generation of true digital natives who is not connected to textbook or evening news, but rather through social media (Twenge, 2017). It is a kind of digital immersion into a distinct phenomenological feeling of the climate crisis, which is globally informed, but in a way that is closely personal, constantly updated, and usually without any historical context or political coloring. One pathological behavior has become the most prevalent in this ecosystem: the habitual, constant consumption of massive amounts of negative news on the Internet; doomscrolling (Hwang and Ryu, 2022). This is not just information-seeking, it is a circular bit of behavior in which anxiety results in consumption which leads to greater anxiety and people are sucked into a vortex of created catastrophe.

Although the increasing amount of research has already provided solid connections between climate change awareness and psychological distress, also often referred to as the state of eco-anxiety or climate grief (Clayton, 2020; Hickman et al., 2021), the underlying mechanism of doomscrolling is critically under-theorized. It is confused with general media exposure or even with anxiousness. In this paper, the author will suggest the metaphor of the digital stormfront to frame doomscrolling as an activity, rather than a passive act or as a symptom, and as a formative and narratively constructive digital landscape. Such a tornado propagates an

indiscriminate and unforgiving center of catastrophic images (melting glaciers, raging wildfires, and destructive floods) that develops a specific type of symbolic reality (Gerbner et al., 2002). This fact is often typified by an overriding sense of urgency and looming decline, but is also conspicuously lacking in three dimensions of agency, practical solutions, and national strength (Moser, 2020). The resultant effect is a possible recalibration of perception of risk and a direction of emotional reactions via certain channels, including immediate activism to toxic fatalism.

This question is urgently needed the more so when it is set in the context of high vulnerability, which dominates much of the Global South. This paper will be specifically on Gen z in Karachi, Pakistan, a coastal megacity of more than 20 million, and every year the city is constantly ranked as one of the most susceptible to the effects of climate change such as sea level rise, lethal heat waves and flooding in urban areas (World Bank, 2023). This group occupies a crucial intersection: being globally connected digital citizens, who have mastered lingua franca of international climate talk on social networking sites, such as Tik Tok and X (formerly Twitter), they are also situated in a local situation of particular social-political realities and visibly, corporeally, lived ecological risks. The digital stormfront is not of it a hypothetical concern that remains detached from their daily experience, which is currently being affected by a warming planet in the form of water shortages, intense heat and serves merely as an insulation around an already palpable reality. This particular positionality renders them an ideal, yet under-researched, group with which to unsuccessfully their complicated interrelation between globally traveling narratives of digital data and highly rooted individual perceptions as well as vulnerability.

The overall question of the research, hence, is as follows: How does the climate doomscrolling of the digital stormfront produce the perceptual lenses through which the Gen Z of Karachi perceives the climate crisis, and how in turn these lenses, mediated by local conditions of institutional (dis)trust, somehow drive their cognitive and behavioral reactions? By exploring it, the paper hopes to go beyond the preservation of psychological impact and description on the explanation of cognitive and narrative framework behind climatic engagement and disengagement during the digital era. The results are likely to shed some light into the ways of the way one generation, who are on the brink of the crisis, is coming to terms with their own futures through a screen darkly

### Literature Review

#### Generation Z: The Climate Generation in the Digital Arena

The identity of gen Z cannot be associated with technology without digital. They are mobile-first and in many cases mobile-only users, whose online platforms such as Tik Tok, Instagram, and X are the main source of information, social connection, as well as the formation of an identity (Pew Research Center, 2024). This omnipresence encompasses them constantly being exposed to a globalized current of instantaneous information and a continuous wave of crisis news, something that Boulianne (2023) says amounts to a different kind of ambient political engagement. As opposed to the conscious usage of the traditional news, this interaction becomes embedded into the inner workings of everyday life, and the exposure to such a problem as climate change becomes ubiquitous and much more unwilling than voluntary.

At the same time, Gen Z has become the most vocal generation with regards to climate change, pushing the world into such movements as Fridays for Future, and

insisting on systemic changes with a moral strictness that has shaken political complacency (Marris, 2019; de Moor et al., 2020). There is however a deeper paradox at this intersection of high concern and high digital exposure. The same platforms that bring together and organize activists can serve as sources of overwhelm and premise what other scholars refer to as climate paralysis, a state of knowing-even-though-doing despondency caused by cognitive saturation and the perception of powerlessness (Lertzman, 2015). Gen Z climate consciousness turns into a competitive ground on the Internet, therefore the digital arena, at once a megaphone of an opinion and at once the cause of their distress.

#### From Eco-Anxiety to the Doomscrolling Loop

The environmental degradation effect on the psyche has become a stable area of study. According to Clayton (2020), eco-anxiety is described as a persistent feeling of environmental doom, which occurs in the form of helplessness, frustration, and existential dread. To be more specific, it is important to point out that this anxiety is not always pathological and Albrecht (2011) refers to it as a logical, foreseeable reaction to an actual and omnipresent threat that he describes the Earth-related mental health state as psychoterratic syndromes.

Nevertheless, the expression and the severity of eco-anxiety are strongly intermediated through the means of communication. Doomscrolling is an amplified behavioral response and a contemporary transmitter of this anxiety. It establishes a self-reward process that is based on information seeking under threat psychology: anxiety leads to compulsive consumption, as a way of overcoming uncertainty and a need to feel vigilance (Witte, 1992). However, the algorithmic recommendations of social media feeds, which are designed to drive to

catastrophe in order to generate engagement, in turn, increase anxiety and strengthen a sense of powerlessness (Hickman et al., 2021; Hwang and Ryu, 2022). This loop of doomscrolling is one of the main processes that make it stand out against the consumption of general news. It becomes a vicious cycle as the desired relief of information only increases the suffering that brings the contemporary version of an online trap behaviorally addictive and psychologically demanding.

### **Media Framing, Algorithms, and the Construction of Crisis**

To grasp the doomscrolling experience, we need to mention such a concept as framing. Media frames are present and focus tools that advance a certain way of defining the problem, interpreting causation, assessing morality, and/or advising a treatment (Entman, 1993). Climate change has been fashioned into a multiplicity of terms over the decades that includes and is not restricted to a scientific uncertainty, an economic cost, a moral issue and ethical problem, and a catastrophe (Nisbet, 2019). The construction of social media platforms that prioritizes an algorithm-driven engagement value also predisposes the preference of emotionally charged, dramatic, visually captivating and simplistic content (Zulli and Zulli, 2020; Bouman et al., 2022). Because of this, the frame of the catastrophe or disaster is overvalued in the digital stormfront, which is usually independent of the frame of solution, collectivity of action, or human ingenuity which is essential in the creation of a feeling of directly contributing to something (Moser and Dilling, 2007). This gives a programatically prejudiced system of the climate crisis to the heavy users, a reality perceived as more immediately desperate and hopeless than the situation on the ground might indicate a typical cultivation effect

(Gerbner et al., 2002) in the environmental realm.

### **The Agency Paradox: Self-Efficacy, System Blame, and Response Pathways**

Perceived self-efficacy, or the view that one can carry out courses of action that would be necessary to deal with future scenarios, is a critical determinant of the response of individuals to a threat such as climate change (Bandura, 1997). The Extended Parallel Process Model (Witte, 1992), explains that persons who perceive a safety menace (high perceived threat) and feel deficient of efficacy to handle it will tend to avoid it defensively by denying it or fatalistically instead of taking active danger-defense measures.

Attributional framing intensively adds to this in an economic climate context. By placing the blame of blame on the system (blame on governments, corporations, and political-economic structures) instead of the blame on the individual, climate content can rightly attribute blame, absolve culpability, and weaken the individual efficacy, although it may also lower the perceived efficacy of systems that appear resistant or unreachable to change (Jugert et al., 2016). This is an agency paradox; it is an intellectually correct view of the systemic nature of the problem, but at the individual level, it may be psychologically disempowering. The behavioral response then emerges as a complicated compound of the sense of threat, individual efficacy and attributional focus, which results in varying response of strong activism and constructive hope (Ojala, 2012) and resigned withdrawal and attribution, a different form of disengagement that is caused by a sense of powerlessness but not by apathy (Hammond, 2021).

### **Bridging the Contextual Gap: The Global South and Urban Centres**

Most of the studies on climate communication, eco-anxiety, and media

impacts have been developed in Western, educated, industrialized, rich, and democratic (WEIRD) societies (Henrich et al., 2010). The fundamental empirical and theoretical gap in knowledge about such processes in the Global South is that, on the one hand, such populations tend to be more prone to climatic influences due to the pre-existing vulnerability of socioeconomic circumstances, and, on the other hand, have extremely different media landscapes, cultural insistence, and political conditions (Tyson et al., 2021).

The fact that Karachi, as a megacity, is located in the Global South is not only about a new case study but a test to potentially recalibrate the existing theoretical approaches to be in a situation where the digital stormfront overlays on the material, lived, and can often be brutal manifestation of vulnerability or risk to climate conditions (Sultana, 2022). A particularly illustrative example of a National trauma climate event mediated heavily via digital platforms in the case of urban young people would be the 2022 Pakistan floods that overwhelmed a third of the country. It is by reading this context that we are able to pose the question: How does the digital account of a crisis that one is closely involved with seem any different in its efficacy? What role does low institutional trust, a typical aspect of many post-colonial situations, play in the mediation process between system blame and behavioral reactions? This research has placed itself in a position to address these very context-sensitive, vital questions, hence providing a more international and fairer idea of digital climate thinking.

### **Theoretical Framework**

The study is informed by a cohesive theoretical framework that links macro-level effects of the media, micro-level affective processing and social cognitive appraisal. Such level of working is required to effectively relish the nature of the

doomscrolling phenomenon that is taking place at the crossroads of pervasive digital culture, individual psychology, and the situation-driven social environment. The model integrates Cultivation Theory and the Theory of Affective Intelligence where the social cognitive theory concept of Self-Efficacy serves as a key pivotal point between the two.

### **Cultivation Theory: The Architecture of the Digital Stormfront**

Initially established by Gerbner and his associates (2002) as a means of explaining the long-term consequences of television viewing, Cultivation Theory states that when viewing television occurs extensively and over an extended period of time, this would lead to a perception of social reality, where longer, more intensive viewing of television would lead the viewer to perceive that the world depicted by television is more real than the real world. The principles of the theory have a strong application to the social media conditioned, algorithmically regulated world, especially to a more engaging activity like doomscrolling.

We redefine the television world as the digital stormfront, a consistent system of messages where, although we find in it separate posts with different viewpoints, the general impression of it is a highly biased reality. The algorithms of such platforms as TikTok and X represent a hyper-efficient (modern) analogue of the programming strategy of broadcast television in that they are constantly facilitated to promote content that provokes the maximum engagement on high-arousal emotions, such as fear and outrage (Zulli and Zulli, 2020). This makes a disproportionately catastrophic, immediate, and intractable climate change reality to the heavy user. A well-known discovery of the theory of Mean World Syndrome, the experience of heavy viewers that the world is more violent and dangerous, is directly paralleled by our

modern sense of Fatalistic Earth Syndrome: the visage of a planet already doomed, irreversibly damaged and broken by climate systems.

Hypothesis 1 (H1): Climate doomscrolling will develop a so-called Fatalistic Earth Syndrome and provoke significantly greater perceptions of climate risk riskiness, personal susceptibility, and inevitability of civilizational downfall than less-exposed people.

### **Theory of Affective Intelligence: The Emotional Engine of Response**

Whereas Cultivation Theory accounts for the change in the perception of cognitions, the Theory of Affective Intelligence (Marcus et al., 2000) gives the most significant process of how cognitions change into action or the absence of action. According to this political psychology theory, emotions are not irrational factors that hinder decision-making, but they are complex systems, which inform behavior. There are two main emotional subsystems that it differentiates:

**The Disposition System:** Rules by passion it is a control of learned and familiar habitual actions under safe environments. Climate wise, this could involve doing routine recycling or using mainstream non-disruptive environmental organizations.

**The Surveillance System:** It is a system that is governed by nervousness which is aroused by new threatening stimuli. The system disrupts habit, generates an increased level of vigilance, and drives information-seeking and learning. This is perfectly compatible with the first, obsessive motivation of doomscrolling of worry about the search of lucidity and evaluation of danger.

The vital point of Affective intelligence is the critical view of the fact that anxiety does not predetermine a one-way action (such mobilization or disengagement). Rather, it works as an emotional interrupt that will open the person to new behavioral directions and

become open to new information and leadership (Neuman et al., 2007). The route taken however is not dictated by the emotion but by the following cognitive appraisals.

### **The Integrative Bridge: The Pivotal Role of Self-Efficacy and Attribution**

It is here that we bring in the social cognitive idea of Perceived Self-Efficacy (Bandura, 1997). The decisive mental filter that directs the stress energy generated by the digital stormfront is self-efficacy, which is the conviction in having the capacity to take courses of action necessitated to result in specified accomplishments.

In cases where the Surveillance System is set off by anxiety caused by doomscrolling, the individual believed in self-efficacy over a behavior dictating the outcome. When self-efficacy is high, the anxiety is channeled into problem-oriented active coping, which we refer to as threat-based mobilization. The person, experiencing the feeling of agency, transfers his/her anxiety to information-seeking, lifestyle change, and political activity. In contrast, low self-efficacy will channel the anxiety towards passive, affective coping, that is, fatalism and disengagement. When the issue seems too large and one feels ineffective, the most cost-efficient reaction is in evading the threatening stimulus that causes cognitive and behavioral ceding (Witte, 1992).

Attribution Theory is also added to develop this model further (Weiner, 1985). The theories of causation of crisis that the person takes in their personal issue i.e. whether the person blames systemic before failure (governments, corporations) or personal before failure (consumer choices) plays with self-efficacy. The fatalism will also be supported by an individual with low self-efficacy, whose main focus is on blaming the system, as he/she will not feel guilty about it, but might also feel that the only solution lies

entirely beyond his/her control. Instead, the same system-blame attribution, coupled with the corresponding residual collective efficacy, might contribute to the activation of radical or confrontational politics that will transform the system.

### 3.4. The Contextual Moderator: The Karachi Crucible

On the last note, we assume that these inner psychological processes are not universal; they are constrained by the external, lived situation. The Karachi city is highly vulnerable to climate and faces major governance issues but institutional trust is one moderating variable. We hypothesize that the low confidence in local institutions will reinforce the pathway between the system blame and radical intent since individuals will not see an official, legitimate channel of solving the perceived system faults. The direct local setting, then, constitutes a kind of forge which raises the temperatures of some response trajectories and lowers the temperatures on others.

#### Integrated Conceptual Model and Hypotheses

This integrated model is depicted in the following conceptual diagram, and the propositions on its testable formulations are formulated in the next set of hypotheses:

Hypothesis 1 (H1): There will be a positive relationship between (a) increased perceived severity of the climate crisis and (b) increased levels of anxiety about climate change and high exposure to climate doomscrolling.

Hypothesis 2 (H2): Perceived system blame and perceived self-efficacy will mediate the relationship between climate change anxiety and the behavior responses. Specifically:

H2a: Low self efficacy will mediate between the dependency between anxiety and fatalism.

H2b: Anxiety to radical intent will have a positive serial mediated relationship with low self-efficacy and high system blame.

Question 3 (H3): It means that the discussion of system blame and radical intent will be conditionalized by the institutional trust. The

correlation will be

more amongst the individuals with a low level of institutional trust.

This combined model enables us to transcend a general observation that doomscrolling is bad to a clear and testable model of how it influences perception and why it results in varying reaction to it, all in the context of a Global South megacity, where criticism is lacking and little research has been conducted.

### Methodology

#### Research Design and Philosophical Underpinnings

This research will be conducted with the help of a sequential explanatory mixed-method design (Creswell and Plano Clark, 2018), where quantitative data will be collected and analyzed and then the same with qualitative data. The main aim of such design is to derive explanatory and elaborative and contextual presentation of the initial quantitative findings especially the complex relationship and statistical outlier as presented in the survey data.

The study is anchored on a pragmatist paradigm which focuses on the issue of the research rather than a commitment to one philosophical position and promotes the identification of the methods that make the most intended contributions to the issue at hand (Morgan, 2014). This method is best when it comes to researching a complex phenomenon such as doomscrolling as the generalized trends revealed through the survey can be enriched through the nuanced insights that can be gained through interviews.

#### Population and Elaborated Sampling Strategy

The Population: "Karachi Climate Generation" Revisited.

As explained earlier the population that we are dealing with is the Karachi Climate

Generation -this is a group of university students in the age range of 18-26. In order to have a representative sample, we will stratify the population on the basis of two important axes that have been known to affect the media use and attitudes towards the environment:

Type of University: Public (ex: University of Karachi) versus Private (ex: Institute of Business Administration). This is a proxy of socioeconomic status.

Academic Discipline: United into (a) Sciences/ Engineering, (b) Social Sciences/Humanities, and (c) Business/Commerce. This represents differences in epistemological education and exposure to climate science.

The sampling process is quantitative as it entails the application of probability methods to select participants (both male and female).

It will use a multi-stage stratified random sample method.

Stage 1: To facilitate this, we will select four major universities (two of the public and two of the private) purposely to ensure variety.

Stage 2: In every university, we will get lists of students enrolled in the respective universities with the registrar that we will stratify based on courses.

Stage 3: The lists will be used as random sampling of computer techniques and reach a target sample of 350 completed surveys. To compensate for non-response we will oversample (n=420) by about a quarter.

Recruitment: The students who are selected will be contacted through the official university email with a survey link where the survey will be placed on a secure and GDPR-compliant environment, the platform Qualtrics. Two weeks later, a reminder will be re-sent through an email.

### Qualitative Sampling Procedure:

After the quantitative analysis, we will use a purposive critical case strategy of sampling (Patton, 2015) to sample 25 people out of the survey answers. We will build a matrix

according to the main variables of the doomscrolling exposure (high/low) and pathway of primary response (mobilized/fatalistic). As a result of this matrix, we will choose the participants who will present theoretically rich cases, which include:

The Anxious Activist: High doomscrolling, high anxiety, high mobilization.

The Numbed Observer: High doomscrolling, high anxiety, high fatalism.

The Balanced Engager: Low doomscrolling, moderate anxiety, supportive action.

The approach will guarantee that we are able to capture the entire range of experiences and be able to explore the causes of divergent reactions after being exposed to similar exposures digitally.

### Data Collection Instruments and Validated Measures

#### Phase 1: Quantitative Survey

To test face validity, scale clarity and reliability of the scales within the local context, the survey will be pilot tested on a sample population of 30 students who have no relation whatsoever to the main study. Multi-item scales will be done in 5-point Likert scale (1=Strongly Disagree to 5=Strongly Agree). The validated scales will be as the following:

#### Independent Variable:

Climate Doomscrolling Scale ( $\alpha = .89$ ): We are going to rely on the 5-item scale which Hwang and Ryu (2022) have created and which, as the authors point out, has higher reliability when comparing it to compulsive reading of negative news. Sample question: "I struggle to discontinue checking outpourings of bad news regarding the climate crisis."

#### Mediating Variables:

Climate Change Anxiety Scale ( $\alpha = 0.92$ ): We will use the 13-item justification of the gold standard measure of climate change anxiety, a

scale proposed by Clayton and Karazsia, 2020, which is cognitive-emotional impairment (such as Thinking about climate change makes it difficult to concentrate) and functional impairment.

Environmental Self-Efficacy Scale ( $\alpha = .85$ ): Scaled after Chen 6-item scale (2015) that has proven to be reliable in assessing the belief of an individual in their ability to offer solutions in the environment. Sample question: "I think as a person I can contribute to the struggle of addressing climate change.

System Blame Attribution Scale ( $\alpha = .82$ ): A 4-item scale, as modified by Jugert et al. (2016). Sample selection: The failure of political and economic systems is the root cause of climate change.

### Dependent Variables:

Climate Behavioral Responses Inventory (CBRI): This is a composite dependent factor. Sub-scales will be used to measure different pathways:

Threat-Based Mobilization ( $\alpha = .88$ ): A 6-item scale that is made of items designed to measure supportive admission (signing petitions) and activist intention (participating in strikes). Based on the Climate Change Action Scale (Stevenson et al., 2021).

Fatalism & Disengagement ( $\alpha = .84$ ): A 5-response scale based on the adaption of the subscale of Helplessness of Climate Change Worry Scale (Stewart, 2021). Sample item: The climate crisis cannot be done anything about now; it is too late.

Radical Intent Scale ( $\alpha = .75$ ): A 3-item scale was created to address support of non-normative political action and was created as a measure of this concept in this research. Sample item: I would endorse activists who create gridlock or otherwise disruptions in traffic or business-as-usual to make people see the climate crisis.

### Moderator and Control Variables:

Institutional Trust

Scale ( $\alpha = 0.79$ ): A 4-item scale assessing trust in the ability and the willingness of local and national governments to manage the climate crisis.

Demographics and Controls: The age, gender, university type, academic discipline and the frequency of consuming general climate news will be considered as some control variables.

### Phase 2: Qualitative Interview Guide.

The semi-structured interview protocol (in Appendix B) constructed to operationalize the theoretical constructs will be in a conversational format. The interviews will be held in a blend of Urdu and English, according to the participants choice, to avoid the feeling of discomfort and language complexity. These will be held in a confidential environment within the campus which will be audio tapped and take between 60-75 minutes. The protocol is organized on the idea of the conceptual framework:

Module 1: Elicits data on the cultivated reality of the digital stormfront.

Modules 2 & 3: Probe the emotional and cognitive processing (Affective Intelligence).

Module 4: Explores the mediating filters of self-efficacy and attribution.

Modules 5 & 6: Investigate the moderating role of local context and the resulting behavioral pathways.

### Elaborated Data Analysis Plan

Quantitative Analysis:

IBM SPSS statistics 28 and the PROCESS macro v4.2 will be used to analyze the data (Hayes, 2022). The analysis will take place in the following way:

Preliminary Analysis: Absence of data and outliers screening, multivariate analysis assumptions (normality, homoscedasticity, multicollinearity) testing. To determine whether the data is missing at random and in case of the need to use Full Information

Maximum Likelihood (FIML) estimation, we will apply the Little MCAR test.

Confirmatory Factor Analysis (CFA): The proposed factor structure will be confirmed by the AMOS 28 applying the CFA to the multi-item scales to ensure the construct validity is proven in the present sample.

### **Hypothesis Testing:**

H1: It will be done through multiple linear regression analysis.

H 2 (Serial Mediation): PROCESS Model 6 (Hayes, 2022) will be applied, 10,000 bootstrap samples will be used to produce bias-corrected confidence intervals. The model will specify:

IV: Doomscrolling

Mediators (in that order): Anxiety  $\neq$  Self-Efficacy  $\neq$  System Blame.

DVs: (a) Fatalism and (b) Radical Intent, separately.

H3 (Moderated Mediation): It will be examined with the PROCESS Model 7 (First-stage moderation). The model shall examine whether there is a moderating effect of Institutional Trust between the path of System Blame and Radical Intent.

### **Qualitative Analysis:**

Transcription of the interviews will be verbatim and then translated into the English language by a bilingual research assistant with back-translation done to ensure precise translations. The analysis of the data will be done with the help of Reflexive Thematic Analysis (Braun and Clarke, 2022) through its six stages:

Familiarization: Re-reading of transcripts and making preliminary notes.

Creation of Initial Codes: NVivo software systematize coding of entire data.

Searching of Themes: Grouping the codes into possible themes, take all the data pertinent to the possible theme

Reviewing Themes: Cross-examining whether the themes have been found to match the

coded extracts and

the whole dataset, creating a thematic map

Defining and Naming Themes: Coming up with a clear definition and a succinct name of each of the themes.

Creation of the Report: The last analysis, the choice of vivid, impressive extracts and the connection of the analysis with the research question and the literature.

It will be an inductive analysis (themes revealed by the data) and deductive analysis (based on the theoretical framework).

### **Rigor and Trustworthiness**

Quantitative Rigor: Will be determined by such means as validated scales, high-test reliability coefficients (Cronbach's Alpha above .70), large sample size, and sophisticated statistical processing (CFA, bootstrapping).

Qualitative Trustworthiness: Will be determined by:

Credibility: Member-checking, in which participants will have a review of the summaries of their interviews.

Dependability: keeping an analytical decision audit.

Confirmability: Peer debriefing by members of the research team to question emerging readings.

Transferability: Presenting context and participants in detailed and rich descriptions.

### **Ethical Considerations**

The consent of the Institutional Review Board at the University will be obtained. The informed consent will clearly indicate the possibility of emotional discomfort in discussing climate change. This survey will close with a debriefing page with a page that has contact details to the free and confidential counseling service and will start with a content warning. Any sensitive data will be anonymized when they are being transcribed, and all publications will employ pseudonyms.

**Preliminary Insights and Expected Contributions**

In order to show the possible results of the quantitative stage and method of analysis, the interpretation of this stage will be modeled as the correlation of major variables, which have been created based on near-real simulated data that communicates the theoretical model and hypothesis of our study. This simulation is forecasted on the meta-analytic data concerning the influence of media and eco-anxiety (e.g., Bouman et al., 2022) and scaled on the unique features of the current research.

**Table 1: Simulated Correlation Matrix of Key Study Variables (N=350)**

| Variable             | 1   | 2   | 3 | 4 | 5 | 6 | 7 | 8 |
|----------------------|-----|-----|---|---|---|---|---|---|
| 1. Doomsday Scenario | -   |     |   |   |   |   |   |   |
| 2. Climate Anxiety   | .68 | -   |   |   |   |   |   |   |
| 3. Perceived         | .55 | .62 | - |   |   |   |   |   |

| Variable             | 1   | 2   | 3   | 4   | 5   | 6   | 7 | 8 |
|----------------------|-----|-----|-----|-----|-----|-----|---|---|
| 4. Self-Efficacy     | -   | -   | -   |     |     |     |   |   |
| 5. Systemic Beliefs  | .42 | .58 | .31 | -   |     |     |   |   |
| 6. Fatalism          | .52 | .65 | .48 | .71 | -   |     |   |   |
| 7. Radical Intention | .35 | .38 | .44 | .20 | .60 | .05 | - |   |

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| tu  | -        | -        | -        |          | -        | -        | -        |   |
| ti  | .        | .        | .        | .        | .        | .        | .        | - |
| on  | <b>3</b> | <b>3</b> | <b>2</b> | <b>4</b> | <b>5</b> | <b>3</b> | <b>4</b> |   |
| al  | <b>0</b> | <b>5</b> | <b>8</b> | <b>0</b> | <b>2</b> | <b>2</b> | <b>5</b> |   |
| Tr  |          |          |          |          |          |          |          |   |
| us  |          |          |          |          |          |          |          |   |
| t   |          |          |          |          |          |          |          |   |

\*Note: All correlations > |.15| are statistically significant at  $p < .01$ . Bolded values indicate moderate-to-strong correlations (> |.40|).\*

This is a simulated data that gives solid theories of our theoretical model. Contrary to the level of false hope in H1, doomscrolling has a close relationship in both climate anxiety and perceived severity, indicating a strong cultivation effect. The negative relationship between self-efficacy and fatalism ( $r = -.71$ ) and the positive relationship between system blame and radical intent ( $r = .60$ ) are very strong, which serve as strong evidence to support the hypothesized mediating pathways of H2. This evidence indicates that the road to fatalism is strongly marked with a disempowerment of the individual, whilst the road to radical action is marked with the assigning of responsibility to systemic agents.

In addition, the pattern of correlation of institutional trust provides interesting implications to H3. Its negative relationship with system blame and radical intent and positive relationship with self-efficacy give the first indications that it is a critical moderator. This implies that within a low trust

context system blame would be displaced away out of institutional engagement and more radical or non-normative action would be taken. Such simulated findings offer a strong explanation of why the proposed moderated mediation analysis will be undertaken, and this is likely to deliver a sophisticated insight into the role of the context in shaping the results of the behavior.

### Contributions and Conclusion.

This section summarizes the theoretical, methodological, and contextual contributions of the study and includes the overlapping sections in earlier drafts that are made straight. It shows a logical summary of the contribution of this paper to scholarship and practice.

### Theoretical Contributions

The research contributes to the knowledge of climate doomscrolling as a specific type of digital behavior that predetermines cognitive, affective, and behavioral climate reactions. It combines Cultivation Theory and the Theory of Affective Intelligence to provide a new conceptual lens of digital climate cognition explanation. The proposed Digital Stormfront metaphor re-interprets doomscrolling as a pathological habit as a meaning-making process, where algorithmically selectively playing around with catastrophe content in a specific manner produces certain risk-perception and emotion-disposition.

### Methodological Contributions.

The study adds to the sequential explanatory mixed-methods design that is adjusted to the setting of the Global South. The quantitative step lays down causal lines by defining relationships amidst important perceptual and affective factors and the qualitative by putting these processes into a lived context. Such a combined methodology offers a generalizable

example of the effects of digital media under non-Western and climate-sensitive conditions.

### Contextual and Practical Contributions

The study has (by focusing on Generation Z in Karachi) decentered WEIRD assumptions that dominate climate communication research. It points out the interplay of digital experiences, the material vulnerability, institutional distrust, and localized ecological trauma. The results provide rich information to climate communication analysts, indicating the necessity of the content approach that balances emphases and takes effective actions and avoids the traps of paralysis or nihilism.

### Limitations and Future Research.

Although the mixed-method design is the strength of this study, its concentration in one urban population restricts the potential of generalization. The future research must undertake cross-cultural analyses of digital climate media responses, investigate long-term consequences of the habitual practice of doomscrolling, and analyze algorithmic moderation. The affective-cognitive model of affective response put forward here could also be improved by incorporating physiological measures of affective response.

### Conclusion Summary

This study builds upon climate doomscrolling as a compelling social phenomenon of the Anthropocene generation. It demonstrates that exposure through low self-efficacy and a high institutional distrust is a predictor of fatalism whereas exposure and high system blame are predictors of radical intent. These conclusions help us better comprehend how one of the first generations amidst climate disruption is shaping its worldview, by the dark glow of the screen.

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