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Editor's Note

The 2022 issue of the Asian Journal of Resilience (AJR) features one research article about the narrative of one individual's resilience amid adversities. The second article is a review that illustrates evidence of human resilience in prehistoric southeast Asia. The first article presents a psychological approach to individual resilience, while the review article suggests a historical perspective on human-environment interaction related to resilience and adaptation.

In her article, *Transcending Adversity: A Narrative Study*, Lorizza Mae C. Posadas-Gacott highlighted the character strengths of one individual - a mother, spouse, and educator; and how those qualities helped her thrive and emerge positively despite her multiple roles with corresponding adversities. The narrative is an inspiration to those who can relate to the same.

The *Correlation of the Changing Landscape and the Subsistence Patterns: Reviewing Archaeological Evidence of Prehistoric Human Resilience of Southeast Asia*, authored by Jerone Avel S. Cansino, substantially argued the dynamic relationship between landscape and culture, that is, human-environment interaction and how each influenced each other's resilience development.

Due to the limited quality submissions, AJR released only two articles. Despite this, these two contributions are significant additions to the existing body of knowledge about individual and human-environment interaction resilience. The AJR Editorial Board appreciates the authors, reviewers, and editors of these two articles. The publication of this issue has again been made possible by their significant input and support.

Jemimah G. Pizarro-Ompad
Managing Editor

Transcending Adversity: A Narrative Study

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Lorizza Mae C. Posadas-Gacott¹

Abstract

This qualitative research explored the character strengths of an individual who could thrive and succeed in the aspects of marriage, motherhood and family relations, studies, and work-related endeavors amid adversity. This study was anchored on a narrative approach, where qualitative data was collected through a semi-structured interview. Directed approach content analysis revealed five major virtues based on the character strengths and virtues identified by Peterson and Seligman (2004). Wisdom, courage, humanity, temperance, and transcendence helped the participant handle hardships. The specific character strengths are 1) perspective in handling finances, 2) perseverance amidst multiple roles, 3) kindness as a source of nurturing behavior, 4) love while playing various roles in the family, 5) self-regulation in managing finances, 6) spirituality as the source of faith, 7) meaning, and purpose, 8) gratitude in the presence of peripheral support, and 9) hope on her ability to affect the future. The study presents experiential proof that transition points and their simultaneous effects on personal, family, school, and work relationships do not inherently deprive a mother's ability to overcome challenges, especially with the presence of character strengths. Implications for positive psychology and positive institutions are also discussed.

Keywords

character strengths and virtues, marriage and motherhood, positive psychology, transcending adversity, work and family

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1. Introduction

The family is one of the “positive institutions” that gear individuals to become better citizens with a sense of responsibility, discipline, humanitarianism, politeness, temperance, patience, and value system (Seligman & Csikszentmihalyi, 2000). Despite some vagueness on its boundary, the family's notion as the basic unit of a society composed of people connected by blood or emotion has thrived. Regardless of marital or civil status, it is believed that family members, particularly the spouse or the husband and wife, play a vital role in maintaining harmony and honing the family members' future, as per the functionalist perspective. Moreover, it is a tradition for many married couples, regardless of religious affiliation, to be together and help each other during the best and worst times. When people are reared in positive institutions, positive values are likely to develop, which bring positive societal implications.

Despite some uncontrollable and unexpected cases, not all couples fruitfully raise and maintain a family that shows interpersonal harmony, successful descendants, stable financial resources, and a happy household. In positively functioning families, circumstances like these may be transcended, given that either of the partners goes the extra mile to meet their partner's limitations (Cundiff, 2012).

Moreover, many self-help books and articles promise success and happiness while juggling different roles, especially among women. Tips on how to be a good partner, wife, and parent, and even how to be an effective leader, had proliferated, targeting busy women and mothers in the family. Despite these resources, there seems to be limited attention given to character strengths that generate success and happiness, particularly in maintaining accord with all family members, raising successful children, managing the household, and thriving in a career.

Furthermore, a mother, as locally and idiomatically described in the Philippines as “*ilaw ng tahanan*” [the light of the household], has evolved roles. Considering the progressing egalitarian nature of partners within families, it is not surprising to see mothers playing multiple roles simultaneously. Engaging and finding meaning while facing simultaneous challenges at home, family matters, and the occupational and societal realm may no longer be surprising. Despite this, it is worth knowing that literature and narratives on mothers' tribulations and strengths anchored on virtues and character strengths remain scant.

The development of personal distress has been frequently linked with predisposing and precipitating factors and the lack of mental, emotional, behavioral, and volitional capacity to cope with stress (Rashid & Niemiec, 2014). An evolutionary perspective supports this by emphasizing the role of nature in programming humans to think, feel, and respond negatively or evasively when dealing with setbacks and challenges. It is not surprising that clinical and counseling fields predominantly revolved around correcting dysfunction and the adverse effects of stress among individuals and families.



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Investigations on positive families also remained little because scholarly attention primarily focused on family dysfunctions (Kirszman, 2002). Despite this, the emergence of positive psychology offered a new perspective on dealing with individual and collective negativities (Park et al., 2004). Instead of alleviating negative symptoms, the field has developed a reliable classification, definition, and measurement of characteristics that buffer humans from adverse effects of pressures and maintain buoyancy amidst undesirable life situations.

Character strengths were conceptualized under positive psychology, which studies strengths that enable individuals and communities to flourish, thrive, and achieve well-being and purpose regardless of external and internal demands (Seligman & Csikszentmihalyi, 2000). Peterson and Seligman (2004) identified 24 character strengths classified into six virtues. These character strengths are pervasive attributes valued in their own right and not automatically connected to noticeable outcomes. In this sense, some people exemplify these strengths, while others may possess these traits in a less obvious manner. Likewise, these character strengths do not shrink others; instead, they inspire those who observe their manifestation.

The six organizing virtues of the 24 character strengths are wisdom, courage, humanity, justice, temperance, and transcendence (Peterson & Seligman, 2004). Wisdom pertains to gaining and using knowledge and includes creativity, curiosity, judgment, love of learning, and perspective. Someone with these character strengths displays novel ideas, loves to explore, thinks critically, and possesses sound insight. The second is courage, which fuels motivation despite opposition. It covers bravery, perseverance, honesty, and zest. A person with these character strengths can assert himself under challenging situations, is persistent and determined, has integrity, and is truthful, energetic, and enthusiastic. The third virtue is humanity, which embodies caring for others and is composed of love, kindness, and social intelligence. A person with these character strengths establishes close relationships with others and is compassionate and socially adaptable. Furthermore, justice for building balanced social relationships revolves around teamwork, fairness, and leadership. Such character strengths are found in a person who can work with a team effectively, beholds justice as significant, and is effective in facilitating group tasks (Peterson & Seligman, 2004).

The fifth virtue, the temperance that protects an individual from excess, involves the strengths of forgiveness, humility, prudence, and self-regulation. Someone with such character strengths can tolerate one's shortcomings, be unassuming, be cautious in decision-making, and manage one's thoughts, feelings, and behavior. Last, the virtue of transcendence builds links with a bigger universe and deep meaning and carries an appreciation of beauty and excellence, gratitude, hope, humor, and spirituality. Anyone with these character strengths is attuned to exceptional examples, thankful for positive experiences, has a positive outlook toward the future, loves to have fun by making others laugh, and acknowledges one's purpose and existence (Peterson & Seligman, 2004).

The presence and use of character strengths have been linked to enhanced work satisfaction, occupational engagement, a sense of purpose, self-efficacy and self-esteem, goal realization, positive emotions, emotional strength, and lower perceived pressure (Govindji & Linley, 2007; Linley et al., 2010; Littman-Ovadia & Davidovitch, 2010; Littman-Ovadia & Steger, 2010; Park et al., 2004; Proctor et al., 2009; Wood et al., 2011). Its application aids better problem adjustment by reinterpreting and reframing, thus enhancing perspective, improving self-efficacy, and minimizing the focus on one's limitations. It promotes psychological flexibility, helps individuals manage relational changes, and balances social interactions. Evidence also shows that those conscious of their character strengths at a young age develop better self-confidence in adulthood due to cumulative advantage (Judge & Hurst, 2008).

1.1 Rationale of the Study

The optimistic benefits of positive psychology have been recognized in different settings and backgrounds. However, little attention was given to exploring women's narratives, particularly wives and mothers, who have transcended life's challenges, raised and maintained a positive institution (family), and successfully carried out multiple roles. Understanding the context of these narratives anchored on the perspective of character strengths also received little attention. This study is conducted to understand how character strengths help a particular Filipino mother successfully maneuver through adversity.

1.2 Purpose of the Research

This research explored the virtues behind a mother's triumph amidst adversities. The study should identify the following to meet this aim: the participant's transition point, the challenges she encountered after the major life changes, and the character strengths that sustained the participant in the face of tribulations.

2. Methodology

This section discusses the research design, the research participant, the instrument used, the procedures, and the data analysis.

2.1 Research Design

This study used a qualitative design to explore and understand the social phenomenon being investigated from the participant's viewpoint (Creswell, 2013). The phenomenon explored in this study revolved around the mother's ordeal and the character strengths that helped her transcend life's adversities. Specifically, the study anchored on the narrative approach, which helped the researcher explore the problem, identify the context, and recognize the issues and lessons learned by the participant from her life experience. Narrative inquiries allow the participants to describe their experiences that may clarify their identity and how they see themselves (Creswell, 2013). Narratives commonly highlight turning points or specific challenges (Denzin, 1989).

2.4 Research Procedure

The researcher began with research conceptualization, followed by preparing guide questions. The researcher followed the Process Interview Model (PIM) by Dundon and Ryan (2010) in data gathering. The PIM embodied four stages, such as (a) retrieval or the building of rapport, securing confidentiality and giving informed consent; (b) respect or confidence zone that enclosed the participant's agreement to partake in the study; (c) reconciliation or strike zone that opened up for deeper conversation and disclosure and (d) reinforcement stage, which communicated gratitude and recognition of participant's narrative. The researcher used an audio recorder to capture the whole narrative. The researcher transcribed, read, reread, and familiarized with the data. Analysis followed through using pre-conceived codes and categories anchored on the list of character strengths. The researcher also validated qualitative data before coming up with the research report.

2.5 Data Analysis

To identify and understand the character strengths that sustained the participant in facing adversities, the researcher used qualitative content analysis, particularly the directed approach (Hsieh & Shannon, 2005). In this approach, the qualitative data were subjected to structured analysis, where a pre-existing theory or research framed the coding, categorizing, and analyzing. In this study, the model of 24 specific character strengths organized into six general virtues, such as wisdom, courage, humanity, transcendence, justice, and moderation (Peterson & Seligman, 2004), provided the analytical structure.

2.6 Ethical Consideration

Before starting this study, the researcher secured consent from the participant. The nature and purpose of the research were thoroughly explained, along with the research's confidentiality.

3. Results

The qualitative analysis of the narrative revealed the participant's transition point (3.1), challenges encountered (3.2), and coping strategies, which eventually paved the way for the identification of the participant's character strengths (3.3).

3.1 Stroke and Paralysis of Husband: The Wife's Major Life Adversity

Before the transition point, the participant was 37 years old and married for eight years to a 43-year-old military person in the Metropolitan for soldierly schooling. She was one of the top school heads in a government school in their province and was pursuing her doctorate. She had three children, aged eight, six, and two years old. The participant narrated that she did not know that she was two months pregnant with her fourth child when she learned about her husband's condition. Her husband, who had been away for several months, suffered from a thrombotic stroke, a condition that ensues when a blood clot develops in the artery that brings blood to the brain (Mayo Clinic, n.d.). Upon knowing the news, she immediately flew to the Metro

and left her three children in the province under the care of a trusted domestic helper. The illness also led to the paralysis of the right arm and leg of the participant's husband.

The participant described the stroke and paralysis of her husband as her transition point and major life challenge. From having major but manageable roles in the province as a mother of three children, a supportive wife of a husband far from home, a conscientious doctorate student, and a school head, the participant had to face the role of caregiver to her husband. She also had to take care of her health and monitor her pregnancy.

3.2 The Challenges of Playing Multiple Roles

The significant life change that happened to the participant marked the transition point that brought many changes to her life. The participant's most challenging experience after the paralysis of her husband comprised the simultaneous demands of having to play multiple roles, especially when they got home after a few months of stay in the hospital. She had to be a wife who needed to care for the paralyzed husband, a mother and father to growing children and a newly born child, a school manager, and a doctorate student. She needed to be the provider and the nurturer of all family members. The multiple roles resulted in multiple trials regarding financial, familial, time, and occupational concerns. Her difficulties revolved around her husband's medical expenses and physical therapy, baby supplies, children's schooling, hectic and demanding work schedule, doctorate studies, and care and maintenance of her sick husband, sick mother, and aunt.

3.3 The Character Strengths Behind Effective Coping

The content analysis revealed the character strengths that helped the participant survive and thrive on the challenges. The findings show that the participant's character strengths fall into five categories, specifically the virtues of wisdom, courage, humanity, temperance, and transcendence. Table 1 summarizes the themes, exemplars, sub-themes, and the corresponding description.

Table 1 Generated themes on the character strengths behind effective coping

Major Theme (Virtues)	Responses	Sub-Theme (Characters Strengths)	Description of Theme
Wisdom	The more trials I encounter, the more I become stronger. I'm just enjoying life. In my 60 years of existence, I have seen that challenges are normal and can happen anytime. Despite that, we should be able to handle it. I don't get sad when I have problems. It's normal to experience trials in life.	Perspective on handling problems.	This theme shows the use of mental facility, particularly obtaining and using knowledge to value a righteous life.



Table 1 cont.

Courage	I told him (my husband) that I could let go of my doctorate studies for my children's welfare in school. I got challenged when he said I should finish what I had started. I shouldn't have enrolled if I couldn't just complete it. That's the reason why I persevered. Then, I became the school's officer-in-charge. I wanted to prove that I was doing my best at work and didn't lose motivation. I kept going. I didn't suffer much because I knew I had to juggle my roles, especially at work. I proved to them I could do it, I switched roles at home, and as my children fell asleep, I started planning for tomorrow.	Perseverance in work, studies, and tasks at home.	This theme involves using willpower to attain goals amidst external or internal opposition.
Humanity	I cared for him by clothing him, bathing him and throwing his stool and urine because he couldn't get up and get around. I experienced all of these. Then I also had to care for my sick mother and provide for her medical expenses. I carried the role of being a daughter, wife of a person with a disability, head of the school, and a mother of four children who happened to be good-looking and bright.	Love as a mother, wife, and provider.	
Temperance	I learned to be economical in handling my finances. I needed to allocate a budget for main priorities like water and electric bills, the helper's salary, milk, and medical expenses. I also prioritized our food for every day. My earnings then were just enough to meet our daily basic needs.	Self-regulation in managing finances	This theme pertains to characters that keep people away from excess and temptation.

One of the global themes from the participant's narrative was wisdom, which specifically embodied the participant's perspective on handling problems.

The participant viewed difficulties not as threats that must be avoided but as typical challenges that must be faced as they strengthened her character.

The perspective of normalizing life's problems helped her cope with the trials. Regarding coping with pressures from multiple roles at work, school, and tasks at home, the second theme pointed to courage, which mainly shows her perseverance. Instead of letting go of her doctorate studies to lighten her load, her spouse encouraged her to pursue her academic endeavor and endure the consequences of juggling multiple roles simultaneously. The participant's determination also rewarded her professionally, as she became the officer-in-charge of her workplace. Furthermore, the added work responsibilities motivated her to do her best instead of giving up and feeling stressed. Her awareness and acceptance of the consequences of her choices helped her face her responsibilities at home and her workplace.

Moreover, the third theme, humanity, mirrored the participant's character strengths, like kindness as a caregiver and nurturer of the whole family, her children, her spouse, and even her sick mother. She elaborated on her caregiving experiences while acknowledging the roles of being a daughter, wife of a disabled spouse, school manager, and loving mother of four children. She also showed her love as a mother, wife, and provider by providing for her children's needs. Specifically, because she was also a busy career person, she ensured her children had the materials and financial resources for their school requirements. She loved her children by keeping them and her spouse her top priority.

Temperance was the fourth theme in the participant's narrative. It covered self-regulation, which helped the participant in coping with financial stress. The participant became more practical in financial management and only prioritized necessities and fees for house expenses such as food, water, and electric bills, helper's fees, and medical expenses. Her earnings as a government employee then were just enough for the family's daily needs. With a virtue of temperance and a character strength like self-regulation, the participant lived within her means and could limit herself from having unnecessary expenses. The last theme was transcendence, which embodied the character strengths like spirituality, gratitude, and hope.

Despite the challenges that happened, the participant was able to find meaning and purpose through character strength and spirituality. She showed spirituality through prayers and faith in a higher being to guide and inspire her not to give up. Spirituality also helped her acknowledge the meaning and importance of life itself and recognize that things happen not by chance but by purpose. She also exhibited gratitude to others who helped her along the way and God, who became her oasis of strength amid difficulties. Last, the character strength and hope also fueled the participant to look at things in a positive light. Knowing that life was difficult did not discourage her. Instead, her hopes made her believe in her capacity to make a change and influence the future. Spirituality, gratitude, and hope brought essence to the participant's life.

4. Discussion

The study's general findings substantiate the impact of character strengths in boosting the participant's facility to transcend major life challenges and maintain a positive institution

Primarily, the findings regarding using perspective (under the virtue of wisdom) supported the notion that reinterpreting and reframing perception may foster effective emotional regulation (Rashid & Niemiec, 2014; Wood et al., 2011). It nurtures an open mind to see the bigger picture in a particular situation. Likewise, given the participant's perseverance in executing multiple roles at home, work, and studies, the result was consistent with the claims of Littman-Ovadia and Steger (2010), who believed that perseverance fuels goal achievement. Interestingly, the findings indicate that perseverance may be linked with the effective execution of multiple roles, such as being a mother, wife, caregiver, leader, and student, all at the same time. On the other hand, the participant's kind and loving character fit the earlier findings of Rashid and Niemiec (2014) that character strengths have beneficial effects in managing social relations and balancing social roles. The findings suggest that the virtue of humanity may sustain a person to care for others without feelings of exhaustion continually.

Moreover, the result concurs well with the notion of Peterson and Seligman (2004) that self-regulation protects a person from excess, as the participant managed her limited financial resources by controlling impractical impulses while prioritizing the immediate needs of family and important expenses. The findings also validate the role of spirituality under the virtue of transcendence in finding meaning and purpose amid difficulties (Peterson & Seligman, 2004). In this study, meaning and purpose may be achieved by constant connection with a higher being. Likewise, the result is in complete agreement with Park et al. (2004) concerning the effect of gratitude on buffering distress. Instead of focusing on her limitation, the participant banked on outside resources for assistance. It thus increased her self-efficacy and improved her affective domain. Lastly, the presence of hope, as evidenced by looking at things positively, a sense of agency and pathways, and believing in oneself to surpass trials, supported the concept of transcendence that further brought deep meaning and satisfaction to the participant's existence (Peterson & Seligman, 2004).

5. Conclusion and Recommendation

This research explored the virtues that fueled a mother's strength during significant life challenges by identifying her transition point, the trials she encountered after the major life change, and the character strengths that helped her withstand and surpass adversity.

The analysis provides empirical evidence showing that going through transition points or major life changes and experiencing their demanding and simultaneous effects on personal, family, education, and work relations may not automatically rob a mother's efficacy to surpass obstacles. It may likely happen when virtues and character strengths emerge and are used, especially in times of need.

The study suggests that possessing and applying character strengths and virtues may buffer the strain and pressure of simultaneously playing multiple roles and responsibilities.

Dealing with difficulties may be made easier by an open mind and perspective. Having to be a mother, wife, caregiver, student, and leader and gaining success in all these fields may be brought about by perseverance despite the opposition.

Moreover, kindness and love may be an oasis of vigor in caring for family members, particularly a paralyzed spouse and growing children. The findings also point to the essence of self-regulation in successfully managing financial resources. In addition, the evidence in this study implies that character strengths like spirituality, gratitude, and hope play a vital role in resiliency and helping a person to cope effectively with challenges.

This study's findings show that virtues and character strengths may be protective against emotionally, physically, socially, and financially debilitating circumstances. The study points to the idea that the creation and sustenance of a positive institution, particularly the family, may be executed by a mother who possesses the virtues of wisdom, courage, humanity, temperance, and transcendence. This study may have practical implications for Positive Psychology and creating a positive institution, particularly in linking the strengths of perspective, perseverance, kindness, love, self-regulation, spirituality, gratitude, and hope to familial, occupational, educational, and social success.

This research only explored the virtues and values behind a Filipino mother's success regarding personal, marriage, family, educational, and career affairs. In this manner, the study has considerable limitations regarding its application to a broader population. Given the study's narrative and qualitative stance, it is improper to generalize and draw conclusions on association and causal relationships. Likewise, because the study only focused on the character strengths that sustained the participant, it is suggested to consider exploring the strengths present before, during, and after a major life change. It is to see comparisons and validate whether turning points play a vital role in developing character strengths. Replicating the study with other types of individuals may be necessary.

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Declaration of Conflict of Interest

The author declares that no conflict of interest is involved in the study.

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The Correlation of the Changing Landscape and the Subsistence Patterns: Reviewing Archaeological Evidence of Prehistoric Human Resilience of Southeast Asia



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Abstract

This paper argues the correlation between the changing landscape and the changes in subsistence patterns. This paper will discuss how changes in the landscape are related to the changes in subsistence strategies. The changes in the subsistence strategies are related to the changes in the landscape. The literature on Historical Ecology and the cultural-ecological approach was reviewed to find patterns and relationships that would lead us to understand the relationship between the culture and its landscapes from the Late Pleistocene to the present. This paper argues the correlation between the changing landscape and the changes in past human culture subsistence patterns in Southeast Asia.

Keywords

resilience, niche construction, Pantropocene, Southeast Asia archaeology

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1. Introduction

This paper proposes a perspective of looking at the history of the relationship of humans to their environment. Before proceeding with this paper, it is necessary to see the three of the most prominent schools of thought available in archaeology in looking at human-environment relations: the (1) historical ecological approach, (2) behavioral ecology, and (3) cultural-ecological approach to understanding the relationships between humans and their landscape in Southeast Asia. In this paper, I attempted to review the knowledge about human adaptation strategies from the late Pleistocene and the Holocene to support the emerging perspective that humans, even during the "primitive times," can alter environmental conditions. This idea is emerging and inspired by the Pantropocene Project led by Patrick Roberts of the Max Planck Institute of Geoanthropology (see Amano et al., 2021; Roberts et al., 2021; Scerri et al., 2022). This perspective rose as a critique of the belief that the Anthropocene started only during the Industrial Revolution.

I chose Southeast Asia as a case study for this paper because it is established from the literature that it is a different case from the rest of the world with its association with the Pacific islands through the "island laboratory" concept (Fitzhugh & Hunt, 1997; Fitzpatrick & Erlandson, 2018; Kirch, 2007). Hunt and Rabett (2014) mentioned that the lack of niche in mainland and island Southeast Asia in subsistence strategies is an indicator of a recurring strategy used by its settlers- the use of a wide variety of strategies. Among the issues that need attention is the diversity of subsistence strategies due to its environment's vast array of options.

Another issue I will approach is determining the transition between the hunter-gatherers and identifying the Neolithic age. In this paper, I will try to relate how such dynamics have shaped humans and the environment.

In archaeology, the relationship of humans with the landscape is proposed by Gordon Childe and similarly by Leslie White when they suggested that culture is a means for humans to adapt to their environment, which eventually leads to its evolution (Steward, 1955). It was also said that all societies have lived in different environments and vicissitudes. Their traditions have varied, which could be correlated to the diversity of cultures. It implies that various environmental conditions have caused human populations to react differently. These different reactions or adaptation strategies are why culture differs across different human societies. In archaeology, this is described as the concept of the multilineal evolution of culture. This school of thought believes that the different environmental conditions that have resulted in different adaptation strategies have created many cultural traits. However, Steward (1955) argued about the differences in the environment and the certainty of the unilineal evolution of culture. Steward and his contemporaries suggested a parallel causality model in the development of cultures, which they refer to as a multilineal model of cultural evolution carried out by the processual archaeologists' tradition.

The anthropologist Julian Steward first proposed the cultural-ecological approach in his writings (Ford & Steward, 1954; Steward, 1942; 1929; 1960), and his contemporaries called this approach the cultural ecology. This school of thought was soon followed by writers such as Wolf (1984). The main position of this cultural ecology is that humans adapt to their environments. The concept of diffusion is central to the formation of cultures. It could be accounted for the uniqueness of each culture, as these are products of the different environments that have shaped them.



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Simply put, the idea of a cultural-ecological approach is grounded on ecological determinism. Sahlins (1964) asserts that cultural ecology has the potential to provoke thoughts regarding (1) acculturation and diffusion, (2) animal ecology, (3) rural sociology, (4) bureaucracy, stratification, and urbanization, (5) formal organizations, (6) technology, and finally (7) economy. Having ecological determinism as a theory for cultural development or change means assuming that the environment is the only variable in the formation of culture. This idea of Sahlins (1964) could also be related to what I mentioned earlier: a landscape is a physical environment valued for its aesthetic appeal and economic, political, social, and spiritual significance.

However, this concept of the environment is different from the idea of Sahlins (1964). Although the environment affects how humans form and reform their culture, human activities also modify the environment. It is contrary to the position of cultural ecology that humans are just adapting to environmental conditions. Also, in primitive societies, humans cannot modify environmental conditions. Similar to the historical ecology position proposed in the writings of many archaeologists (Balee, 1998b; Balee & Erickson, 2006; Crumley, 1994a; 1994b; 1998; 2003; Redman, 1999).

On the other hand, historical ecology argues that humans have been modifying the environment since the earliest times. And if anything, it is not the environment that changes culture but rather the opposite. It is human activities that have been modifying the environment. It is then argued that the landscape is a place of interaction with a temporal dimension that is cultural, historical, and evolutionary. It challenges the notion of pristine primitives. In its idea of history, there are three essential elements, namely (1) time, (2) cycle, and (3) empirical patterns. These three positions on the human-environment relationship have provided arguments and theories on how societies and the environment have evolved and formed through time.

There is a need to look at how the environment shapes culture and how culture shapes the environment in the form of the wide-range adaptation strategies employed in Southeast Asia. However, it is important to note that this paper does not intend to judge which of the previously mentioned theories is the most relevant, as these theories have provided their valid arguments and counter-arguments. However, I propose to find the middle ground through which we can have a fruitful conversation in our attempt to define and understand human resilience.

2. The Reciprocity of Culture and Landscape

In this paper, I argue that culture and landscape have a very dynamic relationship. Different factors are at work in the formation of both the culture and the landscape. I say that the variability of actors produces both the culture and the landscape, and culture and environment affect each other. Various scholars similarly express this idea (Caillon et al., 2017; Comberti et al., 2015; Gächter & Hermann, 2009; Hagen, 1972; Raymond et al., 2018) when they argue the reciprocity that exists between nature and culture. In this paper, one of my arguments is that the existence of pristine forests, even in the late Pleistocene period, should be subjected to criticism. However, I decided to focus only on the culture and landscape dynamics related to the subsistence strategies because of my limitations while writing this paper. This paper does not discuss the formation of societies, their politics, and spirituality.

Anthropocene, or the effect of human activity, caused the change in the landscape. In particular, I argue that the change in the floral and faunal population is due to the changing climatic conditions and human activities. I would say that the Anthropocene phenomenon started on a much earlier phase of human activity as early as the hunter-gatherer societies, or roughly the late Pleistocene to mid-Holocene, consistent with the idea being argued by the Pantropocene Project (Amano et al., 2021; Roberts et al., 2021; Scerri et al., 2022). Although it might still sound controversial for some, archaeological evidence has shown otherwise, as the widely accepted belief on the start of the Anthropocene is always associated with the Industrial Revolution. For example, Stephens et al. (2019) have demonstrated that as early as 3,000 years ago, hunter-gatherers, farmers, and pastoralists influenced changing the landscape. Ellis (2011) mentioned that although the majority of the changes in the biosphere happened in the past century, humans have already been altering the terrestrial biosphere for the past 8,000 years.

3. The Late Pleistocene to Holocene

I would argue that humans have shaped the landscape from the Late Pleistocene to the Holocene. That landscape and "culture" dynamics have already started among hunter-gatherer societies. It could be accounted for the vast diversity of resources in both the island and mainland Southeast Asia. Although there is a wide diversity in food sources, various literature like White (1943 & 1959), Piper and Rabett (2014), Conrad (2015), Cranbrook and Piper (2013), Ochoa et al. (2014), Hutterer et al. (1976), and Louys and Roberts (2020) argued that the food sources were not that easy to come by; and that these hunter-gatherers needed to employ a wide variety of subsistence strategies. However, the impact of anthropogenic activities in the late Pleistocene up to the Holocene was related only to the competition of humans with other predators in their access to the food source.

One special case that has shed light on this possibility is the extinction of large mammals in Palawan and Indonesia, specifically the tiger species present on the island around 10,000 years ago. If what I believe is true, then there is a possibility in the archaeological record that the taxa of the faunal food source diminished over time. The variability of human societies in how they dealt with a complex environment could be discerned by investigating the variability in settlement and technological choices (White, 1959). By investigating the evidence for the diversity of prehistoric environments and cultures, the data could be traced back to the late Pleistocene.

The range of exploited resources was so broad, from pig to mollusk, and was seen as evidence of how flexible human adaptation had been for thousands of years of occupying Southeast Asia. This width in the variation of the resources that were consumed was said to be part of flexible procurement and planning strategies. In the case of delayed-return strategies, detoxification of some nuts and yams was also employed. This diversity continued until the Holocene. This variability was also observed in other places within Southeast Asia (Piper & Rabett 2014; Conrad, 2015; Cranbrook & Piper, 2013; Ochoa et al., 2014).

Technological changes were also evident in the late upper Pleistocene to the Holocene that happened in Southeast Asia. These changes are interpreted as refinements and the advancement of economic methods and technologies.

This concept is already evident in the body of literature about Southeast Asia (Sinha, 2012). The paper of Hutterer et al. (1976) argued that human populations in tropical environments need adaptation, and these adaptations are different from those in temperate and cold climates. It can be reflected in how tropical people treat clothing and shelter, as there is little need for it. However, it is more challenging than it appears. The exploitation of resources is complicated because the resources are varied, and the people need a wide variety of necessary tools so that the energy they spend in gathering, manufacturing, transporting, and procuring raw materials is minimized.

While it can be evident in the literature that the environment is indeed a factor in shaping culture by catalyzing adaptive processes, the question still can be asked whether the landscape determines the culture of the human population at the time. One case we can look at is the paleozoology data of Magsanib Pasimbahan Cave in Dewil Valley, El Nido, Palawan (Piper et al., 2011). The changes in the composition, as well as the structure of the mammal community in Palawan, have been evident during the last 14,000 years. There is evidence of the disappearance of large taxa since the end of the last glacial period, estimated to happen around 10,000 years ago. Among the taxa that became extinct in Palawan are the tiger and the possible dhole. It was argued that the manner of extinction of these taxa is different from the extinction that happened around 50,000 years ago. It could be possible that cultural activities could have played a role in this, along with the environmental changes.

Louys and Roberts (2020) express the same thoughts. They claim that environmental factors drive megafauna extinction in Southeast Asia. This environmental setup caused the grazers and the extinction of browsers, and eventually, the savannah that emerged during the mid-Pleistocene disappeared during the Holocene. However, evidence from the literature (Ochoa et al., 2014; Piper et al., 2011; Piper et al., 2008) points out that although the environment played a large part in the extinction of the faunal taxa, human activity also played a critical role.

The hunting activities in the late Pleistocene could have affected both the predators and the prey. One thing that could have caused this is not necessarily the increase in the human population but rather the increase in population density. At the time of the last glacial maximum, the sea level rose, and the savannah was reduced to what it is today, the space in which the human population and the environment were reduced. This increase in population density and the reduction of space for resources could have affected both the environment and the human population. Cultural activities such as hunting and gathering have contributed to the ease of resource access. If this were true, the difficulty of accessing the resources humans need for subsistence might be a form of adaptation to the environment from human activities. These adaptations might be manifested through mammals being pushed further inland affecting the vegetation and, in turn, affecting the floral and faunal populations.

In studying this complex phenomenon, it is, therefore, necessary for an archaeologist to understand the ease of access/difficulty of accessing resources for humans. It may raise cautionary tales on estimating floral and faunal population estimates based on available assemblages. The caution is that the decrease in the appearance of faunal

remains on sites could not always mean a population reduction. Although the latter could be true, as has always been generally accepted, this decrease could also mean an increase in difficulty in accessing such resources as a means of landscape adaptation to human activities. In turn, with these, there will be the possibility that the human population will opt to utilize readily available resources instead of chasing difficult ones. It would fit the picture of the wide variety of subsistence strategies that early humans employed.

4. Age of Domestication

Instead of using the term neolithic, I will use domestication to refer to when humans started domesticating plants and animals in Southeast Asia. It is for clarity as the term neolithic in Southeast Asia is difficult to recognize in the archaeological record's insufficiency and the discrepancies with the ethnographic accounts (Hutterer, 1983). I have argued above the possibility that human activities have affected the environment as early as the late Pleistocene. Also, human culture is not only a product of its landscape; culture and landscape are affected by certain dynamics.

My second argument is the dynamics between culture and landscape during the Late Pleistocene to the Holocene period. The dynamics between landscape and culture now differed from what occurred during the Late Pleistocene. The start of the domestication of plants and animals helped the culture develop adaptation strategies. However, it could not be said that the environment predetermines the adaptation of humans. I say so because of the wide variability of adaptation strategies in one setting. In this shift of adaptation strategy, I see that humans can exploit the environment in various ways and that the environment does not determine cultural formations. What the landscape has, are its features. The Ifugao exemplifies this by adopting both swidden and terraced rice farming, the slope and water availability, and its effect on their subsistence strategies. However, the presence of resources is not the key element in these dynamics but rather the decision of human culture to exploit such resources. It is no case that the landscape determined the culture of the Ifugao. It could be seen that they could transform the landscape to help ease access to their needs (Acabado, 2008).

Headland (1987) proposed an alternative hypothesis about yam consumption in the rainforest of Southeast Asia, taking the Agta of Luzon as a case in particular. The hypothesis is that the rainforest is food-poor for humans. Headland (1987) meant that tubers and yam do not grow in the wild. The rainforest being food-poor for humans could give implications that early hunter-gatherers could not produce tubers for their consumption because access to it was difficult. The only alternative that could be considered is the reliance on hunter-gatherer communities in prehistoric times for the cultivated food source. Headland (1987) has correlated it to the adaptation strategies that humans have employed (see also Headland & Reid, 1989).

However, Headland's (1987) argument was critiqued by Dentan (1991), stating that the Malaysian rainforest is rich with tubers that could be used by early hunter-gatherers, thus invalidating the claim of an early presence of cultivated land. However, deficits in resources could come in two ways, namely (1) environmental deficits and (2) cultural deficits.



Environmental deficits refer to the deficiency of natural resources. On the other hand, cultural deficits refer to the deficiency of cultural knowledge to use the available resources. These two deficiencies are essential concepts for the cultural landscape dynamics in Southeast Asia. As the environments give deficits and difficult access to food sources, the early Southeast Asians were able to mitigate this by developing a wide range of strategies. Environmental deficits are the deficits that are related to the landscape; it is the access to resources. While it is established that the forests of Southeast Asia are abundant, it has environmental deficits, as could be reflected in the literature. Access to a food source is difficult, and they must have the necessary cultural knowledge to cope with these deficits, which they did. These observations are deviations from the concept of human niche construction.

Headland and Reid (1989) argued that up to the mid-Holocene, hunter-gatherers were not isolated, much like what was previously thought. But instead, these hunter-gatherers had been trading with a culture with agriculture for their subsistence. Eder (1978) observed this behavior among the Batak in his ethnographic works. Suppose the claim of Headland and Reid (1989) and Headland (1987) is true. In that case, it could be entirely possible that Eder (1978) missed an important point when he assumed that the practice of hunter-gatherer trading with food cultivators was a recent event. In a study conducted on the Batek indigenous group in Malaysia, Endicott and Bellwood (1991) argued that the hunter-gatherers could sustain themselves only in a small population in lowland tropical rainforests. This independence was made possible again by the diversity of resources in the environment, which was moderately abundant. It was suggested that the Batek were opportunistic rather than conservative and tended to exploit strategies they could use.

It was proposed that the development of agriculture in Southeast Asia is dynamic if the relationship between environment and culture is to be considered (Hutterer, 1983). The earliest belief in the development of agriculture in Southeast Asia is tied to two civilizations, China and India (Clark, 1965). However, after the Second World War, many scholars have begun considering this assumption (Sebring, 2015). Hutterer (1983) pointed out that increasing the carrying capacity of an environment requires human manipulation through directing environmental manipulation, transferring material to lessen competition with other species, or maintaining habitats. Hutterer (1983) suggested the non-linearity of the energy expended by the population and the food energy harvested. It was argued that the more the subsistence strategies were manipulated, the less profitable they became.

The works of Acabado (2012) among the Ifugao living in the North Central Cordillera suggested two subsistence strategies. The rice terraces are found on gentler slopes, while swidden farming is found in higher elevations. It was argued that these two systems are contemporary, and the practices correlate to the slope and the availability of technology. It was argued that the size of the land that was cultivated for swidden and rice agriculture was related to the population size as the larger basins can attract larger populations.

5. Perspectives for the Archaeological Record

Culture and landscape are in a dynamic relationship, and the key factor is the availability of resources. Access to these resources is crucial in these dynamics during the Late Pleistocene and Mid-Holocene.

There is a possibility that humans have competed for the resources not only among themselves; but also with the other landscape inhabitants, including non-humans. For this, I suggest that the variability in the faunal remains could be examined as evidence of the diversity of the previous cultures' subsistence strategies. The decrease in faunal assemblages could mean two things: (1) the population decline or (2) added difficulty in accessing them due to continued hunting practices. These two things, I believe, could be correlated to the diversity of technologies and subsistence strategies, and this could also explain the absence of niche construction in the subsistence strategies of Southeast Asia and the Pacific Islands.

During the age when Southeast Asians started the domestication of plants and animals, some cultures adopted a more sedentary lifestyle. There is still evidence of diversity in the subsistence strategies employed by the early settlers of Southeast Asia. There is evidence for the hunter-gatherers trading goods with those who practiced agriculture. Here it could be seen that the technologies have changed, and the variation is still present. In the case of the Ifugao, where swidden and rice paddies are found, it has shown how the environment shaped human culture, but it also shows human ingenuity. This ingenuity is the ability of humans to exploit the landscape to fit their needs.

Here I propose that the diversity of Southeast Asian assemblage could be viewed as shaped by the interaction of culture and landscape. During the Late Pleistocene, it could be possible that the landscape affected the human population through the availability and access to food sources. The human population affected the landscape by adopting various subsistence strategies that could have altered the faunal population and access, bringing some faunal taxa to extinction. The problem of identifying the Neolithic age in Southeast Asian sites could also be due to access to food sources. It could also be possible that even though the early human population in Southeast Asia had already discovered the domestication of plants and animals, they still used the hunting-gathering lifestyle. It was due to the climatic conditions that were sometimes insufficient to sustain their needs.

6. Conclusion

At the beginning of this paper, I made clear that my main aim is to establish an argument that landscape and culture are in a dynamic relationship. Also, neither one nor the other is the sole determinant of the fate of another. I argue that the variability in the assemblage of faunal remains (and possible faunal remains) are cultural means of adaptation to the complex environment. The variability in the subsistence patterns is not the sole product of environmental determinism but rather the ability of human culture to react to what the landscape gives and, in the process, modify the landscape to fit its needs. Thus, while it is true that human culture reacts to what the terrain provides, it is also true that humans tend to be manipulative and ingenious and can go beyond what the landscape gives them. Humans do not simply adapt to what the environment gives them, but they make every effort to try even to shape the landscape in their favor.

My aim in this paper is to present a science-based narrative about the interaction of humans and the environment in the past. I hope this narrative could help future resilience research redefine resilience in scientific discourse. Suppose humans are not only passive receivers of the changing environmental and climatic conditions even in the Holocene.

The ability of humans to modify the landscape has led to long-term ecological effects. Thus, in viewing the line of evidence presented in this paper, I suggest that resilience discourse should not only focus on human adaptation to changing environmental and climatic conditions but also on making the environment resilient from human activities. Also, human resilience is just as important as environmental resilience from human activities.

One good example of this is the adoption of indigenous knowledge and practices of indigenous people communities, which is already gaining attraction. While this contradicts the arguments that I have presented in this paper, a good argument was presented by Dressler (2005). It was argued that the legislation criminalizing swidden farming needs to be better grounded. The legislators who proposed the law failed to understand that *kaingin* farming is continuously shifting because the indigenous communities consciously or unconsciously give the land better chances to regenerate compared with monocropping and mining activities. Although we cannot deny that swidden farming can destroy the environment, learning from the indigenous people through their thousands of years of experience interacting with their natural environment can help us understand it. The bottom line for this is understanding the dynamics of the relationship between humans and their environment. The diversity of human adaptive strategies for subsistence in Southeast Asia is a resilience strategy for humans. The biggest lesson from the past is that we should look at biodiversity protection because building a resilient environment and biodiversity is necessary for human resilience. For thousands of years, the archaeological records of Southeast Asia have demonstrated that the broad range of subsistence options is a key to survival for human populations. Aside from this, many approaches can be formulated to help make the environment resilient to human activity.

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