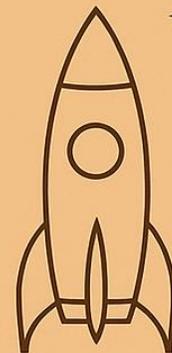
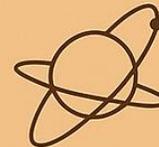


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**Editor-in-Chief:** Hasan Alisoy

**Executive Secretary:** Gerda Urbaite

**Salomėjos Nėries g. 57, Vilnius, Lithuania**

**E-mail:** editor@egarp.lt

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# The Portrayal of the Polish-Lithuanian Peasantry in British Travel Memoirs, 1764-1795

<sup>1</sup> Gerda Urbaite

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**Abstract.** This article examines Margaret Atwood's 1972 novel *Surfacing* as a complex narrative of self-discovery, conceptualized here as an 'ecology of self'. The analysis posits that the unnamed protagonist's psychological healing is achieved through an ecofeminist immersion in the Canadian wilderness, which functions as a simultaneous confrontation with repressed personal trauma and a postcolonial rejection of patriarchal, consumerist ideology, metaphorically termed 'Americanism'. This study employs an integrated theoretical framework of ecofeminism, psychoanalysis, and postcolonialism to argue that these are not discrete but interlocking systems of oppression. The paper's original contribution lies in its comparative analysis, which reveals profound thematic resonances between Atwood's Canadian narrative and the cultural and historical experience of the Baltic states. By comparing the novel's exploration of identity formation against a hegemonic neighbour, the role of nature in national resilience, and the recovery from collective trauma with the post-Soviet Baltic context, this study establishes *Surfacing* as a work of transnational significance, offering a powerful model for post-oppression identity formation relevant to the Baltic region.

**Key words:** Margaret Atwood, *Surfacing*, ecofeminism, Canadian literature, Baltic identity, postcolonialism, psychological trauma

## INTRODUCTION

Margaret Atwood's 1972 novel *Surfacing* stands as a canonical work of Canadian literature that powerfully transcends its national origins. The narrative follows an unnamed female protagonist, a commercial artist, who returns to the remote Quebec wilderness of her childhood, ostensibly to search for her missing father (Atwood, 1972a). This quest, however, quickly evolves into a profound and harrowing journey into her own psyche, a descent that must precede a spiritual and psychological 'surfacing' (Niederhoff, 2009; Tolan, 2009). The novel serves as a potent allegory for the healing of a self fractured by the intersecting pressures of patriarchal society, personal trauma, and a creeping colonial ideology. The protagonist's initial state of emotional numbness and alienation gives way to a radical transformation, culminating in a primal reconnection with the natural world and, through it, with a more authentic sense of identity (Bouson, 1993; Warren, 1990).

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<sup>1</sup> Urbaite, G. Editor, *Euro-Global Journal of Linguistics and Language Education*. Email: [urbaitee0013@gmail.com](mailto:urbaitee0013@gmail.com). ORCID: <https://orcid.org/0009-0001-5471-6210>

This article argues that *Surfacing* charts an ‘ecology of self’, a process wherein the protagonist’s recovery is contingent upon a radical ecofeminist immersion in the Canadian wilderness. This journey is simultaneously a psychoanalytic confrontation with repressed trauma—specifically a forced abortion that she has concealed behind a fabricated personal history—and a postcolonial rejection of ‘Americanism’, which the novel figures as a hegemonic, anti-ecological, and patriarchal force. The protagonist’s path to wholeness requires her to dismantle the artificial constructs of civilization and language that have alienated her from her body, her history, and the land itself.

The unique contribution of this paper is to situate Atwood’s novel within a comparative framework, arguing that its core themes resonate profoundly with the post-Soviet experience of the Baltic states of Estonia, Latvia, and Lithuania. The novel’s exploration of a fraught national consciousness defined against a powerful and culturally dominant neighbour; the central role of the natural world in preserving cultural memory and fostering resilience; and the psychological process of recovering from collective historical trauma all find striking parallels in the Baltic context (Howells, 2000; Kazlauskas & Zelviene, 2016; Kurvet-Käosaar, 2013; Mole, 2012). By drawing on scholarship concerning Baltic history, cultural identity, and mythology, this analysis reveals *Surfacing* as a work of transnational significance. It offers a literary model for post-oppression identity formation that speaks directly to the interests of the *Baltic Journal of English Language, Literature and Culture* and its readership, demonstrating how a quintessentially Canadian story can illuminate the universal struggle for selfhood in the wake of historical and cultural subjugation (Ashcroft et al., 2006).

## **THEORETICAL FRAMEWORK: INTERSECTING ECOLOGIES OF OPPRESSION AND IDENTITY**

To fully apprehend the protagonist’s journey in *Surfacing*, a multi-faceted theoretical approach is necessary. The novel’s richness emerges from the confluence of ecofeminist, psychoanalytic, and postcolonial concerns, which are not merely parallel themes but an interlocking system of oppression. The protagonist’s struggle is against a unified ideological enemy: a patriarchal, colonial, and hyper-rationalist worldview that assaults the integrity of the female body, the individual psyche, and the natural landscape simultaneously.

## **ECOCRITICISM AND ECOFEMINISM**

Ecocriticism provides the foundational lens for this study, examining the relationship between literature and the physical environment (Love, 2003). More specifically, ecofeminism posits a direct link between the patriarchal domination of women and the instrumentalist exploitation of nature (Warren, 1990). Writers in this tradition argue that Western culture has constructed a series of damaging hierarchical dualisms—culture/nature, reason/emotion, mind/body, male/female—where the first term is privileged and the second is devalued and seen as an object to be controlled (Warren, 1990). *Surfacing* is a quintessential ecofeminist text, dramatizing this parallel oppression. The protagonist comes to see her own violated body and the despoiled Canadian wilderness as analogous sites of victimization (Warren, 1990). Her journey is one of recognizing that the masculinist culture which reduces her to a reproductive vessel is the same one that clear-cuts forests and treats animals

as disposable objects for sport. As Bouson (1993) notes, the novel “rejects the masculinist culture—which is depicted as both rationalistic and dangerously aggressive—and idealizes a nature-identified femininity” (p. 39). The protagonist’s healing, therefore, necessitates a rejection of these binaries and an embrace of the devalued terms: nature, emotion, body, and the feminine.

## **PSYCHOANALYSIS AND TRAUMA THEORY**

The narrator’s initial state of detachment is a textbook case of psychic repression. Her journey can be read through a psychoanalytic lens as a painful but necessary ‘return of the repressed’ (Niederhoff, 2009). She is, as Freud might say, suffering from reminiscences, though she is not yet conscious of what they are (Tolan, 2009). Her emotional numbness, her inability to feel or cry, is a defense mechanism erected to protect her from the profound trauma of a forced abortion and the preceding affair with her married art professor (Bouson, 1993). To cope, she has constructed an elaborate false narrative: a marriage, a child given up after a divorce (Bouson, 1993). This fabrication allows her to maintain a ‘false self’, but it comes at the cost of authentic feeling and connection. Her physical journey north to the island becomes a catalyst for a metaphorical journey inward, into the subconscious. The wilderness, stripped of social artifice, forces a confrontation with the memories she has buried. Her eventual descent into what society would label ‘madness’ is, in this framework, not a pathology but a radical form of therapy. It is the process of violently dismantling the false self in order to allow the true, integrated self to ‘surface’ (Bouson, 1993; Niederhoff, 2009).

## **POSTCOLONIALISM AND CANADIAN NATIONALISM**

Published in 1972, *Surfacing* is deeply embedded in the cultural anxieties of its time, particularly the rise of Canadian nationalism and the pervasive fear of American cultural and economic imperialism (Howells, 2000). The novel uses a postcolonial framework to explore the power dynamics of dominance and subservience, not between a distant metropole and a colony, but between two adjacent nations (Parker, 2016; Ashcroft et al., 2006). ‘Americanism’ in the novel is not a nationality but an ideology: a destructive ethos of consumerism, technological aggression, waste, and a profound disconnection from nature (Howells, 2000). It is figured as a “disease from the south” that infects the Canadian psyche and landscape (Atwood, 1972b). The narrator and her companions repeatedly mistake other Canadians for Americans, leading to the realization that ‘American’ is a state of mind, a way of being that is defined by senseless violence and ecological disregard (Atwood, 1972a). Atwood (1972b) positions Canada as a feminized, victimized space, analogous to the narrator herself. The exploitation of the Canadian wilderness by American interests mirrors the exploitation of the narrator’s body by her lover. Her personal quest for identity is thus inextricably linked to a national quest for an authentic identity separate from the overpowering influence of its southern neighbour (Howells, 2000).

The convergence of these three theoretical lenses reveals the novel’s sophisticated argument. The narrator’s personal trauma—the abortion—is inflicted by an agent of patriarchy, her lover, who embodies the rationalist, emotionally detached logic that trivializes her experience (Bouson, 1993). This same logic is explicitly tied to the ‘American’ ethos of control and domination that is destroying

the Canadian wilderness, exemplified by the American tourists who senselessly kill and hang a heron (Atwood, 1972a). The forces oppressing her are not separate; they are facets of the same destructive worldview. Consequently, her psychological healing cannot be a purely internal process. It must be an ecofeminist and postcolonial act. To recover her psyche, she must reject the patriarchal logic that devalued her (Warren, 1990); to do that, she must reject the colonial ‘American’ ideology that underpins it (Howells, 2000); and to achieve that, she must immerse herself in the pre-colonial, pre-patriarchal, non-rational space of the wilderness. The ‘ecology of self’ is thus a holistic concept: the health of the individual ecosystem (the self) depends on its ability to resist the invasive monoculture of a dominant, destructive ideology.

### **THE PATHOLOGY OF CIVILIZATION: TRAUMA, ALIENATION, AND THE FRAGMENTED SELF**

The novel opens with the protagonist already in a state of profound alienation. Her narration is flat, detached, and marked by an emotional numbness that signals a deep psychological wound (Bouson, 1993; Tolan, 2009). She is an unreliable narrator, not out of a desire to deceive the reader, but because she has first deceived herself, burying the trauma of her abortion beneath a fabricated history of marriage and divorce (Niederhoff, 2009). This self-imposed amnesia has rendered her a spectator in her own life, unable to connect with her own feelings or with those around her. Her later declaration, ‘I am not an animal or a tree, I am the thing in which the trees and animals move and grow, I am a place’ (Atwood, 1972a), is, in its initial context, a statement of negative passivity. She is a hollowed-out landscape, a colonized territory defined and occupied by the actions and expectations of others rather than by an intrinsic identity of her own.

This internal fragmentation is mirrored by the dysfunctional social ecosystem of her companions. The group she travels with—her silent and emotionally inarticulate boyfriend, Joe; her friend Anna; and Anna’s husband, David—represents a microcosm of the diseased civilization she is attempting to flee (Atwood, 1972a). David is the most overt embodiment of the novel’s antagonist values. A former Bible salesman and communications teacher, he is a figure of casual cruelty and misogyny who never speaks in his own voice, preferring jokes and impersonations (Atwood, 1972a). His relationship with Anna is a study in patriarchal control. He insists she wear a full face of makeup at all times, even in the wilderness, reducing her to a sexualized object, a ‘doll’ whose purpose is to affirm his masculinity. Anna, in turn, internalizes this objectification, constantly worried about her appearance and her husband’s fidelity. David and Joe’s collaborative film project, aptly titled *Random Samples*, further exemplifies this objectifying gaze. Their camera reduces the complex reality of the wilderness and the women to a series of disconnected, consumable images, a form of colonial data-gathering that imposes meaning rather than seeking understanding (Bouson, 1993).

This social pathology is explicitly linked to the broader cultural ‘disease’ of Americanism. Throughout the journey north, the narrator catalogues the symptoms of this ideological invasion: the blasted rocks and bulldozed trees for new power lines, the tourist cabins littering the landscape, and the general ethos of waste and overconsumption (Howells, 2000). The ultimate symbol of this pathology is the

hanged heron they discover at a portage, killed for sport and strung up by American tourists (Atwood, 1972a). This act of senseless violence against a creature of natural grace encapsulates the destructive core of the ideology the narrator opposes. It is an expression of power for its own sake, a logic that stems from a failure of Enlightenment reason. The rationalism championed by her scientist father, an 'eighteenth-century man' who believed in subduing nature, has degenerated into a force of brute domination that creates a profound and tragic 'rift between nature and culture' (Bouson, 1993, p. 39). The Americans in the novel are the inheritors of this failed reason, wielding technology not for progress but for destruction, treating the Canadian landscape as a resource to be exploited and a playground for their violent impulses (Howells, 2000).

### **THE JOURNEY INWARD: WILDERNESS AS THERAPEUTIC AND SACRED SPACE**

The protagonist's journey of self-discovery is a process of systematic deconstruction, a shedding of the layers of civilization that have imprisoned her. As she immerses herself deeper into the wilderness, she progressively discards the tools of the society that has damaged her: first her reliance on others, then language, logic, clothing, and even cooked food (Warren, 1990). This is not a passive withdrawal but an active and often violent dismantling of the identity imposed upon her by the patriarchal, colonial world. She recognizes that language itself is a colonial tool, stating, 'If you look like them and talk like them and think like them you are them... you speak their language, a language is everything you do' (Atwood, 1972a; see also Parker, 2016). To become herself, she must become speechless, returning to a pre-linguistic state of being.

Several catalytic moments propel this transformation, forcing the repressed past to surface. Her father's mysterious drawings, which she initially believes are signs of his insanity, lead her to discover ancient Indigenous rock paintings on a remote cliff face (Atwood, 1972a). This search for a pre-colonial art form is symbolic of her quest for a more authentic, non-exploitative way of relating to the land, a history that predates the 'American' invasion and her father's scientific rationalism (Bouson, 1993). The novel's climax occurs during a dive into the lake, where she seeks these paintings. In the murky depths, she confronts a 'dead thing' floating in the water (Niederhoff, 2009). This amorphous shape is at once the drowned corpse of her father—the embodiment of the patriarchal, rationalist legacy she must move beyond—and the repressed memory of her own aborted fetus, the core of her personal trauma (Tolan, 2009). This underwater anagnorisis shatters her fabricated history. She is forced to acknowledge the truth: 'I couldn't accept it, that mutilation, ruin I'd made, I needed a different version' (Atwood, 1972a; Tolan, 2009, p. 94). By confronting this dual death, she begins to reclaim her own story from the lies she constructed to survive it.

This personal surfacing is linked to her growing identification with the victimized natural world, symbolized most powerfully by the hanged heron. The image of the slaughtered bird becomes a totem for her own violation. Later, during her period of deepest transformation, she hides from a search party, fearing that 'if they guess my true form, identity, they will shoot me...and hang me up by the feet from the tree' (Atwood, 1972a). Her complete identification with the heron signifies her rejection of the human/animal binary and her embrace of a shared victimhood with nature (Warren, 1990).

The narrator's final state, which her friends and society would deem madness, is thus reframed as a state of heightened ecological consciousness and therapeutic wholeness. She destroys the contents of the cabin, erasing the last vestiges of her family's civilized life, and chooses to live as an animal, eating plants and sleeping in a lair she digs in the earth (Warren, 1990). This journey represents a powerful reversal of the traditional Western creation myth. Instead of moving from primordial chaos to the structured order of civilization, the narrator must move from the false, destructive order of civilization back to a primal, pre-rational unity with nature to find true psychic order. This is not a descent into chaos but an ascent into a different, more authentic kind of order—an ecological order. Atwood presents a radical ecofeminist critique, suggesting that for a woman to heal from the trauma inflicted by patriarchal civilization, a process of 'un-civilizing' is necessary. She must reject the foundational binaries—culture/nature, reason/emotion, human/animal—upon which that destructive civilization is built (Warren, 1990). Her rebirth is not into society, but into the land itself, culminating in the realization: 'This is a place where I was born' (Atwood, 1972a).

### **A COMPARATIVE RESONANCE: THE CANADIAN NORTH AND THE BALTIC SACRED GROVE**

While *Surfacing* is deeply rooted in the Canadian landscape and its specific postcolonial anxieties, its central themes find a powerful and illuminating echo in the historical and cultural context of the Baltic states. The novel's exploration of identity formation in the shadow of a hegemonic power, the role of nature in national resilience, and the process of recovering from collective trauma creates a bridge between the Canadian postcolonial and the Baltic post-Soviet experience.

### **POSTCOLONIAL AND POST-SOVIET PARALLELS**

Atwood's critique of American cultural and economic imperialism serves as a compelling analogue to the Baltic nations' long struggle to define and maintain their identities against the historical and ongoing influence of Russia (Howells, 2000; Mole, 2012). In the novel, 'Americanism' is an invasive force that threatens to erase authentic Canadian culture, replacing it with a homogenous, consumerist, and ecologically destructive ethos (Parker, 2016). This mirrors the experience of Soviet occupation in Estonia, Latvia, and Lithuania, which involved not only political and military domination but also a systematic attempt at cultural assimilation, or 'Sovietization', and the imposition of a foreign ideology that privileged Russian culture and suppressed national traditions (Mole, 2012). Atwood's (1972b) depiction of Canada as a 'victim' nation, struggling for survival and a distinct identity, resonates with the concept of 'historical trauma' that is central to understanding the Baltic psyche. The legacy of Soviet-era political violence, mass deportations, and oppression has left a deep, trans-generational wound that continues to shape memory, politics, and identity in the region today (Kazlauskas & Zelviene, 2016; Kurvet-Käosaar, 2013). The need to reclaim a national narrative from the shadow of a dominant, external power is a foundational experience shared by Atwood's protagonist and the modern Baltic nations.

## WILDERNESS, NATURE, AND NATIONAL RESILIENCE

In both the Canadian and Baltic imagination, the natural world plays a crucial role as a repository of authentic identity and a symbol of national resilience. For Atwood's narrator, the remote Quebec wilderness is a sacred space, a sanctuary from the diseased, Americanized south. It is the locus of a pre-colonial past, embodied by the Indigenous rock paintings, and the only place where she can shed her false self and undergo a spiritual rebirth (Atwood, 1972b; Parker, 2016).

This conception of nature finds a direct parallel in Baltic culture. For Estonians, Latvians, and Lithuanians, nature—particularly forests, the sea, and sacred groves (*biis*)—is profoundly intertwined with national identity, folklore, and a deeply rooted pagan heritage. Throughout centuries of foreign rule by German, Swedish, and Russian powers, the natural landscape served as a constant, a physical and spiritual homeland that preserved a sense of cultural continuity when political sovereignty was lost (Mole, 2012). The deep connection to nature is a cornerstone of Baltic identity, expressed in seasonal festivals, a reverence for the land, and cultural practices like foraging for mushrooms and berries, which has been described as a national pastime. This act of living from the land is precisely the path the narrator of *Surfacing* takes in her quest for healing, suggesting a shared understanding of nature as a source of both physical and spiritual sustenance.

## ECOFEMINIST SPIRITUALITY AND BALTIC MYTHOLOGY

The most profound connection between *Surfacing* and the Baltic context lies in the realm of spirituality. The narrator's journey involves a complete rejection of the patriarchal religions of her civilization—both the alienating Christianity of her childhood and the cold, sterile rationalism of her scientist father. In their place, she develops a personal, immanent spirituality in which the divine is not transcendent but is found within nature and within herself. Her transformation culminates in a mythic impregnation and a self-identification with the landscape, a rebirth as a primal, powerful female force. This process can be read as the unconscious rediscovery of a 'Great Goddess' archetype (Warren, 1990).

This emergent ecofeminist spirituality aligns with remarkable precision with the spirit of pre-Christian pagan traditions of the Baltic peoples. Unlike the patriarchal pantheons of many Indo-European cultures, Baltic mythology features powerful female deities who are intrinsically linked to nature, fate, and creation. The narrator's journey mirrors the domains of these goddesses:

- **Laima:** The Latvian and Lithuanian goddess of fate, destiny, childbirth, and luck. She weaves the destiny of each individual, a power the narrator seeks to reclaim for herself by taking control of her own reproductive future and conceiving a child on her own terms.
- **Saule:** The Sun Goddess, a central figure who is the source of all life, fertility, and regeneration. The narrator's immersion in the natural cycles of the wilderness and her decision to create new life reflects an alignment with this life-giving solar principle.
- **Žemyna** (Lithuanian) or **Zemes māte** (Latvian): The Earth Mother goddess, the deified, fertile

soil itself. The narrator's ultimate act of healing is to become one with the earth, sleeping in a lair dug from the ground, effectively returning to the body of the Earth Mother to be reborn.

These mythologies provide a cultural framework for a non-patriarchal, earth-centered spirituality that Atwood's protagonist intuits and reconstructs for herself. Her journey is not simply a regression to a primitive state but a progression toward a complex, ancient, and holistic worldview that has been preserved in the folklore and cultural memory of the Baltic region.

**Table 1 Comparative Analysis of Post-Oppression Themes in *Surfacing* and Baltic Cultural Narratives**

<i>Thematic Axis</i>	<i>Surfacing (Canadian Postcolonial Context)</i>	<i>Baltic Cultural Narratives (Post-Soviet Context)</i>
<b>The Hegemonic "Other"</b>	'Americanism': A rationalist, technological, consumerist ideology that colonizes the landscape and psyche (Howells, 2000; Parker, 2016).	Soviet Legacy/Russian Influence: A history of political occupation, forced modernization, and cultural suppression that created collective 'historical trauma' (Mole, 2012; Kazlauskas & Zelviene, 2016).
<b>The Site of Authenticity</b>	The Canadian Wilderness: A pre-colonial, non-rational space of Indigenous memory and natural order, offering a path to an authentic self (Atwood, 1972b; Parker, 2016).	Nature (Forests, Swamps, Sea): A repository of folklore, pagan heritage, and national identity; a symbol of resilience and a retreat from foreign domination (Mole, 2012).
<b>The Nature of Trauma</b>	Personal and Collective: The narrator's repressed abortion trauma is a microcosm of the nation's victimization and the land's violation (Niederhoff, 2009; Tolan, 2009).	Historical and Trans-generational: The trauma of political violence, deportations, and oppression is passed down, shaping memory and identity (Kazlauskas & Zelviene, 2016; Kurvet-Käosaar, 2013).
<b>The Path to Recovery</b>	Ecofeminist Immersion & Mythic Rebirth: Rejection of patriarchal logic and language; merging with nature; development of a personal, immanent, female-centric spirituality (Warren, 1990).	Cultural Reclamation & Return to Roots: Revitalization of folklore, language, and pre-Christian traditions; emphasis on the deep connection between national identity and the natural landscape (Mole, 2012).

## CONCLUSIONS

The 'ecology of self' charted in Margaret Atwood's *Surfacing* is a deeply resonant and multi-layered process of healing. The protagonist's journey from emotional numbness to a primal, integrated consciousness demonstrates that personal recovery from trauma is inseparable from a radical critique of the cultural pathologies that inflict it. By weaving together ecofeminist, psychoanalytic, and postcolonial threads, Atwood creates a powerful narrative in which the violation of the female body, the colonization of the psyche, and the destruction of the natural world are shown to be symptoms of a single, overarching malady: a patriarchal, rationalist, and imperialist ideology. The protagonist's cure, therefore, cannot be partial; it requires a total rejection of this ideology and a rebirth into a

different mode of being, one rooted in the land and guided by an immanent, non-patriarchal spirituality.

This analysis has argued that the novel's Canadian narrative finds a profound and previously underexplored echo in the historical and cultural experience of the Baltic states. The shared patterns of confronting the trauma of a hegemonic 'other', of resisting cultural erasure, and of locating national and spiritual resilience in the natural world establish *Surfacing* as a key text for a transnational, comparative ecocriticism. The narrator's intuitive reconstruction of an earth-based, female-centric spirituality aligns with striking clarity to the ancient, pre-Christian mythologies of the Baltic region, with its powerful goddesses of fate, sun, and earth. This connection elevates the novel from a national allegory to a universal myth of recovery.

In an era marked by escalating ecological crises, resurgent nationalisms, and ongoing struggles over identity and history, the paradigm offered by *Surfacing* remains urgently relevant. The novel, when read through the lens of Baltic cultural memory, provides more than just a story of individual survival. It offers a vital, non-patriarchal model for imagining a more sustainable and authentic relationship between the self, society, and the planet—a model of 'surfacing' that holds lessons for cultures navigating the complex legacies of oppression worldwide.

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# Immersive and Gamified Approaches: VR/AR in Language Learning

<sup>1</sup> Zarifa Sadigzade

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**Abstract.** The evolution of digital technologies has significantly transformed language education, offering novel pathways for immersive and engaging learning experiences. Among these innovations, virtual reality (VR) and augmented reality (AR) technologies—especially when combined with gamification—have demonstrated the potential to revolutionize second language acquisition. This paper synthesizes current research on immersive and gamified language learning, highlighting the effectiveness of VR and AR environments in enhancing motivation, interaction, fluency, and learner autonomy. Grounded in experiential learning theory (Kolb, 2014) and the benefits of multisensory learning (Shams & Seitz, 2008), the study applies a conceptual analysis framework to systematically review and categorize the affordances and limitations of VR/AR tools in language education. Drawing on literature from Lin and Lan (2015), Parmaxi (2023), and others, this article identifies major thematic outcomes such as cognitive engagement, decreased anxiety, and adaptive learning opportunities. Despite their promise, challenges such as technological cost, access disparity, and instructor training remain barriers to mainstream adoption. The findings underscore the pedagogical potential of immersive-gamified strategies and call for more longitudinal, empirical, and interdisciplinary research. Practical implications for language teachers and policymakers are discussed, with future directions aimed at equitable implementation and evidence-based practice.

**Key words:** *Virtual reality (VR), augmented reality (AR), gamification, immersive learning, language acquisition, experiential learning, multisensory learning, technology-enhanced language education*

## 1. Introduction

The digital transformation of education has ushered in a paradigm shift in how languages are taught and learned. Traditional classroom methods—centered on textbooks and passive learning—are increasingly being challenged by immersive, interactive, and personalized technologies. Among the most groundbreaking of these are immersive technologies, particularly virtual reality (VR) and augmented reality (AR). These tools enable learners to interact with virtual environments or overlay digital elements on the real world, thereby transforming language learning into an experiential, multisensory process (Lin & Lan, 2015; Wu et al., 2013).

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<sup>1</sup> Sadigzade, Z. Lecturer, Nakhchivan State University. Email: [zarifasadig@gmail.com](mailto:zarifasadig@gmail.com). ORCID: <https://orcid.org/0009-0007-1179-1214>

Closely tied to these developments is the pedagogical use of gamification, defined as the application of game-like elements (e.g., points, rewards, competition) in non-game contexts such as education. Gamification, when thoughtfully implemented, can increase learner engagement, motivation, and resilience (Dehghanzadeh et al., 2021; Flores, 2015). Its integration into VR/AR platforms creates highly interactive and emotionally engaging language learning experiences, especially when compared to conventional digital tools or classroom methods.

The convergence of VR/AR and gamification in language education presents a timely opportunity to reimagine second language acquisition (SLA). Unlike static e-learning environments, immersive platforms enable situated learning, where learners practice language skills in contextualized, lifelike scenarios. For example, a VR-based language app may simulate a café in Paris, allowing a French learner to order coffee, interact with avatars, and navigate social customs—all in real-time. These experiences are not merely engaging but also pedagogically grounded in experiential learning theory, which posits that knowledge is constructed through concrete experience and reflection (Kolb, 2014). Moreover, as Shams and Seitz (2008) argue, multisensory learning—learning that involves visual, auditory, and kinesthetic inputs—can enhance comprehension, memory, and cognitive flexibility.

These immersive environments also support interactionist views of language acquisition, which highlight the role of meaningful communication in developing language competence (Swain & Lapkin, 1998). For instance, virtual tasks that require learners to collaborate or negotiate meaning with peers or AI characters can replicate authentic linguistic exchanges. Additionally, as Genesee (1994) emphasized in the context of immersion programs, language learning is more effective when it is content-integrated and occurs within purposeful, real-world tasks.

In recent years, the potential of VR/AR and gamified tools has expanded with the growing sophistication of mobile technology, cloud computing, and artificial intelligence. Systematic reviews by Parmaxi (2023) and Xie et al. (2019) have shown that educational applications are trending toward increased personalization, interactivity, and learner-centered design. VR and AR are no longer considered niche technologies but are becoming viable, scalable tools in both formal and informal education settings. Nevertheless, a critical examination of their actual impact, accessibility, and pedagogical validity in language education remains lacking.

This article aims to fill that gap by addressing the following research questions:

1. What are the key affordances and limitations of immersive VR/AR environments in second language learning?
2. How does gamification within immersive environments influence language learners' motivation, engagement, and proficiency?
3. What pedagogical frameworks best support the integration of immersive-gamified technologies in language education?
4. What challenges and opportunities emerge in the implementation of these technologies at scale?

Through a conceptual synthesis of current literature, this study critically examines how immersive and gamified approaches shape language acquisition, with particular attention to cognitive, affective, and social dimensions. It further explores the theoretical underpinnings, practical applications, and ethical considerations of implementing VR/AR in language classrooms.

## **2. Methods**

### **2.1. Research Design and Type of Study**

This study adopts a conceptual and literature-based synthesis approach, aimed at critically examining existing research on immersive and gamified technologies in second language learning. Rather than conducting an empirical experiment, this article offers a theory-informed analytical framework, drawing on diverse peer-reviewed sources to evaluate pedagogical patterns, effectiveness, and challenges associated with the integration of VR, AR, and gamification in language education.

This method aligns with the objectives of a theoretical contribution: to map, categorize, and synthesize knowledge while proposing a coherent narrative that advances understanding and guides future research. The synthesis relies on systematic reviews, empirical studies, and theoretical papers published primarily between 2002 and 2023, capturing the evolution of immersive and gamified approaches over two decades.

### **2.2. Theoretical Framework**

Two primary theoretical lenses guide this analysis:

- **Experiential Learning Theory (Kolb, 2014):** Central to immersive environments, this theory emphasizes learning as a cyclical process involving concrete experience, reflective observation, abstract conceptualization, and active experimentation. VR/AR technologies simulate real-life contexts in which learners can experience, reflect, and apply new language knowledge meaningfully.
- **The Four-Dimensional Framework for Immersive Learning (De Freitas et al., 2010):** This model helps evaluate immersive learning by considering context, learner characteristics, pedagogical models, and the representation of content. It supports analysis of how VR/AR tools align with educational goals and user needs.

Additional supporting perspectives include:

- **Interactionist SLA theory (Swain & Lapkin, 1998),** highlighting communicative practice.
- **Multisensory learning theory (Shams & Seitz, 2008),** emphasizing the integration of visual, auditory, and kinesthetic modalities.
- **Gamification theory (Dehghanzadeh et al., 2021; Flores, 2015),** examining motivational dynamics and learning outcomes in game-like environments.

### **2.3. Reference Selection Criteria**

References were selected based on the following inclusion criteria:

1. **Relevance:** Articles must directly examine the role of immersive technologies (VR/AR) and/or gamification in second language learning or broader educational contexts.
2. **Scholarly Rigor:** Only peer-reviewed journal articles indexed in established academic databases (e.g., Scopus, Web of Science) were considered.
3. **Recency and Significance:** Preference was given to studies from the past decade (2010–2023), although seminal earlier works (e.g., Billingham, 2002; Genesee, 1994) were included due to their foundational influence.
4. **Diversity of Methodologies:** Both quantitative and qualitative studies, as well as systematic reviews and conceptual analyses, were included to ensure comprehensive coverage.
5. **Interdisciplinarity:** Studies spanning fields such as applied linguistics, educational technology, psychology, and computer science were considered to capture the multifaceted nature of the topic.

Key references include Lin and Lan (2015), Parmaxi (2023), Hung et al. (2018), Wu et al. (2013), and Suh and Prophet (2018), among others, whose insights inform the categorization and interpretation of immersive learning outcomes.

### **3. Results**

This section synthesizes recurring themes from the literature on immersive (VR/AR) and gamified approaches to second language learning. Drawing from conceptual analyses, empirical studies, and systematic reviews, four dominant categories emerged: (1) motivation and engagement, (2) communicative competence and fluency, (3) cognitive processing and load, and (4) pedagogical adaptability and learner personalization. These themes reflect both the strengths and limitations of immersive-gamified environments in language acquisition.

#### **3.1. Motivation and Engagement**

A central finding across studies is that VR/AR platforms—especially when gamified—significantly enhance learner motivation and engagement. Dehghanzadeh et al. (2021) noted that gamification elements such as real-time feedback, rewards, leaderboards, and avatar progression contribute to sustained learner interest. Similarly, Flores (2015) emphasized that immersive games help reduce learner anxiety, especially among shy or low-confidence students.

In VR-based environments, the novelty and sensory richness of simulations promote emotional investment. For example, Lin and Lan (2015) demonstrated that students learning English in a VR environment exhibited greater time-on-task and enthusiasm compared to peers using traditional digital tools. These findings align with Kolb's (2014) experiential learning model, wherein learners gain satisfaction and meaning from concrete experiences.

Parmaxi's (2023) review further revealed that AR-enhanced tasks—such as scavenger hunts or object-recognition activities—trigger curiosity and foster intrinsic motivation, particularly among younger

learners. However, motivation levels tend to be higher when learners perceive a sense of control and relevance, which calls for careful instructional design.

### **3.2. Communicative Competence and Fluency**

Interaction-rich environments—particularly those simulating real-world settings—are associated with improved speaking fluency, vocabulary retention, and pragmatic awareness. Swain and Lapkin (1998) emphasized the importance of task-based collaboration in SLA, which immersive platforms can replicate effectively.

For example, avatar-based conversation tasks in VR scenarios have been shown to improve learners' ability to formulate extended utterances and respond spontaneously (Hung et al., 2018). In simulated shops, airports, or cultural festivals, learners are required to use functional language, adjust to sociolinguistic cues, and negotiate meaning.

The integration of gamified narratives (e.g., language quests or mystery-solving games) also fosters situational language use, as learners must employ vocabulary and grammar to progress through storylines (Flores, 2015; De Freitas et al., 2010). These activities create low-stakes environments that lower affective filters and encourage language risk-taking.

### **3.3. Cognitive Processing and Load**

While immersive learning environments offer high engagement, several studies point to the dual-edged nature of cognitive load. VR and AR environments—rich in visual, auditory, and interactive stimuli—can either facilitate or overwhelm cognitive processing depending on their complexity.

Shams and Seitz (2008) argue that multisensory learning generally improves memory and comprehension; however, excessive stimuli or poor interface design can lead to distraction. Suh and Prophet (2018) found that novice learners may experience disorientation or extraneous load in poorly scaffolded VR activities.

To optimize cognitive effectiveness, Parmaxi (2023) and Wu et al. (2013) recommend adaptive interfaces, clear objectives, and layered task complexity, especially for beginners. Xie et al. (2019) highlighted the role of AI and learning analytics in tailoring task difficulty and reducing overload.

### **3.4. Pedagogical Adaptability and Personalization**

One of the key affordances of VR/AR-enhanced language learning is the ability to adapt to individual learner needs. According to Xie et al. (2019), technology-enhanced platforms increasingly incorporate personalized learning paths, learner analytics, and real-time scaffolding, allowing educators to respond dynamically to each student's progress.

AR applications, such as those described by Yuen et al. (2011) and Kesim and Ozarslan (2012), often use mobile sensors to adapt tasks based on physical location, learner input, or even emotional feedback. This situational adaptability fosters context-rich learning that is difficult to replicate in traditional classrooms.

Gamified systems also support competency-based progression, where learners move at their own pace and receive customized feedback. However, as Billingham (2002) cautioned, effective integration requires careful alignment with curriculum objectives and learner proficiency levels.

## **4. Discussion**

The results of this conceptual synthesis illuminate the powerful role that immersive and gamified technologies can play in reshaping second language acquisition (SLA). By grounding the findings in established SLA theories and pedagogical models, this section explores the educational implications, practical limitations, and future directions for applying VR, AR, and gamification in language learning contexts.

### **4.1. Theoretical Implications for SLA**

The application of immersive technologies aligns closely with interactionist theories of SLA, which emphasize the importance of meaningful communication in language development (Swain & Lapkin, 1998). VR/AR platforms facilitate interaction-rich environments where learners engage in real-time negotiation of meaning, context-sensitive vocabulary use, and multimodal comprehension. Such conditions reflect Genesee's (1994) argument for content-based language immersion, where language is acquired more effectively when embedded in purposeful and contextualized tasks.

The integration of experiential learning theory (Kolb, 2014) further explains why immersive approaches yield higher engagement and deeper learning. Learners in VR/AR environments do not passively absorb information; they actively participate, reflect, and adapt through feedback loops, mirroring Kolb's experiential learning cycle. Similarly, multisensory learning theory (Shams & Seitz, 2008) provides cognitive support for the idea that combining auditory, visual, and kinesthetic elements can enhance both retention and comprehension, particularly for vocabulary and pronunciation tasks.

### **4.2. Pedagogical Implications**

For educators, the practical benefits of immersive-gamified tools are manifold. First, these environments create low-stakes, high-engagement conditions, which are crucial for reducing foreign language anxiety—a known barrier to performance. The ability to practice conversations with avatars or in virtual settings before facing real-world scenarios boosts learners' confidence and willingness to take risks.

Second, immersive learning supports task-based language teaching (TBLT) methodologies by embedding language practice in meaningful scenarios—such as navigating an airport or solving a mystery in the target language. As shown by De Freitas et al. (2010), narrative-based game structures in VR settings facilitate not just vocabulary acquisition, but also the development of critical thinking, problem-solving, and socio-pragmatic competence.

Third, the adaptive and personalized nature of many VR/AR systems supports differentiated instruction, allowing teachers to accommodate various learning styles and proficiency levels. Tools informed by Xie et al. (2019) and Parmaxi (2023) demonstrate how learning analytics and AI-based scaffolding can tailor experiences in real-time, maximizing learner autonomy.

Nevertheless, the successful implementation of these approaches depends heavily on instructional design quality, teacher training, and alignment with curricular goals. As Billingham (2002) and Kesim & Ozarslan (2012) noted, poorly designed or contextually irrelevant immersive activities can lead to cognitive overload or disengagement.

### 4.3. Challenges and Limitations

Despite their promise, several barriers hinder the wide-scale adoption of immersive and gamified language learning:

- **Cost and Infrastructure:** High-end VR systems and AR-capable devices remain financially inaccessible for many institutions, particularly in under-resourced settings. Even mobile-based AR tools require reliable internet and device compatibility, creating equity concerns.
- **Teacher Preparedness:** Many educators lack formal training in designing or facilitating immersive experiences. Without professional development, even the most sophisticated tools risk underuse or misuse (Wu et al., 2013).
- **Content Relevance and Localization:** Much of the current immersive content is designed with Western cultural contexts in mind, making adaptation necessary for diverse learner populations.
- **Technological Fatigue:** Prolonged exposure to digital environments, especially VR, can lead to eye strain, motion sickness, or cognitive fatigue, requiring careful moderation and user-centered design (Suh & Prophet, 2018).

### 4.4. Future Research Directions

Given the emerging nature of this field, there is a pressing need for longitudinal, mixed-methods research that evaluates the sustained impact of immersive-gamified learning on language proficiency, particularly across age groups, linguistic backgrounds, and learning contexts.

Key future research areas include:

1. **Effectiveness vs. novelty effect:** Determining whether observed improvements stem from pedagogical merit or short-term enthusiasm.
2. **Cross-cultural adaptability:** Investigating how immersive content can be localized without losing effectiveness.
3. **AI integration:** Exploring the synergy between immersive technologies and adaptive AI in personalizing learning trajectories.
4. **Teacher training models:** Developing scalable frameworks for preparing educators to integrate immersive technologies effectively.
5. **Ethical and accessibility considerations:** Addressing digital equity and ensuring inclusive design for learners with disabilities.

By addressing these gaps, future studies can move beyond pilot implementations and contribute to a robust, evidence-based foundation for immersive and gamified language education.

## 5. Conclusion

The integration of immersive technologies and gamification into language learning marks a transformative development in second language acquisition. As this conceptual synthesis demonstrates, VR and AR environments—when aligned with game-based elements and sound pedagogical principles—offer rich opportunities for learner engagement, interaction, and personal growth. By situating language practice in authentic, emotionally engaging contexts, immersive technologies support experiential and multisensory learning, encouraging deeper comprehension and retention.

The reviewed literature consistently highlights several key affordances: heightened motivation, increased communicative competence, enhanced cognitive engagement, and growing potential for personalized instruction through real-time data and AI integration. These findings underscore that immersive and gamified approaches are not merely educational novelties but tools with tangible pedagogical value.

However, the path toward widespread implementation is not without its challenges. Issues related to cost, technological access, teacher training, and cognitive overload demand thoughtful planning, institutional support, and further empirical exploration. As immersive learning becomes increasingly mainstream, a shift from experimental to evidence-based, scalable practice is crucial.

Educators are encouraged to explore VR/AR-enhanced language tasks that are purpose-driven, culturally relevant, and developmentally appropriate. Institutions must invest not only in infrastructure but also in the professional development of instructors who will lead the integration of these tools into curricula.

Looking ahead, future research should focus on longitudinal outcomes, cross-cultural design, and the ethical implications of immersive technologies in education. Interdisciplinary collaborations between educators, technologists, and linguists will be key to refining these tools and ensuring that their benefits are inclusive and sustainable.

In sum, immersive and gamified methods—when grounded in theory and applied with care—represent a forward-looking approach to language learning. They honor the complexity of language acquisition while embracing the capabilities of 21st-century innovation. As digital fluency becomes a core component of educational success, the thoughtful integration of VR/AR and gamification into language instruction may well redefine what it means to "learn a language" in the modern age.

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# Can NotebookLM Support English Language Learners? A Theoretical Perspective on AI Tools in Education

<sup>1</sup> Hasan Alisoy

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**Abstract.** The rapid rise of artificial intelligence (AI) in education has sparked interest in its potential to assist English Language Learners (ELLs). This paper explores the theoretical potential of Google's NotebookLM – a note-taking and research assistant launched in mid-2023 – as an AI tool to support ELLs. We consider how NotebookLM might aid in vocabulary acquisition, academic writing, reading comprehension, and self-regulated learning, despite a current lack of empirical studies on this specific tool. Drawing on existing literature about AI-powered language learning tools (e.g. Grammarly, ChatGPT, Duolingo) and principles of notetaking in learning, we discuss NotebookLM's alignment with key second-language acquisition (SLA) theories. Major frameworks such as Vygotsky's Zone of Proximal Development (ZPD), self-regulated learning theory, and cognitive load theory provide lenses for understanding how AI can scaffold learners and personalize learning. While optimistic about NotebookLM's promise to generate summaries, answer questions, and simplify content for learners, we emphasize the need for critical early discussion of its limitations. The paper concludes by calling for empirical research and pilot studies, advocating cautious optimism in embracing NotebookLM and similar AI tools in English language education.

**Key words:** *NotebookLM, English Language Learners (ELLs), AI in Education, Self-Regulated Learning*

## 1. Introduction

The emergence of advanced AI tools is reshaping education, offering new ways to personalize and support learning. In particular, generative AI and large language models have made headlines for their potential to assist both teachers and students. Tools like ChatGPT, introduced in late 2022, demonstrated how AI could provide instant feedback, language practice, and information on demand. Educators worldwide are now grappling with how best to integrate such technologies into classrooms in meaningful, responsible ways. In this context, AI is seen as a double-edged sword: it promises individualized support and innovative learning experiences, yet raises concerns around efficacy, ethics, and equity. The rising role of AI in education thus warrants close examination, especially in fields like language learning where interaction and feedback are crucial.

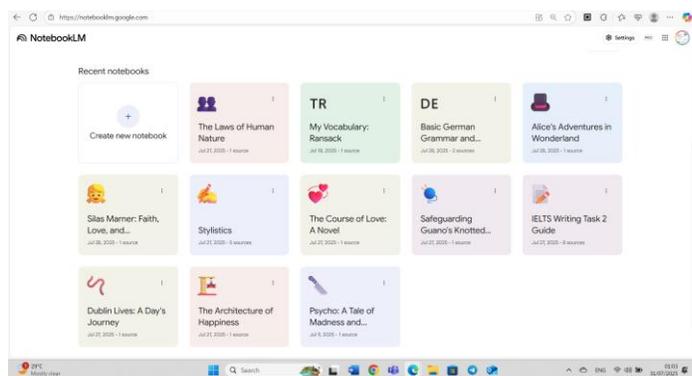
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<sup>1</sup> Alisoy, H. Lecturer in English, Nakhchivan State University, Azerbaijan. Email: [alisoyhasan@ndu.edu.az](mailto:alisoyhasan@ndu.edu.az). ORCID: <https://orcid.org/0009-0007-0247-476X>

One recent innovation is **NotebookLM**, unveiled by Google in mid-2023. NotebookLM is described as a “virtual research assistant” that leverages AI (Google’s Gemini model) to help users interact with their documents. In essence, it allows a learner to upload texts (such as articles, PDFs, or notes) and then ask the AI questions about that content or request summaries and explanations. The AI synthesizes information from the user’s sources to generate helpful responses, complete with citations to the original documents. For example, a student could feed an English article into NotebookLM and ask, “What are the key points of this text?” or “Explain this paragraph in simpler words,” and the tool would produce an AI-generated summary or clarification grounded in the provided material. This promises a form of on-demand, context-specific support for learning and research.

### Figure 1:

*Screenshot of the original NotebookLM interface, showing an uploaded document alongside an AI-generated sidebar with key topics, suggested questions, and a query box. Such features illustrate how NotebookLM can guide learners by highlighting important concepts and prompting inquiry.*



NotebookLM’s launch is so recent that it remains largely untested in real classrooms. It evolved from an experimental project (“Project Tailwind”) into a limited release in July 2023, and by late 2024 it shed its beta status and even introduced a subscription-based “NotebookLM Plus” for advanced features. As of 2025, the tool has been adopted by some researchers, students, and professionals as an aid for synthesizing notes and sources. However, there is a **notable gap in empirical research**: no published studies yet examine NotebookLM’s impact on learning outcomes or its efficacy for any learner population. This absence is especially evident regarding **English Language Learners (ELLs)** – students who are learning English as a second or foreign language. Given how new NotebookLM is, educators and researchers have not had time to formally evaluate it with ELLs, despite its potential relevance.

**English Language Learners (ELLs)**, in both global and academic contexts, form a significant portion of learners today. Globally, an estimated 1.5 to 2 billion people are learning English – roughly 20% of the world’s population. This includes a wide spectrum: from children in bilingual elementary programs, to international university students studying in English, to adult learners in EFL (English as a Foreign Language) contexts around the world. In U.S. K-12 education, “ELL” typically refers to students in public schools who are not yet proficient in English and require specialized support in mainstream classes. These learners face distinct challenges. For instance, when reading academic texts,

ELLs often encounter *unfamiliar vocabulary and complex grammar structures* that native speakers find routine. Limited vocabulary knowledge and difficulties with idioms or academic language can impede their reading comprehension. Grammatical errors and lack of fluency can hinder their writing. Many ELLs also struggle with listening (due to new accents or fast speech) and speaking (due to lack of confidence or fear of mistakes). In essence, ELLs need support in **vocabulary acquisition, grammar development, reading comprehension, writing fluency, and oral communication**. They benefit from scaffolding – i.e. instructional support that makes challenging content accessible – and from personalized practice that targets their specific gaps.

Considering both the novelty of NotebookLM and the needs of ELLs, the **research question** guiding this paper is: **Can NotebookLM meaningfully support English language learners in the near future, and if so, in what ways?** We approach this question as a *theoretical exploration*, mapping out potential roles and limitations of NotebookLM for ELLs based on what is known from related literature. Our aim is not to provide empirical evidence (which is currently lacking) but to discuss how NotebookLM *could* be utilized or why it *might* be beneficial, grounded in established theories of language learning and educational technology.

In pursuing this aim, we will first review relevant literature on AI in language education (Section 2) to situate NotebookLM among other tools that have been studied (such as intelligent tutoring systems, Grammarly, Duolingo, chatbots, etc.). We will then outline key theoretical frameworks (Section 3) – notably **Vygotsky’s Zone of Proximal Development (ZPD)**, **self-regulated learning**, and **cognitive load theory**, as well as principles from **Computer-Assisted Language Learning (CALL)** – to provide lenses through which NotebookLM’s functionality aligns with known learning mechanisms. Next, we propose several potential use cases for NotebookLM in English language teaching (ELT) and learning (Section 4), ranging from academic writing support to vocabulary building and autonomous study, including hypothetical classroom scenarios. In the Discussion (Section 5), we critically examine the promise of these ideas versus the unknowns and risks (such as over-reliance on AI, ethical concerns like data privacy and bias, and the danger of hype outpacing evidence). Finally, the Conclusion (Section 6) summarizes key points and emphasizes the need for empirical research and careful optimism when integrating NotebookLM or similar AI tools in education. In short, this paper serves as an early conceptual inquiry into how a cutting-edge AI notebook might transform or trouble the landscape of English language learning.

## 2. Literature Review

To understand NotebookLM’s potential, it is important to review prior research on AI-powered tools in language education, the role of notetaking and summarization in learning, and the specific needs of ELLs that such tools might address. This section synthesizes findings from studies on existing language-learning technologies and highlights gaps that NotebookLM could fill.

### 2.1 AI in Language Education: Emerging Tools and Findings

Artificial intelligence has been making inroads into language education for several decades, but recent advances in natural language processing have accelerated the development of sophisticated tools for

learners. A variety of AI-powered applications have been used or studied in the context of language learning:

- **Grammar and Writing Assistants:** Tools like **Grammarly** use AI algorithms to provide instant grammar correction, writing enhancement suggestions, and sometimes even stylistic feedback. Research generally shows positive impacts of such tools on ELL writing. For example, a systematic review by Dizon & Gayed (2024) found that Grammarly’s automated writing evaluation system effectively reduces grammatical errors in L2 writing and supports the revision process. Individual studies have reported that Grammarly not only helps students catch errors but also *increases their writing confidence and autonomy* in learning, as students can self-edit with AI support. However, reviews note limitations too – e.g. Grammarly’s feedback, while useful, lacks the *teaching presence* a human teacher provides for deeper explanations. These tools work best as supplements to instruction rather than replacements, and students may need guidance to understand AI feedback (which can sometimes be incorrect or context-insensitive). Nonetheless, Grammarly exemplifies how AI can assist one of ELLs’ toughest challenges – producing grammatically accurate, clear writing – by acting as a real-time proofreader and coach.
- **Intelligent Tutoring and Practice Apps:** Another class of AI language tools are intelligent tutoring systems and apps for practice, such as **Duolingo** (a popular gamified language learning app) and various chatbot-based tutors. **Duolingo**, while not a conversational AI per se, uses machine learning to adapt exercises to the user’s level and has an AI-driven feedback loop. Studies have shown Duolingo can be beneficial for vocabulary acquisition and basic grammar practice. For instance, prior research indicates that using Duolingo leads to higher achievement in vocabulary and grammar for EFL students, compared to traditional homework, and can improve learner engagement. A recent experimental study by Ouyang, Jiang, & Liu (2024) found that Duolingo usage had a *significant positive effect on EFL learners’ engagement and willingness to communicate*, boosting their confidence in speaking and overall language attitudes. Learners appreciated the app’s adaptability and the game-like environment, which kept them motivated. That said, the literature also points out challenges: Duolingo and similar apps often focus on individual use, lacking rich interpersonal interaction, and require reliable internet and devices – resources not all learners have. They also cannot fully replace the nuanced feedback of a teacher. Still, such AI-integrated apps illustrate how technology can provide ELLs with extra practice outside the classroom and reinforce fundamentals in an engaging way.
- **Conversational AI and Chatbots:** With recent leaps in natural language generation, **chatbots** and conversational agents have become a hot topic in language education. Chatbots range from rule-based dialogue systems to advanced generative models like ChatGPT. They offer the enticing possibility of a 24/7 conversation partner for language practice. Research in this area is rapidly growing. A meta-analysis of studies on AI chatbots in L2 learning found an overall positive effect on language learning performance (approximately  $g = 0.48$ ), indicating that students who practiced with chatbots outperformed those who didn’t on average. Chatbot

interactions have been shown to improve learners' *speaking confidence, engagement, and vocabulary acquisition* in particular. For instance, Lin et al. (2023) reported that employing a GPT-based chatbot significantly aided students in learning new vocabulary words in context. Other studies note that chatbots can lower learners' anxiety by providing a judgment-free environment to make mistakes and repeat exercises. Even *non-educational* chatbots like **Replika** (an AI "companion" app) have been informally used by learners to practice casual conversation in English, with some reporting improved fluency through regular chatting. However, challenges include the *accuracy and appropriateness* of chatbot responses (early versions sometimes gave incorrect or nonsensical replies), as well as the difficulty of ensuring sustained, pedagogically rich interactions. Some chatbots lack pedagogical design – they converse but do not necessarily *teach* or correct the user. Newer large language model (LLM) based systems like ChatGPT can generate fluent answers and even explain grammar or provide feedback, but they may also produce *misinformation or overly advanced language* that could confuse learners. Despite these caveats, the trend is clear: **AI conversational agents are becoming valuable tools for language practice**, capable of increasing access to interaction in the target language where human partners are not readily available.

- **Other AI Tools:** Beyond these, there are AI-driven translators (e.g. Google Translate) which ELLs commonly use to bridge understanding of new words or even to draft texts (though over-reliance on translation can impede actual language development). Speech recognition technology (like in pronunciation apps or dictation tools) uses AI to give learners feedback on their pronunciation or to enable them to practice speaking by responding to prompts. Automated essay scoring systems and AI writing evaluators (such as ETS's e-rater or Turnitin's Draft Coach) are also used in some academic settings to help students iterate on writing. Each of these has its own body of research; broadly, they show that **immediate feedback and individualized guidance** afforded by AI can help address learners' specific weaknesses, provided the feedback is accurate and the learners are trained to use it constructively.

In summary, existing AI tools have demonstrated benefits for language learners: *automated feedback can reduce errors, adaptive platforms can boost engagement, and chatbots can increase practice opportunities*. Table 1 summarizes a few key findings from recent studies on AI in language learning:

- *Grammarly (writing AWE)*: Reduces grammar errors and improves revision quality; can lower writing anxiety and encourage autonomous correction.
- *Duolingo (adaptive app)*: Increases vocabulary and grammar gains in beginners; enhances engagement and confidence in using language.
- *Chatbots/ChatGPT*: Moderate positive effect on overall performance ( $g \sim 0.48$ ); improves spoken fluency and vocabulary, though must guard against misinformation.
- *AI speech tutors*: (e.g., apps using speech recognition) – help improve pronunciation and listening discrimination, although accent and recognition errors can occur.

Notably, **NotebookLM** did not exist when most of this prior research was conducted, so it is not mentioned in these studies. However, NotebookLM shares DNA with some of the above tools. Like Grammarly, it deals with written text and could offer corrective feedback or suggestions (though its focus is summarization, not error correction). Like chatbots, it allows a form of Q&A interaction – the user asks a question in natural language and the AI responds – albeit the conversation is anchored to uploaded documents rather than free-ranging. Like intelligent tutors, NotebookLM could adapt to a learner’s input (the content they provide) and generate personalized output (notes, summaries). Therefore, one can hypothesize that **the advantages observed with other AI tools might also apply to NotebookLM** if used in analogous ways. For instance, if Grammarly’s feedback fosters self-editing skills, perhaps NotebookLM’s explanatory answers could foster self-study skills; if Duolingo’s adaptive practice keeps learners motivated, perhaps NotebookLM’s ability to answer any question about a text keeps learners curious and engaged in reading. These conjectures need validation, but they provide a starting point for envisioning NotebookLM’s educational value.

## 2.2 Notetaking, Summarization, and Learning

NotebookLM is fundamentally a note-centric tool – it creates notes (summaries, Q&As) from source materials. Thus, it embodies principles of **notetaking, summarization, and personalization** that have long been known to aid learning. We review some of these principles here.

**Cognitive and Metacognitive Value of Summarization:** Summarizing a text is a powerful learning strategy. Research in reading comprehension shows that when students summarize, they are actively identifying main ideas and distilling information, which leads to deeper processing. Summarizing is considered a key *metacognitive strategy* that significantly enhances reading comprehension. By having to restate content in their own words, learners engage in *metacognitive monitoring* — they must check if they truly understand the material. As one study noted, *summarization training improved students’ attention to text and their metacognitive control of the reading process*, particularly for ELLs who need to consciously employ strategies to understand complex English texts. In essence, creating a summary forces learners to extract the gist and organize their thoughts, which strengthens memory retention and comprehension accuracy.

NotebookLM’s core functionality – generating summaries or “notes” from a document – aligns with this learning strategy. In a theoretical sense, if an ELL reads a difficult article and then uses NotebookLM to produce a summary, the AI is modeling the act of summarization. The student can compare the AI summary with their own understanding, potentially revealing gaps (“Oh, I missed that key point in my reading”). Additionally, the AI summary itself can serve as a simplified version of the text, which the student can study to reinforce comprehension. One could liken this to having a tutor who highlights the *important points* after you read. Of course, a concern is that if the AI does all the summarizing, the student might skip doing it themselves. We will address such limitations later. Still, from a cognitive load perspective, an AI-generated summary *reduces the volume of text* a learner has to grapple with at once, focusing their attention on the essential points – this potentially lowers **extraneous cognitive load** and allows more working memory to be devoted to understanding core concepts.

**Annotation and Active Notetaking:** Educational research also emphasizes the benefits of active notetaking and annotation. Rather than reading passively, when learners *annotate* a text (underline, write margin notes, highlight key ideas), they process the material more deeply. Annotation is an active reading strategy that improves comprehension and retention. It requires students to *put information into their own words*, which means they must understand it first. In traditional settings, teachers encourage ELLs to keep vocabulary notebooks, jot down main ideas of paragraphs, or write summaries of chapters as forms of note-taking. These practices are linked to better recall and learning outcomes. For example, a student who writes a brief summary at the end of each textbook section is more likely to remember the content than one who simply reads through, because the act of note-making consolidates knowledge.

NotebookLM’s design effectively provides a digital space for this kind of *personal note creation*. The user can upload multiple documents into a “notebook” and ask the AI to generate notes, which they can edit or add to. It can also suggest questions one might ask about the content. This is akin to prompting the student with cues – a metacognitive support. By compiling a **personalized AI-generated study guide**, ELLs could benefit from organized, concise notes tailored to the materials they need to learn. Moreover, NotebookLM allows saving AI responses as notes within the app, meaning a learner can iteratively build up a knowledge base. For instance, imagine an ELL graduate student reading several journal articles: they could use NotebookLM to summarize each article, then have a set of summaries (in simpler language) to review for understanding or for writing their literature review. While traditional annotation is manual, here the AI accelerates it – but the *personalization* remains, since the notes are based on the user’s chosen sources and questions. In educational theory, personalized content is known to boost engagement and relevancy for learners. AI systems can adapt to individual student needs, improving outcomes through customized content and feedback. Thus, NotebookLM’s ability to tailor outputs to a learner’s specific documents exemplifies personalized learning: the *student is effectively telling the AI what they are interested in or need to learn*, and the AI responds with targeted information.

It’s worth noting that **self-regulated learning** strategies often include summarizing and note-reviewing as key tactics. Successful learners plan how to approach a text, monitor their understanding (e.g., by writing margin notes or summaries), and evaluate what they learned (perhaps by quizzing themselves on their notes). NotebookLM could function as a tool to facilitate these strategies – a point we discuss more in the theoretical framework section. For now, the literature establishes that summarization and annotation are beneficial; therefore, a tool that produces summaries and encourages questions can be seen as *aligned with evidence-based study practices*. Early user feedback on NotebookLM (as reported by its developers) noted that people were using it to “make sense of...piles of papers” and “generate study guides” for themselves, indicating that even without formal studies, the intuitive applications are in line with known good practices (organizing and synthesizing information for learning).

### 2.3 ELL Needs and AI Tool Alignment

As highlighted, ELLs have particular needs in language learning. We now connect those needs with capabilities that AI tools – and by extension, NotebookLM – might offer, based on literature:

- **Vocabulary Acquisition:** ELLs must acquire thousands of new words to be proficient, including general vocabulary and academic terms. This requires repeated exposure, clear definitions, and contextual examples. AI can support vocabulary learning by providing *on-demand definitions and examples*. For example, if a student doesn't know a word in a reading, a tool like NotebookLM could be asked "What does *ambivalent* mean in this context?" and the AI might generate an explanation or simpler synonym, potentially even in the student's first language if translation is enabled. Prior AI tools like dictionary apps and translator bots have been widely used for this purpose, but NotebookLM could go further by **explaining usage in context** (because it has the whole document context). This resembles an AI tutor highlighting vocabulary. Research by Yunus et al. (2022) on mobile learning for ELLs found that easily accessible definitions and examples in apps improved students' vocabulary retention, as they could quickly resolve unknown words without losing reading flow. NotebookLM could fulfill a similar role by acting as a smart glossary for any text.
- **Grammar and Writing Corrections:** ELLs often need corrective feedback on grammatical errors and writing structure. While NotebookLM is not primarily a grammar checker, it can still assist writing. A learner could paste their essay draft into NotebookLM and ask questions like "Can you suggest improvements to this paragraph?" or "Is there a better way to phrase this sentence?" The AI might then paraphrase or point out unclear parts. This is analogous to how students use ChatGPT to get writing advice. Studies have observed mixed but promising results in using AI for writing feedback – for instance, some EFL students using an AI chatbot to review their drafts reported improved organization and idea development. The chatbot wasn't perfect in grammar correction, but it provided *alternative phrasings* that students learned from. Similarly, NotebookLM could help with *academic writing* by organizing references (upload sources, get summaries and quotes to use, which aids proper citation) and by clarifying complex source material so the student can integrate it better into their writing. While empirical evidence is not yet available, one could theorize that NotebookLM might reduce cognitive load for ELL writers by synthesizing reference information (so they don't have to mentally juggle many English texts at once). This aligns with cognitive load theory's recommendation to *segment and simplify information* to avoid overwhelming learners.
- **Reading Comprehension:** ELLs often struggle with reading comprehension, especially of long or complex texts above their proficiency level. Key hurdles include unknown vocabulary (addressed above), complex syntax, and culturally embedded references that they might not know. Summarization and explanation can dramatically help here. In bilingual education, teachers often provide **scaffolds** like summaries or guiding questions to help students grasp content in a second language. NotebookLM could automatically generate such scaffolds. For instance, an ELL in a history class could upload a dense chapter and ask "Summarize this in simple English" – effectively getting a more digestible version. They could also ask specific questions: "Why did the author mention the Treaty of Versailles here?" to get context. This is

similar to having a personal reading tutor. The theoretical benefit is grounded in Vygotskian scaffolding: the AI provides **support within the learner’s zone of proximal development** for reading – explaining what the learner can’t understand alone, thus enabling them to finally comprehend the text with assistance. Prior research on summary tools (not necessarily AI – even human-provided summaries) shows they improve ELLs’ comprehension and content learning because students can confirm if they understood correctly. Additionally, asking and answering questions about a text is known to improve recall and understanding (the self-questioning strategy). If NotebookLM suggests or answers questions about the text, it engages learners in that active processing. This aligns with generative learning strategies that promote better retention.

- **Speaking and Listening Practice:** Although NotebookLM is not a spoken dialog agent (it’s primarily text-based, though it has an *Audio Overview* feature that creates a podcast-like summary), it could indirectly aid speaking/listening. For example, an ELL could use NotebookLM to generate a concise outline of a presentation they need to give, then practice speaking from that outline. Or they might ask NotebookLM to generate sample questions that listeners might ask after their presentation, allowing them to prepare responses. In terms of listening, the *Audio Overview* feature (where the AI produces an audible conversation summarizing a document) might help listening comprehension, especially because it was expanded to support 80+ languages. In theory, an ELL could listen to an audio summary in English to practice understanding, or potentially in their native language if they just need content knowledge. However, as a monolingual (English) learning tool in text mode, NotebookLM’s speaking/listening support is limited unless one uses external text-to-speech for its outputs. This is a noted limitation: many AI tools (like GPT chat) currently function strongest in text, which may not directly improve oral skills unless creatively implemented by a teacher (e.g., having students discuss the AI’s answers).
- **Learner Autonomy and Confidence:** A recurring theme in supporting ELLs is fostering *learner autonomy* – empowering them to take charge of their learning outside the classroom. AI tools, by virtue of being available on-demand, can encourage autonomous learning behaviors. Duolingo, for instance, works largely because learners can use it anytime, setting their own pace and goals. Research indicates that students who supplement their classroom learning with autonomous use of apps or online resources often progress faster, as they engage in more practice and self-reflection. NotebookLM could similarly encourage autonomy: an ELL can use it to clarify doubts without immediately running to a teacher, thus practicing problem-solving. If a student is too shy to ask a “dumb question” in class, they might freely ask NotebookLM and get an explanation, which might then bolster their confidence to participate in class with the understanding they gained. Of course, the student needs to have enough English skill to interact with the AI meaningfully (posing questions clearly). But even that act – formulating questions in English – is good practice. One could imagine learners feeling more in control: instead of waiting passively for a teacher’s explanation, they actively query the AI. This is aligned with self-regulated learning models where *help-seeking* is a positive strategy.

Zimmerman (2002) notes that self-regulated learners strategically seek assistance when needed while maintaining responsibility for their learning. NotebookLM offers a new avenue for help-seeking – a sort of “virtual coach” or reference at one’s fingertips. Early anecdotes from users inside Google reported that employees were using NotebookLM to “**manage their own notes and ideas**” and parse information faster, which suggests a boost in independent productivity. Translating that to ELL education, one can foresee motivated students using NotebookLM as a study companion to get through challenging English content on their own.

## 2.4 Gaps and Alignment with Theory

While the literature on AI in language learning is rich and growing, **NotebookLM itself has not been studied** at the time of writing. This is a critical gap that this paper’s theoretical discussion begins to address. However, from the above review, we see that *NotebookLM’s intended functionalities align with several key approaches in language education*:

- It emphasizes **summaries and guided notes**, which correspond to proven comprehension strategies (metacognitive summarizing, reducing cognitive load).
- It provides **just-in-time information and explanations**, echoing the scaffolding concept in sociocultural theory and the immediate feedback valued in CALL.
- It facilitates **personalized content interaction**, fitting within personalized learning paradigms and self-regulated learning principles (learners can focus on their chosen content, at their own pace, with AI support).
- It could enhance **engagement** by allowing interactive Q&A with texts, which resonates with communicative approaches that value interaction (even if here the interaction is learner-to-AI-to-text rather than learner-to-learner).

In short, NotebookLM is an amalgam of capabilities that we have seen in separate tools: summarizer, Q&A chatbot, research organizer. The literature reviewed gives reason to be optimistic that such capabilities can support language learning. Nevertheless, we caution that **no empirical evidence yet confirms these benefits for NotebookLM specifically**. There may be unforeseen challenges once it’s implemented with real ELLs – for example, perhaps ELLs might over-trust AI summaries and not read deeply, or the tool’s answers might not always be at the right difficulty level for learners. These are speculations that need testing.

Before turning to theoretical frameworks, we underscore the *need for early discussion* (as we are doing) precisely because teachers and students might start using these AI tools *before* research catches up. History has shown that technology often outpaces pedagogy; by the time formal studies are published, students may have already adopted the tech in unstructured ways. Thus, mapping NotebookLM’s potential roles now, through the lens of established theory and analogous research, can guide educators who are considering piloting it. It can also help researchers identify what questions to ask first (e.g., “Does NotebookLM’s summarization improve ELL comprehension as theory predicts, or

do any negative effects emerge?”). In the next section, we ground this discussion in theoretical frameworks to further articulate why and how NotebookLM might support ELLs’ learning process.

### 3. Theoretical Framework

In this section, we examine NotebookLM’s potential through one primary and two supplementary theoretical lenses: **Vygotsky’s Zone of Proximal Development (ZPD)** as the main framework, complemented by **self-regulated learning theory** and **cognitive load theory**. These frameworks help explain the pedagogical rationale for using AI tools like NotebookLM and anticipate their impact on learning. We also relate the discussion to perspectives from **Computer-Assisted Language Learning (CALL)** where relevant.

#### 3.1 Vygotsky’s Zone of Proximal Development (ZPD) and Scaffolding

One of the most influential concepts in education and second language acquisition is Lev Vygotsky’s Zone of Proximal Development. The ZPD is defined as “*the distance between the actual developmental level (what a learner can do independently) and the level of potential development (what they can do with guidance or collaboration)*”. In simpler terms, it is the range of tasks a learner **cannot yet do alone but can accomplish with support from a more knowledgeable other**. Learning is maximized when instruction targets this zone – challenges just beyond the learner’s current ability, accompanied by appropriate assistance (often termed *scaffolding*).

Traditionally, the “more knowledgeable other” providing scaffolding is a teacher or a peer. However, in modern educational technology, we can conceive of AI as an additional *mediator* or assistant in the learning process. **NotebookLM can be viewed as a form of scaffold for ELLs**. It has the capacity to supply immediate support in areas where an ELL might struggle if left unaided. For example, consider an intermediate ELL faced with a science textbook chapter full of complex sentences and new terms. Reading it alone, the student might only grasp 50% of the content (their independent level). With a teacher, the student could potentially reach near 100% comprehension as the teacher explains difficult parts – this teacher support represents functioning in the ZPD. If NotebookLM can provide some of those explanations and simplifications, it can play a *scaffolding role within the student’s ZPD*.

Key features of effective scaffolding include: **contingency** (support is tailored to the learner’s immediate needs), **fading** (support is gradually removed as the learner becomes competent), and **transfer of responsibility** to the learner. How might NotebookLM embody these? The *contingency* is evident when a student asks a specific question – the AI’s help is on-demand for that precise confusion. For instance, a learner asks, “What does this paragraph mean?” The AI responds with a simpler rephrasing. This is contingent support: it addresses the learner’s identified gap at that moment. Over time, as the learner’s proficiency grows (and possibly as they become more skilled at reading strategies), they might rely less on the AI – that would be the *fading* aspect. They might move from

asking the AI for full summaries to just using it to check occasional doubts, and eventually perhaps only for verifying their own summaries. The *transfer of responsibility* occurs if the tool is used in a way that the learner gradually internalizes the assistance. For example, by regularly seeing how NotebookLM summarizes texts, the student may learn to emulate that process, thus improving their own summarization skill without always needing the AI.

Vygotsky's theory emphasizes that learning is a socially mediated process – originally referring to human mediation. But some CALL researchers (e.g., Warschauer, 1997) have argued that computers can mediate language learning by providing interaction and feedback. NotebookLM, while not a human, leverages a vast knowledge base and language model to *simulate some characteristics of an expert guide*. It can “encourage” the learner to delve deeper through suggested questions (this is akin to an expert prompting a learner to reflect). It *collaborates* in the sense that the learner and AI together explore the content – the learner drives the inquiry, the AI contributes information.

One could conceptualize NotebookLM as a form of **distributed scaffolding**: part of the scaffolding is embedded in the tool's design (e.g., it automatically highlights key topics from a document, which helps focus the learner's attention), and part is in the dynamic interaction (the Q&A between learner and AI). Notably, an advantage of AI scaffolding is its *availability and patience*. A student might be unwilling to ask a human tutor to explain something *three times*, but they could ask the AI repeatedly in different ways until they understand, without embarrassment. This encourages the learner to stay in their ZPD longer rather than giving up, because the support is non-judgmental and always accessible.

However, theoretical caution: For scaffolding to be effective, the support must be accurate and well-targeted. If NotebookLM gives a flawed explanation or too advanced an explanation, it might fall outside the learner's ZPD (either still too hard, or sometimes even misleading). This connects to the concept of **calibrated scaffolding** – the AI needs to adjust to the learner's level. Currently, NotebookLM doesn't “know” the learner's proficiency; it only knows the content. In theory, a learner could prompt it: “Explain this in simple English” to force a more calibrated response. This is something educators would need to guide students to do (i.e., teach them to ask for adjustments from the AI, which is a new literacy). The ideal scenario is that NotebookLM becomes *sensitive* to the complexity of its output relative to input – something future developments might improve (like an adjustable “reading level” setting on summaries).

In sum, ZPD theory provides a strong argument that **NotebookLM can scaffold ELLs by operating as a semi-intelligent partner**, helping them accomplish understanding and tasks just beyond their current ability. It embodies the idea that *what a learner can do today with support, they can do tomorrow independently*. If an ELL repeatedly uses NotebookLM to decode texts, eventually they may internalize some of those decoding strategies and rely less on external help. The notion of the AI as an MKO (more knowledgeable other) is perhaps an overstatement – the AI lacks true understanding or pedagogical intent – but from the learner's perspective, it is a source of knowledge and feedback, which functionally can fulfill part of the MKO role. This blends into the next framework: how the learner regulates their own learning with such a tool.

### 3.2 Self-Regulated Learning (SRL)

**Self-regulated learning** theory (Zimmerman, 2002; Pintrich, 2000) centers on how learners proactively control their learning process through goal-setting, strategy use, self-monitoring, and self-reflection. A self-regulated learner plans their approach (forethought phase), implements and monitors strategies (performance phase), and reflects on outcomes to adjust future efforts (self-reflection phase). SRL is particularly relevant for ELLs in content courses or independent study, as they need to take initiative to practice language skills and address weaknesses outside of limited class hours.

Tools like NotebookLM could play a significant role in **enhancing self-regulated learning behaviors** because they provide resources that support each phase of the SRL cycle:

- **Forethought (Planning):** ELLs often have to plan how to tackle a difficult reading or how to study for an exam in a second language. NotebookLM can aid planning by generating outlines or study guides. For example, a learner might upload all their lecture notes into NotebookLM and ask “What are the main themes I should focus on for the test?” The AI might summarize key topics, helping the student create a study plan. By organizing information, the tool assists in *goal setting* (“I need to learn these 3 main themes”) and *strategic planning* (“I will review each summary, then read details in the text”). In SRL terms, the learner is using an environmental structuring strategy – shaping their study materials with AI help – which is indicative of high self-regulation. Zimmerman (2002) highlights that self-regulated learners often set specific goals and plan the use of tactics; here NotebookLM can be one of those tactics (e.g., plan to use AI summaries to guide studying).
- **Performance (Monitoring & Strategy Use):** During the actual learning activity, students need to monitor their comprehension and employ strategies to overcome difficulties. NotebookLM shines in this phase by acting as a *monitoring tool*. If an ELL is reading and doesn’t understand something, asking NotebookLM a question is a form of checking and seeking feedback, which is a metacognitive strategy. It’s akin to *self-questioning*, a well-known comprehension monitoring tactic. Additionally, the ability to ask the AI to verify one’s own summary (“Did I capture the main points correctly?”) and see if the AI’s summary differs can prompt the learner to notice gaps. This encourages reflection-in-action. Furthermore, NotebookLM can function as a **strategy enabler**: learners have strategies like summarizing, elaborating, or seeking examples; the AI can execute or assist those strategies. If a learner knows that “elaborating” helps (making connections or examples), they could prompt the AI: “Give me an example of this concept” – and the AI will do so, effectively helping the learner apply that strategy. In effect, the AI lowers the barrier to using complex strategies by doing some heavy lifting, which is important for ELLs who might struggle to, say, generate an example in English on their own. By making strategy use more accessible, the tool keeps the learner actively engaged rather than passively stuck.
- **Self-Reflection:** After completing a task (like reading a chapter or writing an essay), a self-regulated learner reflects on what went well, what they learned, and what needs improvement. NotebookLM can support this by, for instance, quizzing the learner or highlighting parts they

didn't query which might indicate uncertainty. A possible use: after studying, an ELL could ask NotebookLM to generate a few quiz questions about the material (or use the AI's suggested questions) to test themselves. This is similar to using flashcards or practice tests – a very effective SRL technique. The AI might produce a question the student cannot answer, revealing a weakness, which the student can then address by reviewing that part of the notes. This kind of **self-evaluation** is crucial to closing the loop in SRL. Moreover, because NotebookLM keeps a record of the questions asked and notes made, learners can reflect on their learning trajectory: “I see I asked a lot about vocabulary in the first half of the article but not later; maybe I improved or maybe I missed some?” – these data can feed into metacognitive awareness.

In summary, NotebookLM can act as a **cognitive partner** that augments a learner's self-regulation. It provides immediate feedback and information, which helps learners manage their learning without always requiring a teacher's intervention. Carneiro & Simoao (2011) discuss technology-enhanced environments for SRL, noting that digital tools can prompt learners to plan and reflect by structuring learning tasks for them. NotebookLM does exactly this structuring when it turns a chaotic set of documents into a structured Q&A or summary. It is plausible that using such a tool would encourage learners to take more initiative – knowing they have support might embolden them to tackle harder texts (raising their self-efficacy, a key motivational aspect of SRL). Of course, a potential pitfall is if learners become *too* reliant, as that could impede developing their own self-regulation skills. Ideally, however, the AI serves as a scaffold that is internalized.

One interesting angle is **motivation**: SRL is not just cognitive but also motivational. If an AI tool makes learning experiences more successful (e.g., an ELL understands a tough article with AI help rather than feeling lost), their motivation and self-efficacy can increase, leading to greater persistence. The tool can also gamify or make the process more interactive (even the simple interactivity of asking questions and getting answers can be more engaging than solitary reading). This motivational support is often under-emphasized but is critical especially for ELLs who might feel anxiety or frustration. Knowing “I have a helper I can rely on” might reduce anxiety and encourage practice, akin to how having a patient tutor would.

In conclusion, through the SRL lens, NotebookLM can be seen as fostering independent, reflective learning by providing *resources and feedback at each stage of the learning cycle*. It aligns with the idea of learners controlling their learning environment – here the learner literally controls an AI to adapt the learning material to their needs. Zimmerman's model stresses that self-regulation leads to higher achievement; thus, if NotebookLM indeed promotes SRL behaviors (like self-questioning, self-checking, goal-setting), one would expect improved language learning outcomes as a result.

### 3.3 Cognitive Load Theory

**Cognitive Load Theory (CLT)** provides another useful perspective, focusing on the cognitive processing demands placed on learners. CLT posits that working memory has limited capacity, and effective instruction should reduce unnecessary (extraneous) cognitive load so that learners can devote their mental resources to the germane processing of the material (i.e., truly learning it). Extraneous

load comes from poorly designed materials or tasks that make a learner juggle too much irrelevant or disorganized information.

Applying CLT to the experience of an ELL, consider how cognitively overwhelming reading in a second language can be: the learner must decode vocabulary, parse unfamiliar syntactic structures, possibly translate mentally, and connect ideas across sentences, all while trying to remember what they read earlier. The *intrinsic load* (inherent difficulty of the content) might be high if the topic is complex, and the *extraneous load* might be high if, say, the text is not well structured or if the learner lacks context. NotebookLM can mitigate extraneous load in several ways:

- **Information Organization:** By generating structured summaries or lists of key points, NotebookLM presents information in a more organized manner than a raw text might. For example, if a textbook chapter rambles through examples, the AI summary might extract the main principle and list a couple of examples clearly. This spares the learner from having to mentally organize the content themselves under capacity strain. As CLT advises, *providing worked examples and well-organized information* can ease cognitive load for novices. In this case, an AI summary is like a worked example of understanding the text – it shows how one might condense the text.
- **Reduction of Split-Attention:** Often ELLs have to refer back and forth between a text and a dictionary or grammar reference, which is a “split attention” situation that increases extraneous load. With NotebookLM, a learner can integrate these actions: instead of separately looking up words or Googling background info, they can ask the AI within the same interface. This integration means the learner’s attention is less fragmented across multiple tools or pages – everything is in one “learning workspace.” For instance, a student reading a PDF in NotebookLM’s interface can click or query within that space itself, reducing the working memory cost of context switching.
- **Simplification of Language:** By rephrasing complex text into simpler English on request, the AI effectively lowers the *intrinsic load* to a level better suited for the learner’s current proficiency. While one must be careful because oversimplification can remove important nuances (risking that germane processing of nuance is lost), in many learning scenarios with ELLs, simplifying language is necessary to ensure basic understanding before they tackle nuance. This is why teachers use techniques like *graded readers* (simplified books) for language learners. NotebookLM can act as an on-the-fly text simplifier, which in CLT terms means adjusting the task difficulty to match the learner’s schema development. If the content is too far beyond the learner, they experience overload and learn little; with simplification, the content comes into a processable range.
- **External Memory Support:** Another aspect of cognitive load is that learners use *external tools to offload memory*. Taking notes or highlighting is one such tool – it allows the learner not to hold everything in their head. NotebookLM’s notebooks serve this function by storing the AI-generated notes and answers. Later, the learner doesn’t have to recall “What was the main idea of that article?” entirely from memory – they can look at the AI summary. This is akin to the

concept of the “extended mind” or distributed cognition, where technology extends working memory. By relying on the notebook as an external memory aid, the learner’s working memory can focus on understanding or analyzing rather than remembering raw information.

By applying CLT, we predict that ELLs using NotebookLM might experience *less cognitive overload* when dealing with difficult English materials. For example, a dense academic article might normally overwhelm an intermediate ELL (too many new words, complex ideas in each sentence). If NotebookLM breaks it down into a summary or question-answer format, the learner can process it piecewise, thus respecting the limits of working memory. Empirical support for this approach can be found in studies on segmentation and summarization: Mayer’s multimedia principles, for instance, find that students learn better when information is segmented and pre-processed into digestible chunks rather than a continuous stream. NotebookLM essentially segments textual information via summaries and Q&A.

However, a potential trade-off: **germane cognitive load** is the effort that contributes to learning (like making sense of material, forming connections). If the AI does too much, there’s a risk the learner’s germane load diminishes – i.e., the learner might become a passive recipient of ready-made understanding instead of actively constructing understanding. CLT would suggest that we want to reduce extraneous load but maintain or even enhance germane load. The ideal use of NotebookLM, then, is not to eliminate the learner’s effort, but to remove the unnecessary hurdles so that the learner’s effort is spent on actual language acquisition and comprehension. For example, instead of struggling to decode every word (which is extraneous if one just needs gist), the learner can focus on understanding concepts (germane) because the AI provided definitions.

In practical terms, teachers might guide ELLs to use NotebookLM as a **second step**: first attempt reading (to train their skills), then use NotebookLM to clarify and summarize (to reinforce and ensure comprehension). This way, cognitive load during initial reading might be high (but trainable), and the AI reduces the load in the consolidation phase, which helps schema formation and automation of skills. Over time, as ELLs get stronger, they might need the AI less for simplification (intrinsic load tolerance increases) and only for efficiency or checking (extraneous load remains low).

To wrap up the theoretical view: **NotebookLM’s design intuitively aligns with cognitive load theory by aiming to simplify and organize information, thereby optimizing the cognitive effort of ELLs towards learning rather than overcoming language barriers.** As one educational expert put it, clarity is king – reducing extraneous load is key to effective learning. If NotebookLM can deliver clarity (through summaries and answers), it could significantly improve ELLs’ capacity to handle complex academic content in English, which in turn accelerates their language development and content mastery.

### 3.4 CALL Perspectives

While ZPD, SRL, and CLT give general educational insights, it’s worth briefly situating NotebookLM in the context of **Computer-Assisted Language Learning (CALL) theories.** CALL research often

evaluates tools based on how well they provide **input, output, feedback, and interaction**, which are core elements of SLA (Second Language Acquisition) theory.

- **Input and Comprehensible Input:** Stephen Krashen’s theory emphasizes the importance of comprehensible input (i+1, just beyond current level). NotebookLM can help make input comprehensible (as discussed via scaffolding). By translating i+1 input into i (current level) through summaries, it ensures learners get understandable English exposure. At the same time, because it’s based on the original text, it hopefully retains some of the richness of authentic language (just presented in a digestible form). This aligns with CALL practice of modifying input (through glossaries, etc.) to help learners acquire language from content.
- **Output and Interaction:** Merrill Swain’s output hypothesis suggests learners need to produce language to fully learn it. NotebookLM is not primarily an output-forcing tool (unlike a chatbot that makes learners write or speak). However, learners do interact with it through writing questions. Even that small output practice – phrasing questions in English – is an opportunity for language production. Some learners may also be prompted by the AI’s notes to summarize aloud or paraphrase themselves as a way to double-check understanding (e.g., read the AI’s summary, then try to express it in their own words without looking). The tool might indirectly encourage output if teachers integrate it (e.g., “Use NotebookLM to research a topic, then present it in your own words”).
- **Feedback:** One of CALL’s strengths is immediate feedback. While NotebookLM doesn’t quiz learners in a typical way, it gives a form of feedback by answering their questions. If a learner’s question is unclear (perhaps due to grammatical errors in how they asked it), the AI might give an off-target answer, implicitly signaling misunderstanding. Learners can then adjust their question – in doing so, they receive feedback on their language use clarity. Also, if a learner summarizes and then asks NotebookLM, “Is my summary accurate?” the AI’s response (either confirming or adding details) serves as feedback on their comprehension. This kind of semantic feedback is quite novel and potentially very valuable for ELLs, who often don’t get feedback beyond correctness of language form. Here, the feedback is on *content understanding*, which is just as crucial.
- **Learner Autonomy and CALL:** Modern CALL emphasizes empowering learners to take control via technology (as we discussed under SRL). NotebookLM fits well into an autonomous learning approach – it’s a tool learners can use at their discretion to meet their immediate learning needs. It’s not a prescribed lesson or drill; it’s open-ended. According to constructivist CALL principles, such tools can be very effective if learners are trained to use them well, because they allow learners to construct knowledge (e.g., create their own understanding with AI help) rather than just receive it passively. The theoretical backdrop here includes Papert’s constructionism (learning by making something – in this case, making a personalized notebook of knowledge).

To sum up, whether from a sociocultural angle (ZPD scaffolding), a cognitive-behavioral angle (feedback and load management), or a metacognitive angle (SRL), NotebookLM appears to have *sound*

*theoretical backing* as a potentially beneficial tool for ELLs. It is positioned to scaffold learning within the learner’s proximal zone, encourage active, independent learning habits, and reduce unnecessary difficulty, all of which are desirable in language education.

Armed with this theoretical understanding, we now move to concrete imaginative scenarios of how educators and learners might *use* NotebookLM for English language learning, and what benefits and pitfalls might arise in each case.

#### 4. Proposed Potential Uses of NotebookLM in ELT

In this section, we propose several potential applications of NotebookLM in English language teaching (ELT) and learning. These use cases are hypothetical but grounded in the tool’s described capabilities and the educational needs identified earlier. For each, we describe how NotebookLM could be utilized, illustrate with an example scenario, and consider the benefits and possible limitations.

##### 4.1 Academic Reading and Vocabulary Support

**Use Case:** *Reading Comprehension Aids and Vocabulary Notebook.* One of the most straightforward applications of NotebookLM for ELLs is as a reading companion. When students are assigned challenging readings (articles, textbook chapters, literature) in English, they can use NotebookLM to generate summaries of each section, clarify difficult sentences, and compile a list of new vocabulary with definitions.

**Scenario:** Imagine a university ELL student, Yuna, who is taking an introductory Psychology course. The weekly readings are dense and full of technical terms. Yuna uploads the week’s 20-page PDF into NotebookLM. She first asks, “Please summarize each section in 2-3 sentences.” The AI produces a concise outline of the chapter, which gives Yuna a clear roadmap of the content. As she begins reading the first section, she encounters the term “operant conditioning.” She types, “What does *operant conditioning* mean in simple terms?” NotebookLM responds with a brief definition and an example. She adds that to her notes. When a complicated paragraph appears, Yuna highlights it and asks, “Rephrase this paragraph more simply.” The AI provides a simplified version, helping her grasp the meaning without getting lost in the complex syntax. Over the chapter, she collects 15 new vocabulary words that NotebookLM explained for her, essentially creating a personalized vocabulary list with context sentences. After reading, Yuna quizzes herself by prompting, “Give me a few questions to test my understanding of this chapter.” NotebookLM generates questions, some of which she can answer, and one which she realizes she missed – prompting her to review that part.

**Benefits:** This use leverages NotebookLM’s strengths in summarization and Q&A to *scaffold reading comprehension*. The student can engage with authentic materials slightly above their level (i+1 input) because the AI provides timely explanations and summaries to bridge the gap. It promotes active reading; instead of passively skipping unknown words or sentences, the student addresses them via questions. The compiled summaries and vocabulary effectively become a **study guide** the student can review later, reinforcing learning. Additionally, this approach can save time – rather than flipping through a dictionary and possibly getting multiple unrelated definitions, the AI gives context-specific

definitions instantly, which studies show aids vocabulary retention (contextualized learning). It also ensures that misunderstandings are caught early: if the student misinterprets a section, the summary or Q&A can reveal that discrepancy, correcting comprehension.

**Limitations:** There are cautions to consider. **Monolingual bias:** NotebookLM currently operates in English, so all explanations are in English. For lower-level ELLs, an English definition might still be confusing. Yuna in our scenario seemed to handle it, but a beginner might have preferred a translation. If NotebookLM doesn't integrate bilingual support, beginners might struggle to formulate questions or understand answers entirely in L2 (English). Using it effectively might require at least an intermediate proficiency. Another issue is **over-reliance:** If Yuna started using the AI as a crutch for every single sentence, she might not try to infer meaning from context or develop reading stamina. Teachers should encourage strategic use – e.g., “try reading a paragraph on your own first, then use the AI for clarification.” There's also a risk of **hallucination or error:** the AI might occasionally give a wrong explanation for a term (less likely for well-known terms, but possible). Students must be taught to cross-verify critical information, perhaps by checking the original text or other sources if something seems off. Finally, reading is also about critical thinking – if the AI summary is taken at face value, the student might not learn to analyze tone, bias, or deeper implications in the text. Educators could mitigate this by using the AI summary as a starting point for discussion: “Do you agree with this summary? Did it miss anything important?” Such reflective questions keep the student actively engaged rather than blindly accepting AI output.

## 4.2 Academic Writing and Research Support

**Use Case:** *Organizing Sources, Paraphrasing, and Citation Assistance for Writing.* For ELLs engaged in writing assignments (essays, reports, research papers), NotebookLM can serve as a helpful research assistant. Students can use it to digest academic sources, gather relevant quotes or ideas, get help with paraphrasing complex sentences in their own words, and even ensure they cite information correctly by tracking sources.

**Scenario:** Carlos, an advanced ELL in a graduate program, needs to write a 1500-word literature review on “AI in language education.” He has collected five scholarly PDFs on the topic. Using NotebookLM, he creates a notebook and uploads all five papers. He first asks, “What are the main findings or points in each of these papers?” NotebookLM generates a brief summary of each source, complete with in-text citations or references from the PDFs. This gives Carlos a birds-eye view of the literature. Next, as he outlines his review, he decides to write about common themes across studies (e.g., chatbots in language learning, automated writing feedback, etc.). For each theme, he queries NotebookLM: “Find any evidence or quotes about chatbot effectiveness in these papers.” The AI locates and presents a relevant excerpt from, say, a 2024 study (with a citation) stating the effect size of chatbot use. Carlos uses that quote in his draft (properly cited, thanks to the reference the AI provided). When writing, he struggles to paraphrase a particularly technical sentence from one source. He pastes the sentence and asks, “How can I paraphrase this in clearer academic English?” NotebookLM suggests a rewritten version that maintains the meaning. Carlos checks it against the original for accuracy, then adopts that phrasing, thereby improving the clarity of his writing while

avoiding direct plagiarism. Finally, he uses NotebookLM to double-check his references: “List all the references from these sources in APA 7th style.” The AI compiles a reference list (since it has the PDFs with bibliographies). Carlos cross-verifies and incorporates them into his paper’s references section.

**Benefits:** NotebookLM in this context is like a *junior research assistant* for an ELL writer. It helps in organizing and synthesizing multiple sources – a task that can be overwhelming especially in a second language. By instantly retrieving key points and quotes, it reduces the cognitive load of skimming through many pages, allowing the student to focus on higher-order tasks like comparing arguments and critiquing studies. The paraphrasing support is particularly valuable for non-native writers: often ELLs resort to copy-pasting jargon or overly complex sentences from sources because they aren’t confident in rewording them. With AI suggestions, they can learn how to express the idea in simpler terms. This also can improve their academic writing style over time as they see examples of well-phrased sentences. Citation assistance ensures they give credit properly – a critical skill (and one that ELLs sometimes falter in if citation rules are unfamiliar or they translate titles incorrectly, etc.). Overall, using NotebookLM for writing can speed up the research process and help ELL students produce work that meets academic standards of clarity and evidence.

**Limitations:** A major ethical and educational concern here is **plagiarism and originality**. If misused, a student might lean on the AI too much – for example, taking AI-generated paraphrases or summaries without fully processing them, or even asking the AI to *write* sections of the paper (beyond just summarizing sources). That crosses into academic dishonesty if not disclosed. It’s a fine line: getting help paraphrasing one sentence might be okay (akin to asking a writing center tutor for help), but having AI generate an entire paragraph is not the student’s own work. Educators will need to set guidelines for acceptable use. One approach is transparency: encourage students to document how they used the AI (e.g., “I used NotebookLM to generate a summary of Jones (2023) which I then refined”). This way it’s a learning tool, not a cheating shortcut. Another limitation is accuracy: the AI might misattribute a quote or mix up authors if multiple sources say similar things (though NotebookLM’s citation tracking is supposed to prevent hallucinating sources). Carlos should still cross-check quotes in the original PDFs. The **over-reliance** aspect also matters: writing is a skill improved by practice. If the AI did all paraphrasing, Carlos wouldn’t be improving his own ability to manipulate language. A balanced use would be to use AI paraphrase as a suggestion and then try to refine it himself. Additionally, nuance might be lost – AI summaries might miss subtle differences in studies or the author’s stance, which a critical literature review should capture. So while NotebookLM can handle the heavy lifting of summarizing, the student must still engage critically with the material. Teachers could mitigate misuse by requiring reflective annotations like “Explain in your own words how the AI’s summary aligns or differs from your understanding.” This ensures the student isn’t just copying from AI outputs.

### 4.3 Personalized Language Practice and Autonomy

**Use Case:** *Autonomous Language Practice and Study Material Generation*. NotebookLM can empower ELLs to create personalized study materials and engage in self-directed language practice. Students might

use it to generate practice exercises, conversational prompts, or even translations, thus customizing their learning outside class.

**Scenario:** Wei is an ELL who wants to improve his business English. He has a textbook from his Business English class and also reads news articles on economics. Wei uses NotebookLM in a creative way: after reading a news article about tech markets, he asks the AI, “Give me a summary of this article and then five questions I should answer about it.” The AI provides a summary and questions (like comprehension questions or discussion prompts). Wei writes down his answers to the questions, then asks the AI to check if his answers cover the key points (essentially, he’s using it as a rudimentary tutor to verify his comprehension responses). In another session, Wei wants to practice *writing emails* in English – he types a draft of a formal email to a client and asks NotebookLM, “Can you review this email for tone and clarity?” The AI points out a couple of awkward phrasings and suggests more polite wording. Wei learns from this feedback and revises accordingly. He also uses NotebookLM to **create cloze exercises** for himself: he inputs a paragraph from his textbook and asks the AI to remove some keywords and create a fill-in-the-blank exercise. This gives him a quick worksheet to practice key vocabulary recall. Over weeks, Wei builds a personal “notebook” of these exercises, summaries, and corrected writings. This independent work, aided by AI, supplements his classroom learning and targets exactly the skills and topics he personally needs to work on.

**Benefits:** This scenario highlights NotebookLM’s role in fostering *learner autonomy* and tailoring learning experiences. By generating custom exercises (questions, cloze tests, prompts), the AI helps the learner extend their practice beyond what is available in textbooks. Personalization is key: Wei is essentially co-designing his practice with the AI, focusing on his interest (business news) and needed skill (email writing). The immediate feedback on writing (tone, clarity) is something that traditionally only a human teacher could give, and even then not on demand. AI can fill that gap for writing practice done at home – it’s like having a writing coach available at any time. For speaking, although not explicitly in this scenario, one could imagine a student using NotebookLM to generate a dialogue or role-play script on a chosen topic and then practicing it. The variety of uses is large; importantly, it puts the *learner in control*. Autonomy is strongly linked to motivation; a student who can pursue their own interests in English with some AI help is likely to be more motivated than one who only does prescribed workbook exercises. It promotes a sense of ownership – Wei is essentially making his own learning materials. This aligns with pedagogical movements towards learner-centered curricula and self-access language learning, where learners choose resources and activities that suit their goals (here, the AI is an all-in-one resource generator).

**Limitations:** Autonomy requires ability to self-regulate (as discussed in SRL) – not all learners may utilize the AI effectively without guidance. A risk is that some might misuse it (e.g., ask the AI for answers rather than practicing). For example, Wei could have just asked the AI for the answers to the questions it generated, which would defeat the purpose. Teachers might need to teach strategies for using the tool constructively: like “use it to create exercises, but attempt them yourself before checking.” There’s also the accuracy issue of AI feedback: while NotebookLM can critique tone or grammar in writing to an extent, it might miss context nuances or prefer a style that the teacher might not. There’s also **no human judgment** – e.g., the AI might say an email is polite enough, but maybe

culturally it still sounds off to a native speaker. So AI feedback should be taken as suggestions, not absolute truth. Another limitation is that NotebookLM is not a conversational chatbot (it doesn't keep a multi-turn conversation going like ChatGPT in the same way), so using it for speaking practice is not as straightforward as using an interactive chatbot. It could generate dialogues but won't simulate a live conversation beyond Q&A about a document. For true speaking practice, voice-AI or language exchange might still be needed. Moreover, **motivation** might wane if the AI interactions are too mechanical. Some learners enjoy gamified apps (like Duolingo's points and levels) – NotebookLM is more open-ended and not inherently gamified. Highly self-motivated learners like Wei benefit, but less motivated ones might not engage without teacher scaffolding or goal-setting.

#### 4.4 Classroom Integration and Collaboration

**Use Case:** *Classroom Projects and Group Work Enhancement.* Teachers could incorporate NotebookLM into classroom activities to support group projects, reading circles, or research assignments. In a collaborative setting, multiple students might use NotebookLM together to gather information or verify answers, thereby learning from both AI and each other.

**Scenario:** In an advanced ELL reading class, the teacher assigns a *jigsaw reading* activity: each group gets a different article about climate change and will teach the class about it. One group of three students has a lengthy article. They decide to use NotebookLM collaboratively. One student uploads the article and the group brainstorms what the main ideas are. They then ask NotebookLM to “List the key points of each section of the article.” The AI outlines the article, and the students compare it with their own initial notes – it turns out they missed a couple of points, which they then discuss and add. Next, each student takes a subsection to explain. One student is unsure about a complex paragraph in her subsection, so she uses NotebookLM to simplify it, then confidently puts it into her own words for the upcoming presentation. Another student formulates a comprehension quiz question for the class and even checks with NotebookLM if the answer is clearly present in the text (to ensure it's a fair question). During their presentation, the group uses the AI-generated outline as a handout for classmates. In a different class, a teacher might allow students to use NotebookLM during **independent work time** – for instance, if students are doing a webquest or project research, NotebookLM could be one of the tools at a station to help them find information or summarize findings, much like having an encyclopedia or tutor on hand.

**Benefits:** In-class use of NotebookLM can scaffold learning tasks that would otherwise be too difficult or time-consuming for ELLs, thereby enabling more complex or authentic activities. The jigsaw reading example shows how AI can help ensure *no group is left behind*: normally, if one group's text was harder, they might fail to grasp it fully and then not be able to share with the class. With AI support, they can fill their comprehension gaps and deliver a complete report. This fosters a more equitable learning environment. It also demonstrates **peer-AI interplay**: students had a chance to discuss among themselves and then verify or supplement with AI, which combines human collaboration (valuable for learning communication skills) with AI accuracy/coverage. Using NotebookLM as a collaborative tool can also teach critical thinking – students might debate if the AI's identified key points are indeed the most important, fostering higher-order thinking. Additionally, it

can save classroom time. Instead of groups spending the entire time deciphering the text, they quickly clarify it and spend more time on the pedagogical goal (e.g., practicing summarization or presentation). It basically offloads some lower-level decoding so that class time can focus on discussion, analysis, or practicing speaking – more productive uses of limited classroom hours.

**Limitations:** Introducing AI in class raises some challenges. Teachers must ensure it doesn't become a crutch or an easy way out. For example, will students skip trying to read at all and just rely on summaries? To prevent this, teachers might structure tasks so that AI is a second step, not the first. There's also the risk of **misinformation:** if NotebookLM ever produced an inaccurate summary, students might present wrong info to the class. The teacher needs to monitor or have students verify critical facts. Another concern is that not all students might have equal access or skills in using the AI. In group work, perhaps one student monopolizes the tool (the tech-savvy one) while others disengage. Teachers should assign roles (like one student operates the AI, another cross-checks it, etc.) to involve everyone. There's also a technical aspect: classroom use requires devices and internet – not always available or reliable in all contexts. From a pedagogical stance, teachers have to adapt their plans: if AI gives answers quickly, tasks need to be deeper to remain challenging (e.g., moving from comprehension to application or critique). Finally, some educators worry that reliance on AI could hinder learning fundamentals (e.g., dictionary skills or inferring meaning from context). It will be important to strike a balance, perhaps by sometimes disabling AI use to ensure students can still perform without it when needed (like in exam situations or real-life scenarios without AI).

#### 4.5 Limitations and Cautions in Use

In each use case above, we noted specific limitations. Here we consolidate some general limitations of NotebookLM for ELL support:

- **Monolingual Bias & Language Limitations:** If NotebookLM only works well with English input/output, beginners who need L1 support or translation may not benefit fully. It's primarily an English-medium tool. (However, as noted, its *Audio Overview* feature expanded to many languages [blog.google](https://blog.google), which could hint at future multilingual capabilities).
- **Accuracy and Trustworthiness:** As with any AI language model, NotebookLM can occasionally produce incorrect information or misinterpret a query. ELLs might have difficulty spotting these errors due to limited language proficiency or content knowledge. This could lead to learning incorrect facts or nuances. Therefore, using it for high-stakes information (like important facts or definitions) should come with cross-verification from trusted sources whenever possible. In language learning, a subtle risk is if the AI's rephrasing is slightly "off" in tone or usage – students might unknowingly adopt that. Educators should encourage a healthy skepticism: "AI is a tool, not an authority."
- **Over-Reliance & Skill Atrophy:** The biggest pedagogical concern is that over-reliance on NotebookLM might prevent ELLs from developing certain skills. If a student always uses AI to summarize, they may not practice summarizing themselves (missing out on the language production and cognitive benefits of that exercise). If they always ask AI for word meanings,

they might not develop inference from context or memory retention of vocab as strongly as looking it up and actively noting it themselves might. Teachers should design activities that sometimes *remove the scaffold* to gauge if students can perform without it, gradually building independence (similar to how training wheels are eventually taken off a bicycle). Over time, ideally, ELLs use NotebookLM for higher-level support but can still do fundamental processes on their own.

- **Ethical and Academic Integrity Issues:** Especially for writing support, there is a fine line between assistance and cheating. Without clear guidelines, students might inadvertently cross into inappropriate use – e.g., using AI-generated text verbatim in an assignment. Academic institutions and teachers will need to set policies about AI usage (some already include statements in syllabi like “AI tools may be used for proofreading or brainstorming but all submitted work must be your own”). The ethical use of AI needs to be taught, including issues of plagiarism, transparency, and when it’s not allowed (exams, certain assignments). For ELLs, this clarity is crucial to avoid punishments due to misunderstanding the norms.
- **Data Privacy:** Using NotebookLM involves uploading potentially sensitive documents (like student essays, or articles that might be copyrighted). There might be privacy concerns if students upload personal reflections or if a school has policies about student data. Google’s policies would need to be understood – teachers should ensure students aren’t uploading anything confidential. From a student perspective, their interaction data might be stored; some may be uncomfortable not knowing who can access it. Clear privacy assurances or opting out options should be in place. Schools might also require parental consent for students to use such tools, particularly if under 18.
- **Technical Constraints:** Not a theoretical issue, but practically – if internet is down or the service has usage limits, reliance on it could backfire at a crucial moment. Also, currently NotebookLM is not universally available (it started as a limited trial in the US). So adoption can be slow.

In light of these limitations, the hypothetical examples assume ideal conditions of use. Real-world implementation would need addressing these concerns through teacher guidance, student training on how to learn *with* AI (not just from AI), and ongoing monitoring of effectiveness. Despite these caveats, the potential use cases show that if managed well, NotebookLM could complement traditional teaching and independent study in valuable ways for ELLs. Next, we will discuss overarching implications and what unknowns remain, to temper the optimism with a realistic outlook.

## 5. Discussion

The above exploration paints an optimistic picture of NotebookLM’s potential to support English language learners. In theory, NotebookLM can scaffold ELLs in reading, writing, and self-study, aligning with solid pedagogical principles (ZPD, SRL, etc.). However, it is crucial to balance this *promise* with the many *unknowns* and possible pitfalls identified. This discussion synthesizes those points, examining the broader implications, and outlines a research agenda to move from speculation to

evidence. We also consider the ethical and practical challenges of introducing such AI tools in education, and what that means for teachers and curriculum designers.

**Promise vs. Current Unknowns:** On the promising side, NotebookLM represents a new generation of AI that is context-aware (it uses the user’s own documents) and interactive. Unlike generic chatbots, it grounds responses in provided sources, which is ideal for educational settings where factual accuracy and relevance to the curriculum are important. If the theoretical benefits hold true, ELLs using NotebookLM could experience improved comprehension of complex texts, more efficient studying, and greater confidence in handling English materials on their own. The tool could be a *game-changer* for independent learning, much like calculators were for math – handling tedious parts so learners can focus on higher-level skills. However, we must acknowledge that these benefits are *hypothesized*. The current reality is that no empirical data is available yet on ELL outcomes with NotebookLM. It’s entirely possible that in practice some benefits are less pronounced or offset by new issues. For instance, maybe students get through readings faster but retain less because they relied on summaries (just as some fear GPS navigation tools weaken our own navigation skills). Or perhaps students love using it initially, but novelty wears off and it doesn’t significantly change their long-term habits. We simply don’t know until research is conducted.

Another unknown is *usability*: will ELLs find the interface intuitive? Will they know what questions to ask? There could be a learning curve in learning how to interact effectively with the AI to get good results, and not all learners may figure that out without training. In addition, differences in learner profile (age, proficiency, tech-savviness) might significantly affect outcomes. A tool that works well for a college student might confuse a middle school ELL. These nuances underscore that our optimistic use cases might need fine-tuning per context.

**Risk of Overhyping Untested Tools:** The educational technology field has a history of hype cycles – a new tool emerges with grand claims (sometimes from the companies themselves), early adopters get excited, but then either research fails to find strong effects or implementation issues lead to disillusionment. We’ve seen this with things like language labs, certain intelligent tutoring systems, or MOOCs – all heralded as revolutionary, yet their actual impact was limited by various factors. NotebookLM, being a Google product with significant media attention, could easily be overhyped. Enthusiasts might start calling it a “personal AI tutor for every student” before any evidence. This is dangerous because it can lead to schools spending resources or changing curricula to incorporate a tool that might not deliver proportional benefits, or that only works under certain conditions.

We should thus approach NotebookLM with **critical optimism**. It’s okay (even good) to be excited about the potential – after all, it addresses real pain points in language learning. But educators and administrators should demand evidence and conduct pilots rather than mandating its use outright or assuming it will automatically improve outcomes. Overhyping also brings the risk of under-preparing: if everyone believes the tool is plug-and-play magic, they might not put effort into teacher training or addressing drawbacks. In truth, as we have argued, **the tool’s effectiveness will likely depend on thoughtful integration** and oversight.

Another subtle risk of hype is *teacher resistance*. If a tool is overhyped by external sources, teachers on the ground might be skeptical or see it as a threat to their expertise. It's better to approach it as "here's a new option that, with your professional input, could enhance learning" rather than "this AI will replace some of your teaching." Keeping expectations realistic will facilitate more open adoption and experimentation.

**Ethical Concerns: Data, Bias, Misinformation:** Ethics must be front and center when introducing AI in education. First, data privacy: NotebookLM involves data uploading and possibly storing student-AI interactions on Google's servers. Schools and universities will need to consider FERPA (in the US) or GDPR (in Europe) and other regulations. Sensitive student information should not be uploaded. If NotebookLM is used with minors, parental consent and transparency about data use are essential [ijer.org](http://ijer.org). Institutions might push for agreements that any data is not used to further train models without permission, etc. These are administrative but important details to sort out before large-scale use.

Bias is another ethical issue. AI models like the ones behind NotebookLM are trained on large datasets that include societal biases (e.g., maybe fewer texts from certain cultures or languages). This can reflect in output. For example, a study highlighted that AI detectors misclassified non-native English writing as AI-generated due to bias in what is considered "good English". While that's a specific case, it shows AI can inadvertently penalize or misinterpret ELLs. In NotebookLM's context, perhaps it might summarize differently based on writing styles of authors from different backgrounds. Also, if an ELL asks a question with slightly incorrect grammar, the AI might misinterpret it – not exactly bias, but a limitation in handling non-standard input. It's crucial to examine how the tool performs for ELL-specific language (like interlanguage errors). Additionally, any content-related biases (e.g., if it tends to foreground Western perspectives in summaries if sources are diverse) should be considered in a classroom where critical thinking about sources is taught.

Misinformation and hallucination (the AI making up info) could be particularly problematic in an educational setting. If a student relies on NotebookLM for factual info and it provides an incorrect reference or misquotes an author, the student might spread that false info in assignments or discussions. Teachers must thus inculcate information literacy: students should verify critical information through multiple sources. One advantage is that NotebookLM uses provided documents, which should limit wild hallucinations; it's more anchored than a general chatbot. Even so, it might still misattribute or summarize inaccurately.

**The Human Element & Teacher Role:** One theme emerging is that **NotebookLM is a tool, not a teacher**. It lacks the pedagogical judgment, empathy, and adaptability of a human teacher. It will answer what it's asked, but it won't spontaneously diagnose a misconception like a skilled teacher could, nor provide encouragement or tailored scaffolding beyond what is prompted. Therefore, teachers remain essential in guiding the use of such AI. The teacher's role might shift more towards a facilitator or coach when AI handles some direct instruction (like explaining vocabulary), but arguably that makes teachers even more important to ensure that learning is happening meaningfully and that students are thinking critically.

For example, a teacher might plan a lesson where initial comprehension is aided by NotebookLM, but then the teacher leads a discussion probing deeper inference or critical analysis – areas where human guidance is key. Also, teachers would need to resolve any confusion from AI outputs and help students interpret them. Educators and curriculum designers should see NotebookLM as *augmenting* their toolkit. It could free up class time from rote activities (like going over reading comprehension of a text line by line) and allow more practice, application, and personalized help.

**Research Agenda – What Next?** To move from theory to evidence, several types of studies are needed:

- **Pilot Implementation Studies:** Small-scale implementations in actual classrooms or with volunteer students, documenting how they use NotebookLM and what issues arise. Qualitative data (student and teacher feedback) would be invaluable initially. For instance, does using NotebookLM for reading homework lead to richer class discussions? Do students feel it helps them learn or just get the work done faster? Are there any patterns in errors or misunderstandings when using it?
- **Effectiveness Experiments:** Controlled studies comparing ELLs using NotebookLM versus a control group not using it (or using traditional supports) on various outcomes: reading comprehension scores, writing quality (perhaps blind-rated essays), vocabulary retention tests, etc. This will give a quantitative measure of impact. It would be important to measure not just immediate performance (did they understand a text), but also retention (do they still recall content or vocab later?) and skill transfer (can they summarize a new text without AI later?).
- **Process and Interaction Analysis:** Logging and analyzing how learners interact with NotebookLM – what kinds of questions do they ask? Where do they give up or misuse it? This can identify training needs. Maybe logs show many students asking overly broad questions and getting unsatisfactory answers; teachers could then instruct on asking better, specific questions. Or perhaps logs reveal that students ignore the AI’s citations – indicating a lack of understanding of their purpose, which again is an instructional moment.
- **Different Proficiency Levels:** Research should consider beginner vs intermediate vs advanced ELLs. It’s plausible that advanced ELLs gain the most (since they can engage with it fully in English and use higher-order features), whereas beginners might find it less accessible. Studies focused on each level can refine how to adapt the tool or wrap support around it (like perhaps integrating it with bilingual dictionaries for lower levels).
- **Teacher Adoption and Training:** Another line of research is investigating teacher attitudes and effective training methods. If teachers aren’t comfortable or don’t see value, they won’t implement it. Studies could look at professional development interventions on using NotebookLM and the resultant change (or not) in classroom practices. Also, what challenges do teachers face (technical, classroom management, aligning with curriculum, etc.)?
- **Longitudinal Impact:** If ELLs use NotebookLM regularly over a term, does their approach to learning change? For better or worse? For instance, do they become more independent and

curious (positive) or more lazy in reading full texts (negative)? Longitudinal studies could catch such trends, which short experiments might miss.

**For Educators and Curriculum Designers:** In the immediate term, those designing curriculum or tech integration plans should proceed thoughtfully. It might be wise to start with *optional or supplementary* use of NotebookLM – for students who want extra help, or as part of a learning center – rather than making it mandatory from day one. This way, keen students benefit and also serve as a test group. Their experiences can inform wider adoption. Curriculum designers should consider developing **guidelines or lesson plans** that incorporate NotebookLM in pedagogically sound ways. For example, a reading lesson plan might explicitly say: “After individual reading, students may use NotebookLM to verify their answers, then discuss discrepancies in groups.” By embedding it in the design, it becomes a purposeful tool, not an add-on.

Additionally, educators should emphasize to students the goal of using such AI: it’s to help you learn better, not shortcut the learning. That messaging and framing matters. Some students might think using AI is “cheating” if not clarified; others might think it’s an officially sanctioned way to do less work. Clear expectations (perhaps a classroom AI use policy co-created with students) can address this.

**Relevance and Equity:** We should also discuss who benefits and who might be left out. If NotebookLM or similar tools prove beneficial, ensuring *equitable access* becomes an issue. Wealthier schools or students with personal laptops could integrate it easily, while under-resourced settings might not. This could widen achievement gaps if not addressed. Policymakers and institutions might need to invest in the necessary tech infrastructure or provide alternatives (though frankly, AI like this may be hard to replicate without a machine). Possibly, special programs or after-school resources could offer AI access to those who don’t have it at home. Another equity dimension is language – currently it’s for English learning; similar tools for other languages are emerging, and sharing knowledge across languages is important so that it’s not only English learners who get advanced AI support, but learners of other languages too.

**Environmental and Economic Factors:** Slightly tangential, but some discussion in AI in education points out cost and sustainability. Will NotebookLM remain free? It already introduced a paid version for premium features. If AI in education becomes subscription-based, schools have to consider budgeting, and it may advantage those who can afford it. Also, AI computation has environmental costs (energy use); large scale adoption means we should consider those, though that’s beyond this paper’s direct scope, it’s part of the broad conversation on responsible AI deployment.

In conclusion of this discussion, we maintain that NotebookLM *could be* transformative – an assistive technology enabling a form of personalized, immediate support that was previously unavailable to ELLs. But realizing that transformation depends on careful, critical implementation and systematic inquiry into its actual effects. The worst-case scenario would be either blindly adopting it and facing negative consequences, or rejecting it due to fear and missing out on potential benefits. The balanced path is experimentation with careful monitoring.

## 6. Conclusion

This theoretical exploration set out to answer whether NotebookLM could meaningfully support English language learners, and if so, in what ways. Drawing upon established research on AI in education, cognitive strategies for learning, and language acquisition theory, we have argued that **NotebookLM holds significant potential as an assistive tool for ELLs**, provided it is used thoughtfully.

NotebookLM's ability to generate summaries, explanations, and answer questions based on user-provided texts aligns strongly with the needs of language learners: it can scaffold complex readings by simplifying them, supply instant vocabulary and grammar help, and act as a tireless tutor for reviewing and practicing material. From a Vygotskian perspective, it offers a form of scaffold in the learner's zone of proximal development – giving support just beyond the learner's independent ability so they can reach new levels of understanding. Through the lens of self-regulated learning, it encourages autonomous study habits: learners can set goals (e.g. understanding an article), use strategies with AI assistance (summarizing, questioning), and get immediate feedback to adjust their learning. Cognitive load theory also supports its use, as the tool can reduce extraneous load by organizing and condensing information, allowing learners to focus on core learning tasks. In essence, NotebookLM can serve as a *personalized learning companion*, helping ELLs navigate English content and tasks that might otherwise be overwhelming.

We presented hypothetical use cases – from reading and writing support to vocabulary practice and collaborative projects – to illustrate concretely how ELLs and teachers might integrate NotebookLM into learning activities. These scenarios were optimistic, showing improved comprehension, efficiency, and confidence in learners who leverage the tool. However, we also critically examined limitations: the risk of over-reliance, the need for a certain proficiency to use it effectively, possible inaccuracies or biases in AI output, and ethical concerns like plagiarism and privacy. These cautionary points underscore that **NotebookLM is not a magical solution**; it is a powerful tool whose impact depends on the context and manner of use.

At this juncture – with NotebookLM still novel and unresearched in classrooms – we can conclude that it is *potentially transformative* for ELL education, but that transformation is conditional. It will require educators to approach the tool with “critical optimism,” embracing its benefits while actively mitigating its downsides. Initial trials and pilot studies should be encouraged, and their findings openly shared, so the education community can learn what works and what doesn't. Crucially, extensive empirical research (as outlined in the Discussion) is needed to validate the theoretical advantages we've discussed. Stakeholders should support such research, as the insights will guide effective implementation or highlight necessary adjustments (perhaps even informing developers on educational feature needs).

If evidence confirms even a portion of NotebookLM's theoretical benefits, we could see a shift in ELL pedagogy: more flipped classrooms (with AI helping at home and class time for interaction), more differentiated instruction (students working at their own pace with AI help), and greater learner independence in acquiring language and content. ELLs who might have been left behind due to language barriers could better keep up with mainstream content by using AI support as a bridge. That said, no AI should replace the human elements of motivation, encouragement, cultural understanding, and interactive communication that are central to language learning. The goal is augmentation, not substitution.

In closing, we reiterate the call for **empirical research and careful integration**. NotebookLM and similar AI tools herald a new era in which personalized, AI-driven support is available to learners. This is exciting and a little daunting. Educators and researchers must collaborate to ensure these tools are used to *enhance* learning rather than shortcut it. By doing so – by staying critical yet open-minded – we can harness NotebookLM as a catalyst for better learning outcomes for English language learners. The theoretical perspective offered in this paper is an early stepping stone; the next steps will determine the real impact of AI notebooks in education. Let us proceed with curiosity, rigor, and a commitment to empowering learners.

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# Comparative Study of the International Humanitarian Law System with the General International Law System (Progressive Development of Law)

<sup>1</sup> Mehmet UÇKAÇ

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**Abstract.** International human rights law has characteristics that distinguish it from other branches of public international law. These specific characteristics have caused some common terms to undergo conceptual transformation or metamorphosis and to bring to mind a meaning different from what they have in the field of international law.

One of these terms is “progressive development of law”. The declarative nature of human rights rules (in all types and forms of rules, including custom and treaty) has caused progressive development, which in international law brings to mind the concept of establishing and creating rights, to bring with it the meaning of promoting the status and status and promoting human rights in the subject area of international human rights, which is entirely of the nature of recognition.

Investigating key and frequently used terms such as "progressive development of rights" and identifying and explaining their precise meaning in the subject area under discussion will have the benefit of ensuring that those committed to human rights rules, which are in most cases states, correctly understand the nature and scope of their obligations and implement them correctly and in a timely manner in accordance with the protectionist goals of human rights.

The present study seeks to answer this basic question by explaining the characteristics of international law and international human rights, what is the semantic difference between the term "progressive development of rights" in international human rights and This term has a general meaning in the field of international law, and what are the alternative terms for progressive development in international human law and what meaning do they bring to mind?

**Keywords:** *General International Law, International Human Law, Progressive Development, Support, Promotion*

## Introduction

International humanitarian law has unique characteristics that distinguish it from other subject areas of international law. The foundation of human rights on the principle of non-exchange of benefits,<sup>2</sup>

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<sup>1</sup> Dr. Mehmet Uçkaç, PhD Graduate, International Science and Technology University, Warsaw / Poland, mehmet.uckac@istu.edu.pl, <https://orcid.org/0009-0001-9488-9036>

<sup>2</sup> The Principle of Non Reciprocity

is the first and most fundamental cornerstone that is not seen in any other subject area of international law.

These unique characteristics in the field of human rights, in addition to creating fundamental differences between this field and other fields of international law, are now emerging as global criteria and standards and are also influencing other fields. The process of humanizing international law with indicators such as good governance, human security and the responsibility to protect is the least of the fruits that the generality and comprehensiveness of the international rule of human rights has brought.<sup>1</sup>

Hence, in the international arena, there is rarely an issue that is not affected by human rights issues.

Trade, the seas, the environment, and many of the primary rules and regulations of international law, as well as the secondary rules of international law (the law of international responsibility of states), are influenced by human rights.<sup>2</sup> Public international law, which itself presented a model of differences in the foundations of law (such as replacing the rule of participation of actors with the rule of obedience to a superior power and the unity of the author and the subordinate, as well as the assumption of anarchy in the international system and the determination of self-help and reciprocal action as a guarantee of the implementation of the established rules) to the world, and initially came into existence with the desire to ban war, underwent numerous developments over the years, and since 1945, i.e. at the same time as the establishment of the United Nations, it introduced human rights as one of its main tasks and objectives. However, it did not take long for human rights, like a fertile seed, to grow and multiply, to the point that it also affected all the subject areas of international law and, by resorting to normative and institutional inflation, came into existence. It has been stated that many of the principles governing international law (including the basis of international law on the principle of will and consent) have undergone transformation and transformation.

One of the clear and obvious examples of this transformation can be seen in the interpretative opinions issued by treaty bodies. It should be noted that, although, according to Articles 31 and 32 of the 1969 Vienna Convention on the Law of Treaties,<sup>3</sup> the interpretation of treaties is not possible and has no validity except by the parties to the treaty, the committees, which are composed of experts and human rights experts, have themselves undertaken to issue such interpretations of the articles of the human rights conventions, only informing the states of their interpretations and obtaining their opinions within a certain period of time, and then, by issuing an interpretative opinion, they actually provide a comprehensive interpretation of an article or articles of the convention contrary to the principles set forth in the Vienna Convention.

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<sup>1</sup> Hossein Sharifi Tarazkouhi and Fatemeh Fathpour, "Requirements for Countering Terrorism in the Light of the Humanization Process of International Law," *Shiraz University Legal Studies*, 9, 24 (2017), 211.

<sup>2</sup> For further reading, see: Amparosan Josegil and Ebrahim Beigzadeh, "The International Responsibility of States for Violations of Human Rights," *Legal Research*, 3, 30-29 (2000), 255-307.

<sup>3</sup> Available at: <https://www.jus.uio.no/lm/un.law.of.treaties.convention.1969>, Accessed September 28, 2021.

This practice may not be valid within the framework of legality,<sup>1</sup> and is 'The classical principles may be interpreted differently, but within the framework of legitimacy,<sup>2</sup> they have reached such a position that today we can boldly refer to them as minimum standards of human rights and a valid criterion and criterion for reporting by countries.<sup>3</sup>

Another example that clearly shows the evolution in the foundations of international law is the extension of the rule of international human rights to non-state actors.

International law, which came into existence under the influence of Grotius's ideas, today, under the influence of Kant's ideas and with a new narrative of natural rights and international human rights, was like a tunnel that fell into the fortress of state sovereignty.<sup>4</sup>

Today, states and international organizations are no longer the only actors in the international arena, and non-state actors, including transnational corporations and non-governmental organizations, are the subject of rights and obligations.

The United Nations Security Council, in its resolutions during the Iraq and Syria crises, even addressed the terrorist group ISIS. and demands that they observe certain human principles. In the field of trade, transnational corporations are no longer free to do whatever they want, but rather, in return for the rights they have under the name of investment rights, they have obligations such as due observance of human rights in the country where they invest .<sup>5</sup>

NGOs, especially in the field of human rights, have grown so rapidly that it may not be an exaggeration to consider them the main agents of the normative inflation that has arisen in the subject area of human rights. These organizations openly engage in such activities as drafting human rights treaties, monitoring the implementation of human rights in countries, and even implementing human rights regulations in countries;<sup>6</sup> Therefore, human rights have seriously challenged the state-centered principle of international law and introduced individuals, both legal and natural, as subjects and even as makers of international law. Although it is still, and of course apparently, necessary to rely on the Westphalian principle of state-centeredness and the authenticity of the will and consent of states However, the effectiveness and influence of human rights concepts on the will of states in the present era is undeniable.

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<sup>1</sup> Legality

<sup>2</sup> Legitimacy

<sup>3</sup> For further reading: Pouria Askari, *The Right to Preempt Human Rights Treaties*, 2nd edition (Tehran: Shahr Danesh Institute for Legal Studies and Research, 2017).

<sup>4</sup> Mohammad Ali Movahed, *In the Air of Truth and Justice*, first edition (Tehran: Karnameh, 2002), 1.

<sup>5</sup> Available at: <https://www.ohchr.org/EN/Issues/Business/Pages/CorporateHRDDueDiligence.aspx>, Accessed September 28, 2021.

<sup>6</sup> Pouria Askari and Niloufar Saedi, "International Non-Governmental Organizations and Monitoring the Implementation of Human Rights with Emphasis on Amnesty International," *Public Law Research*, 18, 53 (2016),

The main reason and motivation of the author for writing this article is to explain the impact of the specific and unique features of international human rights law on the interpretation of the “progressive development of rights” and to compare it with the interpretation of this term in the field of general international law.

General international law is the foundation and root of the entire international legal system<sup>1</sup> and means the universal legal rules that govern all members of the international community, including states and international organizations.

Many international law scholars such as Baxter and Dinstein believe that general international law only includes custom and that other sources of international law such as treaties, doctrine, judicial practice and general legal principles cannot be included within the framework of this definition; even if a treaty includes a large number of states, such as the Charter of the United Nations.

However, treaties are often intertwined with custom, so that many provisions of treaties and international conventions are considered either to be the codifiers of custom or to be the creators of a new custom in the international system. Among these documents, one can mention the International Law Commission's draft on the international responsibility of states (2001), which, although it was never ratified by states, many of its provisions became customary.

On the other hand, the mission of progressive or evolutionary and promotional development of law, based on the nature and characteristics of public international law, especially the subject area of international human rights, although it is apparently a mission derived from the statute of the International Law Commission or resolutions of the Human Rights Council, is in essence a general and comprehensive obligation of public international law.

On this basis, the present study examines the concept of progressive development in the system of international human rights law and compares it with the system of public international law.

It is obvious that any interpretation of words will not be possible and correct unless it pays careful attention to the requirements of the essence of the subject area within which the words have been coined.

Paying attention to the paradigm or theoretical framework of the word is the most fundamental. The component is the correct recognition of the concept, and this is especially important in the subject area of international human rights, which is more delicate and requires more precision.

Accordingly, one of the foundations of the present study, which refers to clarifying the difference in the nature and characteristics of the two subject areas of general international law and international human rights, will first be briefly explained, and then the conceptual transformation of the term progressive development in international human rights and its alternative terms and concepts will be discussed.

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<sup>1</sup> Gregory Tonkin and Seyyed Fazlollah Mousavi, “Is General International Law Only Customary Law?”, *International Law*, 13,343-342 (1994), 18-19.

# 1 The nature and characteristics of the systems of general international law and international human rights

## 1-1 The nature and characteristics of the system of international law

International law is a set of rules and regulations governing the international community. Although states are considered the main and so-called active actors of international law, the international law scene is gradually witnessing the presence of other actors such as intergovernmental international organizations, transnational corporations, non-governmental organizations, national liberation movements and ultimately, human individuals.<sup>1</sup>

Nevertheless, states are still considered the primary and primary actors of international law; in other words, states are still the setters of the rules governing the entire human society.<sup>2</sup>

To better and more accurately understand the nature and characteristics of international law, it is necessary to take a close look at the historical process of the formation of this emerging and nascent discipline. The international community, in the sense of intergovernmental society, emerged in the late European Middle Ages and grew in the seventeenth and eighteenth centuries. In this regard, the United Nations is considered a symbol of contemporary international society, which includes the membership of almost all the states of the world.<sup>3</sup>

International law, which was initially the subject of extensive and radical debates among philosophers and thinkers, and in its nature, existential philosophy and essence, there were many philosophical disagreements, some of which referred to it as external public law, while others considered it as International law was defined, after many challenges and many ups and downs, it reached the safe shore of peace and after the Second World War and at the same time with the establishment of the United Nations, it was able to present a single and specific definition of itself.

In a definition agreed upon by the international community, international law refers to the set of rules and regulations that regulate the relations between the actors in this field, namely states and international organizations.

In other words, international law is a system that is responsible for protecting the rule of law in the international arena and achieving common values such as humanity, justice and security.<sup>4</sup>

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<sup>1</sup> Seyyed Ghasem Zamani, *Discourses on International Human Rights* (Tehran: Khorsandi Publications, 2021).

<sup>2</sup> Aramesh Shahbazi, *The International Law System: Unity in Plurality* (Tehran: Shahr Danesh Legal Studies and Research Institute, 2010).

<sup>3</sup> Shahram Zarneshan, *The Formation and Identification of Customary International Law*, 2nd Edition (Tehran: Shahr Danesh Legal Studies and Research Institute, 2014), 22

<sup>4</sup> Zahra Mahmoudi Kordi, "The Nature of General Legal Principles and Their Functions in International Law", *International Law*, 35, 329, (2018), 58

The system of public international law has unique characteristics and features that distinguish it from the national or domestic legal system of countries. The following will mention a few of these differences:

**a) Lack of central power.**

The power structure in the international law system is horizontal. Unlike the domestic system of states, the rule applicable in the international law system is not derived from a superior power and is recognized or created based on respect for the principle of independence and sovereignty of states, as well as the priority of participation and solidarity of states over subordination to a superior power.<sup>1</sup>

**b) Being anarchic.**

The absence of a supreme or superior power in the international legal system and its reliance on the participation and cooperation of states (the unity of the author and the subordinate) has caused the international system to be interpreted as an anarchic or disorderly system.

While this anarchism can disrupt the binding nature or the element of guaranteeing the implementation of international law, it is a natural effect of the equal sovereignty of states and their independence. It is enough to look at the means of implementing international law or the guarantees of its implementation.

Self-help or reciprocal measures, which are essentially and inherently illegal acts, are, in some circumstances, the only means of implementing international law, which is clear evidence of the decentralized, dispersed and anarchic nature of international law.

**c) Reliance on the principle of consent of states<sup>2</sup>**

This feature, which is actually derived from the first feature, namely the lack of central power, refers to the high value of the position of the principle of consent of states and reciprocity in international law. The reflection of this principle is visible both in legislation and in the implementation of laws.

All rules of international law cannot be implemented except with the consent of states, and in the implementation stage, it is possible for states to prevent the general flow of a rule towards themselves by resorting to reservations or interpretative declarations or continuous objections.

**d) The dynamics and evolutionary nature or developments of international law.**

If we can ignore and factor in the nascent nature of international law, we certainly cannot fail to mention the dynamic nature of international law. Given the specific and significant impact of the principle of equality of sovereignties in international law and also the basis of international relations on interests and States, international law as a dependent variable, is always undergoing changes. The most important area of change in international law is international human rights.

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<sup>1</sup> Antonio Casse, *International Law*, Translated by Hossein Sharifi Tarazkouhi (Tehran: Mizan Publishing, 2006), 2.

<sup>2</sup> Consent Based

The movement of humanizing international law and the humanization of the domestic laws of countries and, consequently, international laws all reflect the evolutionary and dynamic nature of this subject area.<sup>1</sup>

### **E) The high position of custom as a main source.**

In such a system with such characteristics, custom, as a procedure accepted by states, has established itself as a binding legal rule and has become the most important source of international law. Custom has enjoyed a high position in the subject area of international law due to its characteristics such as rapid adaptability, generality and substitution.<sup>2</sup>

## **1.2 The nature and characteristics of the international human rights system**

Human rights are the rights that human beings have in common. It stems from their inherent dignity, is as old as man himself, and by virtue of its recognition and establishment in the international legal system, is as old as the United Nations; therefore, human rights are ancient, and their recognition and proclamation are accidental.<sup>3</sup>

Human rights are a set of rights that every individual should enjoy before the state and any other public authority because of his membership in the human family, regardless of any consideration.<sup>4</sup> Human rights in the modern sense are a new and novel term. This term entered the legal literature and everyday conversation after World War II and the establishment of the United Nations in 1945. This term replaced the terms natural rights and human rights, which are older.<sup>5</sup> Before 1945, there was no international text that implied the existence or definition of these rights. The treaties concluded in 1919 between the Allies on the one hand and Poland, Czechoslovakia, Greece, Romania, and Yugoslavia on the other, were essentially concerned with the rights of minorities. That is, those human beings who belonged to a particular race, religion or language were allocated and in this respect it implied a kind of inequality between the minority and the majority; but in 1945, human rights, which until then were considered among the issues that were under the exclusive jurisdiction of states according to Article 15 of the Charter of the League of Nations, were released from the prison of the unquestionable sovereignty of states and became subject to their observance in order to achieve the first purpose of the United Nations, which is to maintain international peace and security; to the extent that observance of fundamental human rights, pursuant to paragraph 2 of the Preamble and paragraph

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<sup>1</sup> Mehdi Abdolmaleki, Valiollah Nouri, Amir Mahmoudi and Majid Zhamtekesh, *The Future of International Law: Realizing Utopia*, Volume 2 (Tehran: Shahr Danesh Legal Studies and Research Institute, 2021), 1.

<sup>2</sup> Shahrām Zarneshan, *The Formation and Identification of Customary International Law*, 2nd Edition (Tehran: Shahr Danesh Legal Studies and Research Institute, 2014), 22

<sup>3</sup> Seyyed Ghasem Zamani, *Discourses on International Human Rights* (Tehran: Khorsandi Publications, 2021).

<sup>4</sup> C. Raj Kumar, "National Human Rights Institutions: Good Governance Perspectives on Institutionalization of Human Rights", *American University International Law Review*, 19, 2(2003), 3

<sup>5</sup> Nasser Ghorbaniya, *In Search of Truth and Justice* (Tehran: Majd Scientific and Cultural Association, 2015), 151

3 of Article 1 of the Charter of the United Nations, became the main principle of the United Nations, and Article 55 of the same Charter explicitly spoke of the connection between these two concepts (peace and security of the world with human rights).<sup>1</sup>

Today, through half a century of activity and initiative of the United Nations, an admirable set of human rights doctrines has been formed in international law. This position is in clear conflict with the situation of the fifty years ago; when there was no set of international rules in the field of human rights.<sup>2</sup>

Understanding the nature of human rights, or in other words, the philosophical foundations of human rights, is still alive and dynamic for two reasons. The first reason is the nascent nature of this subject area of international law, which, as mentioned, its recognition and its inclusion in the legal rules dates back to the establishment of the United Nations.

The second reason is that there is still no consensus on the concept of human rights, and this divergence of views is the result of different philosophical views on man and his rights. To put it more clearly, a single and integrated understanding of human rights has not yet been achieved, and consequently, the authority of international human rights is also facing challenges<sup>3</sup> and therefore, examining the concept of human rights and its philosophical foundations is still a lively debate in this field.

Given the different definitions offered Based on the concept of right and human<sup>4</sup>, it can be said that human rights are the dominion, authority, privilege and ability that humans enjoy. With this definition, human rights have characteristics such as being a type of privilege for the right holder, the right belonging to the person is associated with his power and authority, and finally, human rights are protected privileges.

In general, it can be said that contemporary human rights include the rights of individuals against the state and its main function is to limit the power of the state against individuals. In this way, states are obliged to guarantee and protect human rights for individuals.<sup>5</sup>

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<sup>1</sup> Hedayatollah Falsafi, "The Development and Promotion of Human Rights in the International Community," Legal Research, 16-17 (1995), 9.

<sup>2</sup> Hossein Sharifi Tarazkouhi, Human Rights: Theories and Practices (Tehran: Mizan Publishing, Winter 2018), 7.

<sup>3</sup> See: Marie-Bénédicte Dembour, "What Are Human Rights? Four Schools of Thought", Human Rights Quarterly , 32, 1(2010), 1.

<sup>4</sup> Seyyed Latifeh Hosseini, Introduction to the Concepts of Public Law, Examining the Concept of Human Rights (Tehran: Guardian Council Research Institute, 4-5, 2014).

<sup>5</sup> Seyyed Mohammad Qari Seyyed Fatemi, Human Rights in the Contemporary World, Volume 1, 6th Edition (Tehran: Negah Moaser, 2019),31.

Human rights are related to both morality and law, because they deal with values such as justice, equality, freedom and solidarity, as well as with the processes of recognizing rights, the rituals of exercising rights and the systems of guaranteeing them.<sup>1</sup>

Accordingly, natural rights, equality, freedom and justice are the legal foundations of human beings' enjoyment of fundamental human rights. In explaining the basis of natural rights, it is important to note that the main representative In explaining the basis of natural rights, it is necessary to point out that the main representative of the theory of natural rights in the modern world (John Locke) acknowledges: "Natural rights, since they originate from human nature and are found in the law of nature, are considered a legal basis for the enjoyment of human rights by human beings."<sup>2</sup>

With regard to the unique nature of human rights and its difference from other areas of international law, below we will mention a few of its unique and significant substantive characteristics that provide a reason for the difference in the interpretation of terms such as progressive development.

#### A) Inherent

Usually, every right and obligation arises either as a result of an intentional and voluntary act or an event, unintentional and unintentional, creates it. For example, the tenant's right to the leased property is derived from the lease agreement, which is an intentional and voluntary act, and the injured party's right to claim compensation in a traffic accident arises from unintentional events. However, human rights are neither the result of intention nor do they require the occurrence of an accident or incident.

These rights are inherent to human beings and accompany them throughout their lives. Individuals or groups of people are the owners of these rights, and the duty that exists in relation to these rights is the responsibility of the state.<sup>3</sup>

#### B) Basing on the principle of non-exchange of benefits

The basis of international human rights on rules with a unilateral and protectionist characteristic, which has become known as the principle of non-exchange of benefits, is the most characteristic principle of this subject area. Human rights are a set of inherent human rights that individuals benefit from simply by being human, and in return, they entail a complete set of duties and obligations of states and other actors in the international arena, such as international organizations.<sup>4</sup>

Accordingly, states, unlike other subject areas of international law, have no interest in They do not have the obligation to respect, guarantee, or implement human rights, and are only obligated to protect

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<sup>1</sup> Seyyed Mohammad Qari Seyyed Fatemi, *Human Rights in the Contemporary World*, Second Edition, 3rd Edition (Tehran: Shahr Danesh Legal Studies and Research Institute, 2014) .

<sup>2</sup> Janusz Symonides, *Human Rights: Concept and Standards* (Milton Park, Abingdon: Routledge, 2000),

<sup>3</sup> . Mohammad Ali Movahed, *In the Air of Truth and Justice*, first edition (Tehran: Karnameh, 2002), .

<sup>4</sup> Matthew Craven, "Legal Differentiation and the Concept of the Human Rights Treaty in International Law", *European Journal of International Law*, 11, 3(2000), 500.

and promote them.<sup>1</sup> This unique feature gives this field a privileged position and distinguishes it from other fields.

States that were previously the owners of rights in the international arena and did not sign or ratify any treaties except on the basis of their own consent and will in the years after the Treaty of Westphalia<sup>2</sup>, realized after the formation of the United Nations in 1945, and especially with the ratification of the Universal Declaration of Human Rights in 1948, that the international scene was changing and that they could no longer consider themselves the exclusive owners of rights in the field of human rights and prioritize their interests and concerns over the observance and implementation of human rights.

#### C) The anthropocentricity of all documents and treaties in this field

Basically, in no field of international law other than human rights, individuals are the subject of treaties. States are the originators and parties to treaties, and treaties are essentially intergovernmental.

However, individuals are considered the main beneficiaries of treaties. In fact, human rights treaties are written by and between states, entailing obligations for states and rights for individuals or humans. This feature gives different facets to this subject area. Hence, human rights treaties have transformed the state-centered structure of international treaties.<sup>3</sup>

#### d) The declarative nature of human rights instruments and treaties

Another essential feature of the subject area of international human rights is that human rights instruments all have a declarative nature. Human rights are the specific and inherent rights of humans regardless of color, sex, race, religion, nationality or any other classification.

Non-international instruments are established and ratified only to recognize these rights and to give them the form of treaty rules. These rights have existed since humanity set foot on earth, but perhaps have not been recognized. Or they were not recognized in the form of a document (whether a resolution, a declaration, a letter, a court decision, an interpretative theory or a treaty). In other words, the existence of a human rights rule is independent of the document that expresses it.

This issue can also be understood from the way human rights instruments are drafted and written. The naming of the Universal Declaration of Human Rights adopted by the General Assembly in 1948 is clear evidence of the declaratory nature of this document.

This essential characteristic of international human rights law (being declaratory) distinguishes it from other subject areas of international law in which rules are created by custom or by instrument.

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<sup>1</sup> Seyyed Mohammad Qari Seyyed Fatemi, "Human Rights Treaties in Different Spaces," *International Law*, 20, 28 (2003).

<sup>2</sup> Treaty of Westphalia, Available at: [https://avalon.law.yale.edu/17th\\_century/westphal.asp](https://avalon.law.yale.edu/17th_century/westphal.asp), Accessed July 15, 2021.

<sup>3</sup> Surya P. Subedi, *The United Nations Human Rights System*, translated and researched by Seyyed Ghasem Zamani and Amir Hossein Mohabali (Tehran: Majd Scientific and Cultural Association, 2019), .

e) The universality of human rights obligations

In addition to the above, another characteristic of this subject area is that human rights are universally applicable. In many cases, it is clear that the rules contained in human rights instruments are universal.<sup>1</sup>

## 2 Definition of progressive development and codification in the international legal system

Article 15 of the Statute of the International Law Commission<sup>2</sup>) attempts to distinguish between the concepts of codification and development of international law. The term “progressive development of international law” means the preparation and drafting of treaties on subjects that have not yet been regulated in international law or in those cases, the law has not yet been sufficiently developed in the practice of countries, and the term codification also means the very correct and systematic regularization of international rules in areas that were previously only a simple procedure.<sup>3</sup>

Therefore, the technique of constructing international principles and rules from existing custom or, in other words, changing customary international law to written law has been called “development of international law” in the term codification of international law and its expansion and regulation in principles.

The codification of international law is the practice of treaties that result from the agreement of states and other subjects of international law and, as a result, is subject to the consent of the subjects of international law. There is a debate and disagreement about which is more useful and should take precedence: the codification of international law or the progressive development of international law.

Western states, as well as other states that adhere to conservative traditions, prioritize the codification of international law, while new states, as well as Eastern states, pay attention to the progressive development of international law, because in their view, old international law is a colonial law that can no longer be relied upon.<sup>4</sup>

The field of progressive development and elaboration of rights in the system of public international law is a clear evidence of the dual nature (declarative and constitutive) of the applicable rules of international law.

In fact, the field of elaboration concerns the declarative nature of some rules of international law, and the field of progressive development concerns the constitutive nature of other rules. Of course, the mutual influence of these two fields on each other in the subject area of public international law is undeniable.

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<sup>1</sup> Yoram Dinstein, “The Erga Omnes Applicability of Human Rights”, *Archiv Des Völkerrechts*, 30, 1(1992), 16-21.

<sup>2</sup> Statute of the International Law Commission 1947, Available at: <https://www.un.org/en/about-us/un-charter/full-text>, Accessed September 28, 2021.

<sup>3</sup> Available at: <https://legal.un.org/docs/?path=/ilc/texts/instruments/english/statute/statute.pdf&lang=EF>, Accessed September 28, 2021

<sup>4</sup> Arnold N. Pronto, “Codification and Progressive Development of International Law: A Legislative History of Article 13(1)(a) of the Charter of the United Nations”, *FIU Law Review*, 13, 6(2019), 1106- 1109.

Although elaboration and development are fundamentally different from each other, they are nevertheless closely interdependent; because, on the one hand, no elaboration is limited to the mere declaration of existing rights, and on the other hand, no provision of a completely original rule is made.<sup>1</sup>

In order to maintain the unity and integrity of the drafted convention, the competent organs of the General Assembly have always tried to avoid any action in the final drafting of the relevant convention that would give rise to the suspicion of separating the articles into codified and uncodified provisions.

For example, the International Law Commission has not, neither in the selection of topics, nor in the procedure and procedure, nor in the stage of The preparation and finalization of the draft text did not establish a distinction between compilation and development.<sup>2</sup>

## **2.1 Institutions responsible for the compilation and progressive development of international law**

Given the unity of the author and the subordinate in the decentralized system of international law, the institutions responsible for the compilation and development of international law (international organizations) are themselves subordinate to international law.

In the process of the progressive development of international law, the International Law Commission plays a key and pivotal role. However, other institutions also play and continue to play a role similar to the International Law Commission in different subject areas. Among these institutions, the Commission on Human Rights, and later the Human Rights Council and the treaty bodies, can be mentioned.

Based on Article 13, paragraph a, of the Charter of the United Nations, the task of the compilation and progressive development of international law has been assigned to the General Assembly. This paragraph obliges the General Assembly to promote international cooperation in political affairs and to encourage the progressive development of international law and its codification.

It should be noted that in addition to the International Law Commission, the General Assembly has also used its other specialized subsidiary bodies, such as the Committee on Disarmament, the Committee on the Peaceful Uses of Outer Space, and the International Law Commission on the Law

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<sup>1</sup> Wolfke Karol, "Can Codification of International Law be Harmful?", In Jerzy Makarczyk (ed), *Essays in International Law in Honour of Judge Manfred Lachs* (The Hague: Martinus Nijhoff, 1984), 314.

<sup>2</sup> Seyyed Ghasem Zamani, *Challenges and Initiatives of the General Assembly in the Process of Formulating and Developing International Law, in the Proceedings of the Conference on the Role of the United Nations General Assembly in the Formulation and Gradual Development of International Law* (Tehran: Iranian Association for United Nations Studies, 2010).

of International Trade, in the pursuit of the goal of progressive codification and development of international law.<sup>1</sup>

On the other hand, it should be noted that other United Nations bodies have also played a role in the codification and development of international law. For example, the role of the Commission on Human Rights, as a subsidiary body of the Economic and Social Council, in the codification and development of international law cannot be overlooked.

In fact, before the United Nations General Assembly adopted resolution 60/251 on April 3rd to replace the Human Rights Council with the Commission on Human Rights and its affiliated body, it drafted various treaties, including the 1966 Covenants.<sup>2</sup>

## **-2-2 Participation of other actors in international relations in the process of formulating and developing international law**

Although the International Law Commission, as a subsidiary body of the General Assembly, is considered the main body responsible for the progressive formulation and development of international law, the role of other international organizations, both governmental and non-governmental, in this process should not be ignored.

The need for cooperation between the United Nations and other international organizations, both governmental and non-governmental, led to the Economic and Social Council (ECOSOC)<sup>3</sup> being mandated to conclude cooperation agreements with those international organizations operating in the field of activities of the United Nations, after which the relevant organizations would be considered as specialized agencies. Articles 70 and 71 of the Charter of the United Nations opened the door to cooperation between the specialized agencies and the principal and subsidiary organs of the United Nations.

According to these two articles, international organizations, both governmental and non-governmental, cooperate in various ways with the bodies responsible for the formulation and development of international law.

For example, the International Law Commission has held formal and informal consultations with FAO on the law of the sea and shared natural resources, UNHCR on nationality, the International Committee of the Red Cross on crimes against the peace and security of humanity, the International Law Association on diplomatic protection and the responsibility of international organizations, and the French Association of International Law on the fragmentation of international law.<sup>4</sup>

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<sup>1</sup> Antonio Cassese and Joseph H. H. Weiler (eds), *Change and Stability in International Law- Making* (New York; Berlin: W. de Gruyter, 1988), 195.

<sup>2</sup> Seyyed Ghasem Zamani, "Global Monitoring of Human Rights Implementation: From the Commission to the United Nations Human Rights Council," *Legal Research*, 5, 9 (2006).

<sup>3</sup> ECOSOC: United Nations Economic and Social Council

<sup>4</sup> Available at: <https://legal.un.org/ilc/research.shtml>, Accessed July 5, 2021.

### 3. Conceptual transformation of “progressive development of law” in the international human rights system compared to the international law system

In the arenas with the above-mentioned characteristics, which have obvious differences from the arenas of other fields of public international law, the concept of “progressive development of law” also undergoes transformation and transformation.

Progressive development, which has been previously raised in international law and is one of the duties and tasks of the International Law Commission, means the preparation and drafting of treaties on issues that have not yet been regulated in international law or in those cases, the law has not yet been sufficiently developed in the practice of countries.<sup>1</sup>

Based on this definition, “development” has an established concept and mostly refers to issues that did not previously exist in practice and custom, and the requirements of the international community today require the creation and establishment of that rule. For example, in the field of the law of the sea, many of the rules contained in the 1982 Monte Gobi Convention had a developmental (establishment) aspect and did not previously exist in that field, and the need to regulate the relations of states in that specific issue required the establishment and creation of that rule.

In contrast to "progressive development", there is "codification", which means the very correct and systematic regularization of international rules in areas that were previously a simple procedure.<sup>2</sup>

"Codification", unlike "development", has a concept based on recognition and not establishment. For example, by developing a procedure, the International Law Commission has attempted to recognize it as a rule of international law or it has given a new garment to a treaty on a pre-existing customary rule.

The subject area of human rights is fully understood within the conceptual framework of "codification". As explained in this study, international human rights and obligations are essentially declaratory in nature.<sup>3</sup>

This means that this subject area of international law only identifies human rights that have existed for man since time immemorial and explains them in different forms, including custom, general legal principles, doctrine and treaties. This is precisely why the United Nations General Assembly chose the title of Declaration for the document adopted on 10 December 1948 regarding human rights.<sup>4</sup> Accordingly, all existing treaties in the field of international human rights are declaratory and not founding in nature.

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<sup>1</sup> Article 15 of the Statute of the International Law Commission, available at: <https://legal.un.org/ilc>, Accessed July 10, 2021.

<sup>2</sup> Ibid.

<sup>3</sup> Haleh Hosseini Akbarnejad, *The Nature of Human Rights Obligations in the International System* (Tehran: Shahr Danesh Studies and Research Institute, 2016).

<sup>4</sup> Zaman, *Discourses on International Human Rights*, op. cit.

This is why the committees monitoring human rights conventions always declare that, despite the fact that withdrawal from a human rights treaty is optional, withdrawal does not mean the end of the human rights obligations of the state that has withdrawn from the treaty, because the treaty essentially declares pre-existing rights and withdrawal from it does not eliminate previous universal customary rules and therefore states have never been, are not and will never be exempt from fulfilling human rights obligations. Overcoming the rule<sup>1</sup> From the soft<sup>2</sup> Or, to put it more simply, the overriding of the container causes the container to lose its color and states always consider themselves committed to protecting, guaranteeing and implementing human rights.

Therefore, in this subject area, the concept of “progressive development” as it existed in international law and as one of the special tasks of the International Law Commission is not found. Due to its purely declarative nature of rules, this area only makes sense within the scope of “codification” and “progressive development” undergoes a conceptual transformation in it.

#### **4. Alternative terms and concepts for the progressive codification and development of rights in the international human rights system**

In the subject area of international human rights, instead of “development”, the term “promotion of the status and status of human rights” is used. In other words, “development” in international human rights has undergone a conceptual transformation and brings to mind the promotion of rules and the promotion of the status or status of humans. This is precisely why, in human rights, instead of using the term "progressive development and elaboration", we use terms such as "protection and promotion of human rights".

##### **4.1 Protection of human rights in the sense of the formulation of human rights**

Protection and protection of human rights means ensuring that all people have access to the enjoyment of human rights. The obligation to protect human rights lies with states, and international human rights organizations, as subjects of international law, have also been assisting states in achieving this goal in recent years.

In addition to the obligation of states to exercise due care<sup>3</sup> over people’s rights against the behavior and actions of state agents and institutions, the protection and protection of human rights also includes the obligation of states to act in accordance with the actions of non-state actors, including corporations. This means that states also have an obligation to protect the observance of human rights by non-state actors and will have international responsibility in the event of failure.<sup>4</sup>

In practice, there are two ways to protect human rights and ensure their provisions: one is to use non-legal procedures and the other is to resort to legal procedures. The distinguishing feature of legal procedures from other procedures is not the status of the body that makes decisions in such cases,

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<sup>1</sup> Rule

<sup>2</sup> . Norm

<sup>3</sup> . Due Diligence

<sup>4</sup> Article 2 of the International Covenant on Civil and Political Rights, available at: <https://rc.majlis.ir/fa/law/show/97259>, Accessed August 5, 2021.

but rather the decisions that are legally binding. The result of using non-legal procedures, which are naturally more diverse, is the provision of solutions that are not always based on legal rules, and their acceptance is not seen as compulsory. However, since non-legal solutions are non-legal in nature, they have a wider scope than legal decisions and do not require argumentative preliminaries and dry and soulless arguments.<sup>1</sup>

The most important international documents that are recognized as the core and foundation of human rights are the Universal Declaration of Human Rights (1948), the International Covenant on Civil and Political Rights (1966), and the International Covenant on Economic, Social and Cultural Rights (1966). Together, these three documents are known as the “Bill or Charter of Human Rights”.<sup>2</sup>

Apart from these three main and fundamental documents, there are also a series of supporting and guaranteeing documents and treaties in the international arena. Based on these documents and treaties, human rights monitoring mechanisms have been formed. Depending on the document by which they were formed, these mechanisms have different missions and tasks and are classified into two general categories: mechanisms based on the United Nations Charter<sup>3</sup> and treaty-based mechanisms.<sup>4</sup>

The most important Charter-based monitoring mechanisms are the Human Rights Council and the Office of the United Nations High Commissioner for Human Rights. Treaty-based monitoring mechanisms also include committees overseeing the nine core human rights treaties, namely the Covenants, the Convention on the Rights of the Child, the Convention on the Rights of Persons with Disabilities, the Convention on the Elimination of All Forms of Racial Discrimination, the Convention on the Elimination of All Forms of Discrimination against Women, the Convention against Torture and All Cruel, Inhuman or Degrading Treatment or Punishment, the Convention on the Rights of Migrant Workers, and the Convention on the Elimination of All Forms of Enforced Disappearances.<sup>5</sup>

It is worth noting that the Human Rights Council, as the most important Charter-based monitoring body, has four pillars. The complaints procedure, the advisory committee, the procedure of special rapporteurs (thematic and country) and the universal review mechanism (UPR) are the four pillars of the Human Rights Council. The Council holds three sessions each year and is considered a purely political monitoring body.<sup>6</sup>

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<sup>1</sup> Falsafi,(ibid)

<sup>2</sup> Available at: <https://www.escr-net.org/resources/international-bill-human-rights>, Accessed August 12, 2021.

<sup>3</sup> Charter Bodies

<sup>4</sup> Treaty Bodies

<sup>5</sup> Human rights treaty bodies, Available at: <https://www.ohchr.org/EN/HRBodies/Pages/TreatyBodies.aspx>, Accessed August 12, 2021

<sup>6</sup> United Nations Human Rights Council, Available at: <https://www.ohchr.org/EN/HRBodies/HRC/Pages/Home.aspx>, Accessed August 14, 2021

The political nature of this body is due to the fact that all the people present at the meetings of the Council are representatives of their governments and, in fact, diplomats, and they perform their duties and make decisions in their representative capacity; a special feature that is also referred to in many cases as politicization and was the Achilles heel of the Council's predecessor, the Commission on Human Rights. On the other hand, the ten committees, as the executive arms of the main human rights treaties, play a role in the protection and promotion of human rights.

These institutions have different functions such as lawmaking, monitoring and dispute resolution. These powers and duties are accompanied by different founding origins. For example, the examination of reports by governments on the implementation of The International Covenant on Civil and Political Rights is the responsibility of the Human Rights Committee, which derives its mandate from article 41 of the Covenant and therefore does not require the subsequent consent of States.

On the other hand, the examination of individual complaints against States is based on separate agreements, commonly referred to as the Optional Protocol to the International Covenant on Civil and Political Rights.

Treaty bodies are established to monitor (support) and encourage states to accept and implement international obligations under international human rights conventions. Treaty bodies are international committees composed of experts that are responsible for monitoring the implementation of states' obligations under the core human rights treaties and their optional protocols.

Currently, there are 10 treaty bodies, monitoring 9 human rights conventions and 1 optional protocol. The members of treaty bodies are independent experts who have expertise in the field of human rights and are of good repute, ethics and impartiality.

It should be noted that although the members of treaty bodies are elected by states, this does not mean that they represent a particular state, but that they will carry out their duties in complete impartiality and independence.

Treaty bodies are groups of experts who are independent of political and Intergovernmental organizations such as the UN Human Rights Council or the Security Council vary. The number of experts in each body varies between 10 and 25. Members are nominated and elected by governments for a four-year term. Elections of half of the committee members are held every two years. Appropriate geographical and cultural distribution is also important in the selection of committee members.<sup>1</sup>

The above explanations make it clear that the subject area of international human rights, in addition to the characteristic of normative inflation, also faces the characteristic of institutional or mechanism inflation.

This means that in this area, regardless of the type and nature of the supervisory institutions, whether political, semi-political or legal, states, as the main actors on the international stage and the direct and unique obligors of respecting, guaranteeing and implementing human rights, are under the mutual and sometimes overlapping supervision of these supervisory and support institutions; therefore, structural

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<sup>1</sup> International Service for Human Rights I (SHR), A Simple Guide To The UN Treaty Bodies, 2015.

or institutional inflation is also considered another characteristic of the field of international human rights, along with normative inflation.

The characteristic or Features that have perhaps emerged to fill the gap in the implementation of human rights obligations by states. This inflationary monitoring, which sometimes obliges states to submit initial and periodic reports, is so numerous and diverse that it sometimes leads to boredom and countries refraining from submitting reports.

Nevertheless, the impact of reporting violations and expressing concerns and warnings by various human rights institutions in the global arena in eliminating those violations and, in some cases, compensating for the damages caused by them is undeniable.

These institutions and monitoring mechanisms are the loudspeakers for announcing human rights violations by states and, through this, they undertake to support and protect human rights.<sup>1</sup>

According to Clapham,<sup>2</sup> a well-known human rights scholar, even when states ignore or reject the recommendations of a treaty body, “it is quite clear that the process of informing states that UN observers have become sensitive to a particular issue in their territory, It has led to the release of (prisoners) and political changes.”<sup>3</sup>

#### **4.2 Promotion, promotion or elevation of the status and status of human rights in the sense of progressive development of human rights.**

Since the mid-fifties, the United Nations has taken steps to promote the status of human rights and has used various means and factors in this regard, such as the advisory services program, the periodic reporting system of member states and scientific research on specific rights.<sup>4</sup>

The issue of human rights and the promotion of human rights concepts have been among the specific tasks and missions of human rights institutions, including United Nations institutions. The purpose of promoting human rights is to promote the status and status of human rights, which the inflationary rules and norms formed by governments, along with the establishment of multiple monitoring and support institutions, have taken steps in this direction. In this direction (promotion and promotion of human rights), the role of two institutions is special and valuable, which are explained below.

##### **4.2.1 Human Rights Committees**

One of the most important examples of the promotion or promotion of human rights can be found in one of the functions or tasks of the treaty bodies. The treaty bodies, which are the executive arms of human rights conventions and have various missions, including receiving and examining periodic reports from states and receiving individual complaints, issue general comments, which are a kind of

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<sup>1</sup> Olivier De Frouville, Strengthening the Rule of Law: The Right to an Effective Remedy for Victims of Human Rights Violations (Conference in Vienna, 27-28 June 2013).

<sup>2</sup> Andrew Clapham

<sup>3</sup> . Andrew Clapham, Human Rights: A Very Short Introduction (Oxford: Oxford University Press, 2007), 74-75

<sup>4</sup> Falasifi(ibid)

interpretation of the provisions contained in the treaties, and in this way take a long and effective step in the process of promoting the status of human rights.

The treaty bodies provide general comments or recommendations, which are authoritative guides on how to implement and interpret the conventions to the States parties to the convention. General comments, or interpretative comments, can be considered as substantive guidance on specific articles of the convention or may be considered as more general guidance for States on issues such as how to prepare reports.<sup>1</sup>

Comments Interpretative opinions may vary in their degree of importance and complexity and can sometimes be considered as interpretations of specific articles of the Covenant. These opinions may also be revised or replaced in the light of increasing experience of States or developments in specific areas. The process of developing and adopting interpretative opinions consists of three main stages: consultation, drafting and adoption.<sup>2</sup>

In defining interpretative opinions, Philippe Alston writes: “Interpretive opinions are the means by which the United Nations specialized human rights committee expresses its views on matters arising from the provisions of a treaty in the exercise of its supervisory function, in the form of statements and formal statements.”<sup>3</sup>

The former UN High Commissioner for Human Rights presented a plan in 2012 to strengthen the human rights treaty-based institutions of the United Nations, setting out 10 objectives, including monitoring the effective implementation of the treaty by States parties through the provision of recommendations and opinions or decisions by the treaty bodies.<sup>4</sup>

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<sup>1</sup> Zohreh Sarai and Amirhossein Mohabali, *Interpretation of Human Rights in the Mirror of the Theories of the United Nations Human Rights Committee* (Tehran: Shahr Danesh Institute for Legal Studies and Research, 2018).

<sup>2</sup> Committee On Enforced Disappearances, *Rules of procedure and working methods*, Accessed September 8, 2021, Available at: <http://www.ohchr.org/EN/HRBodies/CED/Pages/WorkingMethods.aspx>.

<sup>3</sup> Philip Alston, “The Historical Origins of General Comments’ in Human Rights Law”, in Laurence Boisson De Charzournes and Vera Gowlland-Debbas (eds), *The International Legal System in Quest of Equity and Universality* (Brill, Nijhoff, 2001), 212.

<sup>4</sup> These ten goals are: 1. Membership: enhancing the expertise, accessibility and independence of all members of treaty bodies; 2. Compliance: State compliance with treaty reporting (including reporting through inter-ministerial, ministerial and national stakeholder reconciliation mechanisms); 3. Implementation: Effective implementation by States parties of treaty bodies, recommendations, opinions or decisions; 4. Reports: With a greater focus and analysis on State reports; 5. Conference support: Strengthening the capacity of conference services to support treaty bodies; 6. Complaints:

In fact, human rights treaty bodies determine the precise scope of the vague obligations of States parties to the treaties through interpretation. On the one hand, this is done by providing opinions and views on individual complaints, and on the other hand, by examining the reports of States parties and assessing their implementation of their obligations, it enables the treaty bodies to participate in the rule-making process in some way.<sup>1</sup>

In this framework, in addition to the treaty bodies (the Human Rights Committee as the body supervising the International Covenant on Civil and Political Rights and the Committee on Economic, Social and Cultural Rights as the body supervising the Second Covenant), the Committee on the Rights of the Child has also played an important and influential role in protecting and promoting children's rights.<sup>2</sup>

The Committee on the Rights of the Child has to date issued 25 interpretative opinions on the interpretation of the articles of the Convention on the Rights of the Child. For the first time, it participated in the development of one of these interpretative opinions, which was actually related to the revised draft of the Committee on the Rights of the Child's interpretative opinion No. 10 (on juvenile justice), and submitted its opinion to the Committee.<sup>3</sup>

#### **4.2.2 The International Court of Justice**

The International Court of Justice, as the judicial organ of the United Nations, has had a significant impact on promoting the status of human rights and promoting human rights concepts. This key role of the Court can be seen in the cases The Court has made use of the case law and its advisory opinions.<sup>4</sup>

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Strengthening the effective capacities of States to respond appropriately to individual complaints; 7. Secretary-General support: Strengthening the capacity of the Secretary-General to support the treaty body system; 8. Constructive dialogue: Coordinated approaches to ensuring effective constructive dialogue with States; 9. Access and visibility: Universal access and visibility of the work of treaty bodies; 10. Recommendations: Adopting more focused, concise and actionable recommendations. For further reading: Navanethem Pillay, Strengthening the United Nations human rights treaty body system: A report by the United Nations High Commissioner for Human Rights (UN Office of the High Commissioner for Human Rights, 2012).

<sup>1</sup> Geir Ulfstein, *Law-Making by Human Rights Treaty Bodies* (Routledge, 2014), 1.

<sup>2</sup> Amirhossein Mohibali, Maryam Mahimani and Zohreh Sarai, *Interpretation of Children's Rights in the Mirror of the Theories of the United Nations Committee on the Rights of the Child* (Tehran: Shahr Danesh Studies and Research Institute, 2019).

<sup>3</sup> Draft revised General Comment No. 10 (2007), Accessed September 20, 2021.

<sup>4</sup> Sandy Ghandhi, "Human Rights and the International Court of Justice The Ahmadou Sadio Diallo Case", *Human Rights Law Review*, 11, 3(2011), 527-528.

Although the Court has limitations both in terms of “consensual jurisdiction”<sup>1</sup> and the framework set out in the petitions, it has repeatedly shown that, although it is not a world court of human rights, it can play an effective role in protecting and promoting human rights during its proceedings.<sup>2</sup>

The International Court of Justice, through the issuance of interim orders and judgments in appeal proceedings and also through the issuance of advisory opinions in cases where the organs of the Organization raise a question, takes steps towards the promotion and promotion of human rights.

The separate opinions of the judges, which are sometimes published in detail, are also important documents that, within the doctrinal framework and as an auxiliary source of international law, contribute to the promotion of human rights.<sup>3</sup>

This organ of the United Nations can, by defining and interpreting the conventions and obligations it is responsible for States have a role to play in this regard. The Court has in some cases endorsed and accepted customary rules of international humanitarian law and in other cases extended them to the law of armed conflict.

The International Court of Justice is considered to be the first authority to explicitly state that there is a direct link between human rights and humanitarian law and that human rights apply in times of war. The most important example of this is the Court’s advisory opinion in the case of the separation wall.<sup>4</sup>

The designation of the International Court of Justice by the International Law Commission as an authority to determine the jus cogens rules of general international law<sup>5</sup> has also given the Court a potential role in ensuring compliance with human rights rules, which can undoubtedly be effective in strengthening the foundations of human rights and proving them to the international community in the future.<sup>6</sup>

If we were to look at the evolution of the concept of one of the human rights in the Court’s practice, we could refer to the right to self-determination. This right, recognized and guaranteed in Article 1 of the Covenant, has been one of the most controversial rights among States, and the Court has taken interesting initiatives in this regard in several cases, including the South West Africa, Namibia and

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<sup>1</sup> Consent Based

<sup>2</sup> John R. Crook, “the International Court of Justice and Human Rights”, *Northwestern Journal of Human Rights*, 1, 1(2004), 1-8.

<sup>3</sup> *Ibidem*.

<sup>4</sup> Zamani, *Discourses on International Human Rights*, op. cit., 8.

<sup>5</sup> . Jus Cogens

<sup>6</sup> *Ibid*.

Western Sahara case,<sup>1</sup> the Barrier<sup>2</sup> and more recently the separation of Chagos from Mauritius,<sup>3</sup> which can be interpreted as promoting and enhancing this right. For example, in its recent advisory opinion (Chagos from Mauritius), the Court ruled that General Assembly Resolution 1514<sup>4</sup> (the so-called decolonization resolution) on the right to self-determination was customary.<sup>5</sup>

## Conclusion

The international legal system has unique characteristics compared to other legal systems. In addition, the subject area of international human rights law, as one of the subject areas of international law, also has its own characteristics that are both influenced by the specific characteristics of international law and have clearly influenced international law.

The most important manifestation and manifestation of the influence of human rights on international law can be sought in the "humanization of international law movement". Today, the observance, guarantee and implementation of human rights are no longer limited to the subject area of international human rights law, and there is talk of the ability to apply human rights rules to actors such as non-governmental organizations, transnational corporations and even human individuals.

Appropriate care for human rights as an obligation on transnational corporations and also efforts to achieve binding treaties in order to commit non-state actors are all signs of the increasing influence of human rights rules on various areas of international law.

The formulation and development of international law is also inseparable from these human rights-based conditions. In addition, the disruption of the rules of the game, which has become one of the characteristics of evolutionary human rights today, has progressed to the point where we can speak of a conceptual transformation of terms in this subject area.

One of these terms that has undergone a conceptual transformation in the subject area of human rights and is sometimes replaced by alternative terms is "progressive development of rights." Based

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<sup>1</sup> Legal Consequences for States of the Continued Presence of South Africa in Namibia (South West Africa) notwithstanding Security Council Resolution 276 (1970) , Accessed September 20, 2021, Available at: <https://www.icj-cij.org/en/case/53>

<sup>2</sup> Legal Consequences of the Construction of a Wall in the Occupied Palestinian Territory, Accessed September 20, 2021, Available at: <https://www.icj-cij.org/en/case/131>

<sup>3</sup> . Legal Consequences of the Separation of the Chagos Archipelago from Mauritius in 1965, Accessed September 20, 2021, Available at: <https://www.icj-cij.org/en/case/169>

<sup>4</sup> Declaration on the Granting of Independence to Colonial Countries and Peoples, Available at: <https://www.ohchr.org/EN/ProfessionalInterest/Pages/Independence.aspx>, Accessed September 28, 2021

<sup>5</sup> Mohammad Hossein Latifian, Advisory Opinion of the International Court of Justice in the Chagos Case in the Mirror of the Right to Self-Determination, Iranian Association for United Nations Studies Forum, 2020.

on the principles mentioned in this research and within the theoretical framework of international human rights, it can be concluded as follows:

a) Given the declarative nature of all human rights rules as one of the characteristics of international human rights, the term “progressive development of rights” in international law, which has an establishment rather than a declaration meaning, has undergone a conceptual transformation in the subject area of international human rights and does not bring to mind the meaning of establishing and creating rights.

b) In the field of international human rights, the term “progressive development of rights”, unlike international law, which means creating and establishing new legal rules, means promoting the status and status of human rights and promoting human rights.

c) Given this conceptual transformation and transformation that concerns the nature and specific characteristics of international human rights in comparison to international law, the terms “protection and promotion of human rights” are used instead of “compilation and progressive development of rights”.

d) Among the institutions that make the greatest contribution In the progressive development of human rights, in the sense of promoting and promoting their status, we can mention the former Commission on Human Rights, the current Human Rights Council, the International Court of Justice, treaty bodies, non-governmental organizations, and specialized agencies of the United Nations.

f) There is no doubt that the nature and specific characteristics of the subject area of international human rights also create other conceptual differences in other words and phrases common to this field with other subject areas of international law.

e) Accordingly, any study and research in the field of international human rights, except within this theoretical framework and taking into account the unique nature and characteristics of this subject area, cannot be consistent with the outlined goal and importance (supporting and promoting the status of human rights).

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# A Review of International Law (Military Use and Arms Race in Space)

<sup>1</sup> Mehmet UÇKAÇ

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**Abstract.** Today, one of the main concerns of the Committee on the Peaceful Uses of Outer Space (COPOS) and its subcommittees is the issue of militarization of outer space rights. The dominant space powers, such as the United States of America, Russia, and China, have added to this concern by using advanced military equipment in space. Therefore, the international community must seek desirable and practical solutions to this problem in order to prevent militarization and the creation of an arms race in space.

On this basis, this article seeks to examine the military use of space and legal documents and explain the contractual and customary system governing space treaties, to examine the military prohibitions governing space activities in order to prevent such activities in outer space, and to conduct a descriptive analysis by examining some dual-use space-based weapons and to make the inappropriate aspects of the military use of space more apparent than before.

**Keywords:** *Space Law, Arms Race, Militarization Of Space, Treaty And Customary System, Space Weapons*

## Introduction

International space law and, consequently, space activities are new phenomena in international law that have been accompanied by the conclusion of outer space treaties and the adoption of numerous resolutions.

One of the important developments in this field is the establishment of the Committee on the Peaceful Uses of Outer Space (COPOS)<sup>2</sup> in 1959 and the two (Technical, Scientific and Legal Subcommittees)<sup>3</sup> that have been approved by the following resolutions of the United Nations General Assembly.

The history of space exploration dates back to the early years after the Cold War and the launch of the first spacecraft, Sputnik 1<sup>4</sup>, by the former Soviet Union. A launch that, although it became a turning point in the effort to achieve irrefutable proof of space advances in its time, caused other space

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<sup>1</sup> Dr. Mehmet Uçkaç, PhD Graduate, International Science and Technology University, Warsaw / Poland, mehmet.uckac@istu.edu.pl, <https://orcid.org/0009-0001-9488-9036>

<sup>2</sup> Committee on the Peaceful Use of Outer Space, (COPUOS)

<sup>3</sup> The Scientific and Technical & Legal-Subcommittee

<sup>4</sup> Sputnik 1

powers, such as the United States and then China, in later stages, to adopt such technologies to present their space power even more advanced and superior to the former Soviet Union.

On the other hand, in the international arena, efforts have been made by space actors by concluding space treaties and proposing the adoption of resolutions or issuing declarations for the peaceful use of space, with the prohibition of military use, and under the supervision of the United Nations General Assembly. However, at the same time, by violating these legal rules, numerous insoluble and dangerous challenges have arisen for other countries, and the struggle to comply with these rules has been intensified day by day.

Accordingly, the proper implementation of these treaties and resolutions has become important, especially in recent years, due to the increase in international tensions and the production of various types of advanced military equipment and tools. This type of equipment is usually used in cyber attacks (cyberattacks).<sup>1</sup>

Which can be controlled and tracked by various types of long-range space satellites from the Earth to space and vice versa. With this description, the need was felt to achieve the fundamental objectives of international law in accordance with the Charter of the United Nations, and in particular the basic principles of international space law for the peaceful uses of space, on the one hand, and to respect the principles of the customary treaty system, along with correct, impartial and non-unilateral interpretations as a tool for the correct understanding of the concepts of space treaties with the help of legal doctrine, on the other hand.

Therefore, the question arises as to what dimensions of the prohibition of military use and arms race in the legal regime of space are revealed by examining sources, including international space law documents and rules and other related documents prohibiting armed conflicts<sup>2</sup>, which are also prohibited in international humanitarian law<sup>3</sup> and, in a sense, have the potential to be used in armed conflicts in space. Also, to what extent do space-based military weapons play a role in the militarization of space? Answering these questions will explore the complex dimensions of the issue and reveal its hidden aspects to a large extent.

### **International Law Governing Outer Space**

Space law<sup>4</sup> can be considered as a comprehensive set of laws and regulations governing space activities. Like other international laws, these laws include various international agreements, treaties, conventions, resolutions of the United Nations General Assembly, as well as laws and regulations of other international organizations.

In addition, many space-faring countries have a set of national laws on space activities that cover a variety of issues, such as environmental protection in space and on Earth, liability for damage caused

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<sup>1</sup> Cyber Attacks

<sup>2</sup> Armed Conflicts

<sup>3</sup> International Humanitarian Law

<sup>4</sup> Space Law

by space objects, dispute resolution, rescue of astronauts, use of space technology, and international cooperation.

One of the characteristics of international space law is its contractual nature; Because most of its provisions are included in treaties. Another distinctive feature is the predominance of multilateral treaties, especially where fundamental rules and principles are concerned.

This is due to the decisive role of the United Nations in the creation of space law. Space law shows that international cooperation is indispensable for the control of space activities so that disturbances and chaos do not occur. (The United Nations treaties on outer space law)<sup>1</sup> are the result of compromises, arguments and negotiations.

These treaties were adopted by the COPUS Committee, which acts on the basis of consensus As a result, their language is not transparent and does not allow us to easily determine,<sup>2</sup> the content and scope of the rights and privileges, as well as the obligations and commitments they entail.

### **The Conventional and Customary System**

International custom is a generally accepted legal practice that plays a vital role in shaping modern international law, including international space law. The origin of customs of public international law, as also referred to in the Statute of the International Court of Justice, is derived from the general practice of States, together with their legal belief in the right to do or not to do something, and they are binding on all States.

International space law, like other subjects of international law, has been formed from multiple sources, including treaty systems, treaties, and customary rules. "Some scholars of international law have considered United Nations resolutions on space matters to be a kind of "immediate formation of customary international law".<sup>3</sup>

This may be especially true of resolutions adopted by consensus or without a vote. Because they express the formation of a new legal belief. The same process exists for the transformation of treaties into custom. Regarding the resolutions of the United Nations General Assembly on space activities, it can be said that these resolutions, with the exception of the Resolution on the Principles of Direct Broadcasting (1982), which was not adopted by consensus, are thus evidence of the creation of soft rights that, with the passage of time, have lost their soft status as they seem to have become general rules of international law or international custom. This is especially true of the principles governing the assessment of remote sensing. (1986) The Principles Governing the Use of Nuclear Energy Resources (1992) are more widely observed; because all states have observed them.

Therefore, considering the views expressed at the time of the adoption of the United Nations resolutions in the field of space activities and the process of their adoption and compliance, it can be stated that these resolutions became binding under conditions that were consistently and continuously

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<sup>1</sup> For other relevant treaties that can be cited in the section on space law prohibitions, see page 9 of this article.

<sup>2</sup> Consensus

<sup>3</sup> Instant international customary law

repeated and observed and became customary, and their name has no effect on the degree of their binding nature. Since the adoption of the Mah Agreement in 1979<sup>1</sup>, no other treaty has been adopted that directly and universally regulates space activities; however, several resolutions have been adopted in this area.

Apart from the Mah Agreement, other treaties have enjoyed relatively universal acceptance. "This is a testament to the fact that the international community is still waiting to reach a consensus on a legal framework for space activities. It is also important to note that for many space activities, there is an international legal regime of a treaty or resolution nature.[4] In principle, public international law is largely customary law. In any legal system, custom is the primary form in which the rights in question are realized."<sup>2</sup> "According to Nice<sup>3</sup>, no treaty can have the value of a well-established custom as a guide to international law, either in itself or as an interpretation of the international conscience of a given period."<sup>4</sup>

"The material elements of custom include diplomatic correspondence, political declarations, the opinions of legal experts, official instructions It is about legal issues and national and international judicial decisions. The value of each of these sources is different and depends on the circumstances and circumstances of each case."<sup>5</sup>

"According to Bencheng<sup>6</sup>, rapid changes in political geography require a rapid development of international law. A theory (of immediate custom)<sup>7</sup> has also been formed on the basis of these changes; Although the formation of international law still requires international acceptance, it can be formed in a shorter time and on the basis of the behavior of a smaller number of states than has traditionally happened. According to the theory of immediate custom, customary international law is the result of the declaration of laws that are generally accepted and the action that indicates their support or the conduct that indicates their acceptance."<sup>8</sup>

"Russian jurists believe that international custom, as a rule, is the result of agreement between states on general principles that simply define the generality of permissible conduct of states and other subjects of international law. They also believe that customary international law plays an important role in the following situations: as a source of rights and obligations of States in areas where there is no treaty in multilateral relations, regulating relations between States that are not parties to a particular

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<sup>1</sup> Moon Agreement,1979

<sup>2</sup> The Scientific and Technical & Legal-Subcommittee

<sup>3</sup> Nys

<sup>4</sup> Sputnik 1

<sup>5</sup> . Cyber Attacks

<sup>6</sup> Bin Cheng

<sup>7</sup> Moon Agreement,1979

<sup>8</sup> Armed Conflicts

convention, and also governing relations between States that are parties to a convention and not to a particular convention.

When these principles are raised in the context of space, different perspectives emerge. For example, with regard to remote sensing activities, there is a view that this issue is generally accepted and that the long history of remote sensing of land and its natural resources has increased the importance of customary law, according to which it is permissible to carry out remote sensing programs without obtaining prior permission from the country being measured. However, this view is challenged by some other theorists in matters related to transit. “Innocuous use of the airspace of States is excluded when ascending into outer space or returning from space.”<sup>1</sup> “Adherence to customary international law would have its own advantages in situations where the space treaty system is ineffective.

For example, it might refer to laws that protect military or non-military satellites in areas not covered by space treaties. Furthermore, customary international law has the potential to change in response to political and technological developments, because customary international law is derived from the behavior and practices of individual States.

In general, customary international law potentially fills many of the gaps in the treaty law system. There are two theories regarding customary international law of space: immediate custom and the analogy of existing laws with space-related issues. According to this theory, an immediate custom that allows preventive measures is formed when a state takes unilateral action and other states follow or accept it. The imitation of the basic laws of the land can also play the role of customary international law.<sup>2</sup>

### **Definition of the concepts of military and weaponization of outer space**

"Any use of space for military purposes"<sup>3</sup> "Militaryization" of space is said to have begun with the launch of the first communications satellites for military use, while "weaponization"<sup>4</sup> is used when weapon systems are deployed in space orbits that have the capability to attack targets in space or on the ground. The weaponization of space has also been defined as the process resulting in the deployment of weapons in space that may be intended to destroy targets in orbit or on the ground.<sup>5</sup>

According to Professor Ivan A. Vlasik<sup>6</sup>, “the term ‘militarization’ as applied to outer space should not be confused with ‘weaponization.’” Although there is no internationally accepted definition of either term, the militarization of space refers to the use of space by a significant number of military spacecraft, while the latter, the weaponization of space, “is defined as the placement of any means

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<sup>1</sup> International Humanitarian Law

<sup>2</sup> Space Law

<sup>3</sup> Militarization

<sup>4</sup> Weaponization

<sup>5</sup> Space Law

<sup>6</sup> . Ivan A. Vlasic

designed to attack man-made targets in outer space or in the terrestrial environment for any period of time.<sup>1</sup>”

### **Military Background and Weaponization of Outer Space**

Since the early days of the space age, both space superpowers (America and Russia) have designed and placed various instruments in orbit to provide tactical and strategic military capabilities. Despite public opposition, long before Sputnik was launched, the space programs of the Soviet Union and the United States were inherently military in nature, and had always been driven by military considerations rather than scientific and non-military considerations. “The tacit understanding between the two superpowers was that there would be no arms race in that environment, as there was a common interest in maintaining military satellites.” In the United States, a group of technical experts; The RAND Project, which also had close ties to the Pentagon and intelligence agencies, began research in 1946 into the design and launch of a reconnaissance satellite.

Until, on July 29, 1955, they announced their intention to launch an artificial moon into space as part of the International Geophysical Year (IGY) program. The Soviet Union also announced on July 30, 1955, that they would also launch satellites into space as part of the (IGY) program. By announcing this plan, they gave it a more scientific aspect and concealed its military nature. Of course, before sending Sputnik, America also kept its activities secret.

Until America published its military activities in its press in 1955 and made it public. The program called (Satellite and Missile Surveillance System), which was the first space-based reconnaissance system, became operational in late 1961.

Then, in 1967, when the Outer Space Treaty was signed, China and France also engaged in military use of space. In the Persian Gulf War (the Allied war against Iraq to counter the invasion of Kuwait) in 1991, which the United States called Operation Desert Storm, military use of space occurred, which was a clear example of the gradual evolution of space equipment.

The Chairman of the Joint Chiefs of Staff described these operations as the first space war because it was the first opportunity to use all of the military's advanced space capabilities in a ground conflict. The United States used 7 imaging satellites and 15 to 20 intelligence satellites to monitor Iraqi radio communications, as well as 3 military meteorological satellites, 4 military communications satellites, and 16 NAVSTAR and GPS satellites.

The Americans also received additional assistance from French SPOT and American LANDSTAR satellites. This war emphasized the importance of military space systems. Among other consequences of the Persian Gulf War, it can be noted that the extensive use of ballistic and Scud missiles by the Iraqis led some influential members of the US to ignore the prohibition of the 1972 Anti-Ballistic Missile Treaty and request the testing and development of ground-based and space-based anti-missile systems as part of a global defense program against limited attacks.<sup>2</sup> “The issue of military use of space has not yet been addressed. Again, arms control is on the agenda. The United States’ plans to build a

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<sup>1</sup> . Consensus

<sup>2</sup> . Instant international customary law

large-scale ballistic missile defense system<sup>1</sup> that includes space-based equipment and “space control” in its military strategy have heightened international concerns about the militarization of space.

China, France, and Russia have called for negotiations on a new multilateral treaty that would ban the stationing of weapons in space and limit its use to peaceful purposes. These requests have been supported by other countries, including Canada and Sri Lanka. China has played a leading role in supporting the creation of a non-military “space sanctuary.”<sup>2</sup>

### **The beginning of the arms race in space**

Regarding the discussion of the military use of outer space, it should be noted that this discussion began simultaneously with the launch of the Sputnik satellite into space by the Soviet Union. In fact, the disarmament regime that currently governs space activities is the result of efforts by the international community, which began simultaneously with this launch, to prevent an arms race in space between the two space superpowers, the United States and the Soviet Union.

In 1999, at the Conference on Disarmament, China proposed the re-establishment of a "Special Negotiating Committee" under the theme of the three work orders of the Conference on Disarmament, "Prevention of an Arms Race in Outer Space". This proposal was originally supported by Russia.<sup>3</sup>

In 2001, China intensified its diplomatic efforts to initiate substantive negotiations on space weapons in response to the United States' proposal to replace the 1972 Anti-Ballistic Missile Treaty (ABM Treaty)<sup>4</sup> with a new strategic framework between the United States and Russia. “When China shot down its own old weather satellite in 2007, it was the first test of an anti-satellite weapon.” It was from the 1980s.

Many observers saw this reaction as a response to the increased US investment in advanced technology for space control and warned of an “arms race”<sup>5</sup> in space. Such an arms race would in fact have negative consequences for space security and the security of all spacefaring nations.

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<sup>1</sup> . Ballistic Missile Defense (BMD)

<sup>2</sup> Referring to the USA's interest in the military uses of space, a senior Chinese representative warned at the United Nations that ‘outer space is now faced with the danger of being weaponized, which manifests itself in two aspects, namely, the development of the missile defense program and the “space control” plan’. Statement by Hu Xiaodi, Head of the Chinese delegation at the 2001 session of the United Nations Disarmament Commission, 10 Apr. 2001

<sup>3</sup> Russia has suggested that the CD establish an ad hoc committee to negotiate a PAROS regime, which could potentially take the form of an international legal instrument. Statement by VasilySidorov, Ambassador of Russia to the CD, Conference on Disarmament document CD/PV.871, 22 Mar. 2001

<sup>4</sup> . Anti-Ballistic Missile Treaty (ABM Treaty)

<sup>5</sup> . Arms Race

But even on the brink of a space war, the (leftovers)<sup>1</sup> 26 of space debris from space weapons testing could severely impact space safety. Further testing of (anti-satellite) weapons<sup>2</sup> would increase this number significantly. An arms race in space would also have negative economic consequences.

The key question is how can we keep space safe? One of the latest initiatives in this area is the European Union's proposal for an agreement among major spacefaring countries on the origin of behavior in space. Although the establishment of "Rules of the Road"<sup>3</sup> for space is a first step in the right direction, it does not prohibit space weapons and therefore cannot prevent an arms race in space.

The creation of an international arms control regime for space would be a better tool for keeping space safe, and the European Union should therefore combine its approach (Code of Conduct)<sup>4</sup> with the initiative to create such a regime. Of course, it cannot create a quasi-arms control regime for space. A long-term strategy should be developed that outlines the fundamental problems that must be solved to achieve arms control in space.

To do this, theoretical considerations about the establishment of international regimes are used. Therefore, to achieve an agreement on arms control in space, countries must address fraud and the unequal distribution of benefits.

However, before these problems can be solved, major space powers must learn that, due to the interdependent nature of space, unilateral strategies for the production of space weapons will not increase their security. The European Union could facilitate such a knowledge-building process by organizing a series of conferences among scientists from major space powers on the dangers of war in space.<sup>5</sup>

### **Basic Principles for the Prohibition of Militarization in Outer Space Based on the Outer Space and Moon Treaties**

Since in order to understand the concepts contained in all documents, especially space documents, we need to carefully study their meanings, which also requires examining the impartial interpretation of some of the ambiguous points of these meanings, which are mostly found in the five-part space treaties and resolutions, especially the declaration resolutions; Therefore, in order to correctly identify and

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<sup>1</sup> Space Debris

<sup>2</sup> ASATs, Anti-Satellite Weapons

<sup>3</sup> Rules of the road are rules about differentiate between rules in territorial space & in outer space as to the legal status of the areas in which satellites are put in orbit. One set of principles will apply dealing with rules applicable to the right of each state to control movement in its territory.

<sup>4</sup> Code of Conduct, The Proposed draft International Code of Conduct for Outer Space Activities is a non-legally binding, voluntary international instrument aimed at building norms of responsible behavior in space activities. This draft initially stemmed from a document proposed by the European Union under the French Presidency

<sup>5</sup> . Moon Agreement,1979

identify the types of prohibitions contained in these documents, it is necessary to first examine the principles known as the Basic Principles of Outer Space.

Then, by analyzing the concepts contained in these principles, which are included in these treaties, in particular the Outer Space Treaty (1967)<sup>1</sup> and the Moon Agreement (1979)<sup>2</sup> it is possible to trace the existence of various prohibitions declared in the field of outer space, especially military prohibitions.

If we consider the Outer Space Treaty as the publication of other space law treaties that contains the spirit and general principles of the rules and obligations of States in the exploration and use of outer space, it is a concept of outer space and has been able to address the military aspects of outer space to some extent; without a doubt, the principles of the Moon Treaty can also be considered as a treaty that is based on the fundamental principles of the Outer Space Treaty, because (this agreement implements the provisions of the Outer Space Treaty on the guidance of space activities in accordance with the laws of the United Nations, the Charter of the United Nations, and for the purpose of maintaining international peace and security and promoting international cooperation with due regard for the respective interests of all Member States, has reiterated.<sup>3</sup>

## **Outer Space Treaty**

The Outer Space Treaty was drafted and drafted by the United Nations Committee on the Peaceful Uses of Outer Space. This treaty governs and controls all activities related to the exploration and use of outer space by States. Theorists have interpreted this treaty as: a structure or primary part of the control and management of space activities, which in itself leads to the establishment of a general norm under the title of peaceful uses of outer space.

This treaty can also be defined as a turning point in human efforts to control the use of nuclear weapons and other weapons of mass destruction and to prevent military conflicts in outer space.

In the preamble to this treaty, the demilitarization of outer space is comprehensively stated and accepted. This treaty also refers to several key resolutions that were previously adopted, such as the 1962 Declaration of Principles, adopted in 1963, and recalls Resolution 1884, adopted in 1963, which prohibits the placing of any nuclear-weapon-bearing or other weapons of mass destruction in orbit around the Earth and the installation of such weapons on other celestial bodies, and also emphasizes Resolution 110 of the United Nations General Assembly of 1947, which prohibits the placing of any nuclear-weapon-bearing or other weapons of mass destruction in orbit around the Earth and the placement of such weapons on other celestial bodies. designed or likely to incite or incite certain threats to the peace, breaches of the peace, or acts of aggression, shall be applicable in outer space and may be used to achieve its objectives.<sup>4</sup>

“Article 4 of the Treaty establishes a clear and unambiguous prohibition against placing in orbit around the Earth any object carrying nuclear weapons or weapons of mass destruction. This article states that

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<sup>1</sup> . Outer Space Treaty, (OST) 1967

<sup>2</sup> Moon Agreement, 1979

<sup>3</sup> Article 2 and paragraph (2) of Article 4 in accordance with the letter of the month

<sup>4</sup> Nys

the moon and other celestial bodies must be used by member states in a manner that does not constitute a threat to international peace and security.

According to this article, “the establishment and maintenance of military bases, installations and fortifications, the testing of any type of weapon and the holding of any type of military maneuvers in the skies are prohibited.” “A reasonable interpretation of the phrase “any type of weapon” used in this article would naturally and normally include weapons that also have the capability of anti-satellite weapons.

In addition to Articles (3) and (4) of the Outer Space Treaty, Article (9) of the Treaty also addresses the use and employment of anti-satellite weapons, stating that "If any State Party considers that an activity or test planned by it on the moon or other celestial bodies is likely to interfere with the peaceful activities of other States Parties in the use of outer space, that State Party shall undertake to: "Before taking any action in the field of such activities or tests, it shall conduct the necessary international consultations." Although the treaty does not provide for a clear and transparent consultation process, it is possible to argue that States that have the capability to develop and use advanced anti-satellite weapons should proceed with their work after "appropriate international consultations." Therefore, it can be said that one of the goals of the Outer Space Treaty was to control arms in space, which specifically includes the control of anti-satellite weapons. However, due to some ambiguities in the provisions of this Treaty, the exact extent of this protection is not clear and transparent, and therefore this Treaty needs a careful review and revision in terms of arms limitation and control of hostile activities.<sup>1</sup>

### **Moon Agreement**

This agreement was adopted by the United Nations General Assembly in 1979, following the Outer Space Treaty, with the aim of including the Moon and other celestial bodies in the legal regime governing outer space.

"Like the Outer Space Treaty, this Agreement also refers to the principle that the Moon cannot be placed under the national sovereignty of any State, (Article 11, paragraph (2)). This Agreement declares for the first time that space resources are the "common heritage of mankind" and prohibits any property rights in relation to these resources. Article (12) of this Agreement is a restatement of Article (8) of the Outer Space Treaty, which limits the competence of States over personnel and equipment. It identifies itself.

Similarly, it can be said that this article also transfers the management of private sector commercial activities to the relevant countries. Similarly, Article (14) of this agreement discusses the international responsibility of the State, which can again be considered an interpretation of Articles (6) and (7) of the Outer Space Treaty, which hold countries internationally responsible for private sector commercial activities.

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<sup>1</sup> Bin Cheng

Of course, it is worth mentioning that this The agreement was opposed by countries that were in favor of mineral exploration and activity in space and was never signed by the main and leading countries in space, such as the United States and the Soviet Union.<sup>1</sup>

“According to this agreement, all activities on the Moon must be conducted in accordance with international law, in the interests of peace, and with due regard for the interests of all States Parties to the agreement. The Moon is declared demilitarized and nuclear weapons must not be mixed with other weapons of mass destruction. be placed in lunar orbit. The exploitation and use of the moon is a matter for all mankind and should be for the benefit of all.

Other provisions of the treaty provide for the freedom of scientific research without discrimination, the preservation of the lunar ecological balance, the guarantee of life and health of individuals on the moon, and the right of reciprocal inspection. The treaty emphasizes the prohibition of the allocation of the moon to a particular state (which is also included in the Outer Space Treaty).<sup>2</sup>

“Article (3) of the Treaty also states: The Moon shall be used by all States Parties exclusively for peaceful purposes. Any threat or use of force or any other hostile act or threat of hostile act on the Moon is prohibited. The use of the Moon for the purpose of committing such acts or participating in any threat against the Earth, the Moon, spacecraft, spacecraft personnel or man-made space objects is prohibited.<sup>3</sup>

### **Investigating the process of prohibiting military use and arms race in space**

In the process of beginning militarization and the beginning of an arms race in outer space, it is possible to refer to the types of military prohibitions and the prohibition of an arms race in space, with reference to existing documents, which mostly include types of space treaties and other related treaties in this field, and with the need to better understand space weapons, which will familiarize the audience with their dual uses as well as aspects of use. It revealed the military implications of them, along with examining the history of activities carried out by advanced space countries such as the United States and Russia, to clarify the issue of militarization in space in order to achieve greater transparency on the subject. “The 1980s saw a complete breakdown in bilateral arms control negotiations between the United States and the former Soviet Union, leading the former Soviet Union to request the United Nations in 1981 to place the issue of an international agreement on the prohibition of space weapons on the agenda of the General Assembly.”<sup>4</sup>“In response to this request, Italy, on behalf of the Western countries, proposed for the first time a statement entitled “Prevention of an Arms Race.” Presented in space. On the one hand, there is the fact that both major space powers have been developing anti-satellite weapons in space, so the draft of this statement called on the Disarmament Committee to give priority to the issue of effective negotiations and agreements aimed

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<sup>1</sup> Instant Custom

<sup>2</sup> Militarization

<sup>3</sup> Weaponization

<sup>4</sup> Ivan A. Vlastic

at preventing an arms race in outer space, in particular a reviewable agreement to ban anti-satellite systems.<sup>1</sup> “

The drafters of this draft explicitly Anti-satellites were considered weapons whose effects would destabilize international peace and security. The draft of this statement was submitted by Mongolia and the Group of Socialist Countries, based on a version of the former Soviet draft for the conduct of the negotiations.

The UN General Assembly adopted both declarations without a negative vote and with only one abstention, explicitly calling on all States to prevent an arms race in outer space and to prevent outer space from becoming a theater of military confrontation, and stating its position that such use of space was contrary to the true meaning of the Outer Space Treaty.<sup>2</sup> “The following year, the Second United Nations Conference on the Exploration and The Peaceful Uses of Outer Space, which was originally devoted solely to the subject of scientific exploration of space, also expressed deep concern in its final document about the development of an arms race in outer space.<sup>3</sup>

According to the Director of the United Nations Office for Outer Space Affairs and the Secretary-General of the Conference, developing countries are no longer willing to leave the issue of militarization and weaponization of space solely to the two space powers.<sup>4</sup>

In the course of the review Expanding on the distinction between passive and active military uses of outer space and stating the status of space as the common heritage of humanity, non-aligned countries also called for an explicit condemnation of active military uses of space. In their view, this situation is necessary to “prevent the spread of an arms race in space that could threaten all of humanity” [21]. “

The final resolution of the Second United Nations Conference on the Peaceful Exploration and Use of Outer Space agreed to make a general appeal to States to prevent an arms race and hostile activities in outer space, and requested the Conference on Disarmament (33) and the Conference on Outer Space Affairs (COPASS) to consider this issue as a matter of priority.<sup>5</sup>

After the end of the Cold War, the Committee on Outer Space Affairs (COPASS) refocused its efforts To mainstream this issue into the principle of peaceful uses of outer space, it has intensified

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<sup>1</sup> Ballistic Missile Defense (BMD)

<sup>2</sup> Referring to the USA's interest in the military uses of space, a senior Chinese representative warned at the United Nations that ‘outer space is now faced with the danger of being weaponized, which manifests itself in two aspects, namely, the development of the missile defense program and the “space control” plan’. Statement by Hu Xiaodi, Head of the Chinese delegation at the 2001 session of the United Nations Disarmament Commission, 10 Apr. 2001.

<sup>3</sup> Russia has suggested that the CD establish an ad hoc committee to negotiate a PAROS regime, which could potentially take the form of an international legal instrument. Statement by VasilySidorov, Ambassador of Russia to the CD, Conference on Disarmament document CD/PV.871, 22 Mar. 2001.

<sup>4</sup> Anti-Ballistic Missile Treaty (ABM Treaty)

<sup>5</sup> Arms Race

international cooperation in the field of new space technologies and expanded the scope of multilateral programs, such as the use of satellite remote sensing systems for environmental monitoring purposes, as well as for the benefit of developing countries, including through the voluntary transfer of this technology. "This issue was also the main objective of the Third United Nations Conference on the Exploration and Peaceful Uses of Outer Space, held in Vienna in June 1999." The conference was based on the assumption that collective efforts should be directed towards achieving the common goals of humanity and that space should not be turned into a arena of competition or conflict between states.<sup>1</sup>

Therefore, the international community began to take measures to protect and preserve outer space for peaceful purposes more than ever before in the 1990s, through a dual approach. One of these approaches was the continued insistence on the implementation of the commitment to conduct negotiations on the prevention of an arms race, at the Conference on Disarmament, and the other was the use of the advantage of the end of the Cold War to promote international cooperation in space and provide multilateral mechanisms for this cooperation.

For this reason, in contrast to the approach taken in the past in the 1980s, the discussion of weapons was avoided at COPUS and the Third United Nations Conference on the Peaceful Exploration and Use of Outer Space. Following the conservative results of the Conference of the Committee on Disarmament during the years 1969-1978, the United Nations General Assembly, at its tenth special session in 1978<sup>2</sup>, which was devoted for the first time to questions relating to disarmament, explicitly referred to the danger of an arms race in outer space and called upon all States to commit themselves, in accordance with the Outer Space Treaty, to participating in multilateral negotiations on the prevention of an arms race in outer space. It was decided to create a forum for international negotiations called the Disarmament Committee, consisting of the five nuclear-weapon states and 35 other states initially.<sup>3</sup>

In 1984, this committee was transformed into the Conference on Disarmament, which currently has 66 member states.<sup>4</sup> The Conference on Disarmament remains the only multilateral disarmament negotiation body of the international community. In addition to the Treaty on the Non-Proliferation of Nuclear Weapons, the Comprehensive Nuclear-Test-Ban Treaty, the Chemical Weapons Convention, the Biological Weapons Convention, the Seabed Arms Control Treaty, and the

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<sup>1</sup> Space Debris

<sup>2</sup> Resolution adopted (without vote) by the United Nations General Assembly on the report of the Ad hoc Committee of the Tenth Special Session, S-10/2, 30 June 1978.

<sup>3</sup> ASATs, Anti-Satellite Weapons

<sup>4</sup> Rules of the road are rules about differentiate between rules in territorial space & in outer space as to the legal status of the areas in which satellites are put in orbit. One set of principles will apply dealing with rules applicable to the right of each state to control movement in its territory.

Convention on Environmental Change were all negotiated at the Conference on Disarmament or its predecessor (the Conference on Disarmament Committee).<sup>1</sup>

In this regard, the documents that can be consulted to inform the process of preventing military uses And the arms race in space is based on the following:

1. The Treaty on the Ban of Partial Nuclear Tests in the Atmosphere, in the Outer Space and in the Waters.
2. The Comprehensive Nuclear-Test-Ban Treaty.
3. The Anti-Ballistic Missile Treaty.
4. The International Convention on Radiocommunications.
5. The Convention on the Model.
6. Strategic Arms Reduction Treaty (START) 1.
7. Convention on Conventional Weapons .
8. South China Sea Treaty .
9. Convention on the Law of the Sea .
10. Outer Space Treaty .
11. Moon Convention .
12. Artemis Treaty .

In the context of familiarizing yourself with space weapons, it should be stated that: "First of all, it is important to provide a precise definition of a weapon because the lack of a precise definition can cause any state to The conformity of its armaments with international treaties and standards, and does not consider them to be evidence of the use of force, and recognizes its right to produce and develop them as unlimited."<sup>2</sup>

According to Article 36 of Protocol I Additional to the Four Geneva Conventions, 1977, a weapon is a means of warfare, whether defensive or offensive, which is used to destroy, injure, defeat or threaten. This definition includes weapons systems, munitions, quasi-munitions, "Provisions, targeting devices and other mechanisms for causing damage or injury"<sup>3</sup> Weapons are also considered to include those equipment, munitions and tools that have an offensive capability, the operational capability of the weapon being used, not its actual condition and structure.

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<sup>1</sup> . Space Law

<sup>2</sup> Code of Conduct, The Proposed draft International Code of Conduct for Outer Space Activities is a non-legally binding, voluntary international instrument aimed at building norms of responsible behavior in space activities. This draft initially stemmed from a document proposed by the European Union under the French Presidency.

<sup>3</sup> . Outer Space Treaty, (OST) 1967

This type of definition of weapons includes both conventional and unconventional weapons.<sup>1</sup> The definition of the term (space weapon)<sup>2</sup> is much debated and it can even be argued that the definition Space weapons are not logical because they should encompass a wide range of space-based technologies that have dual-use characteristics. Consider, for example, a controllable satellite that can be used for a wide range of entirely non-military purposes, but can also be used to strike another satellite; thereby damaging or destroying it. According to this approach, A space weapon is any device (whether land-based, sea-based, airborne or space-based) designed to damage or destroy an object in orbit or any space vehicle designed to attack targets on the ground.<sup>3</sup> Also, “a space weapon is a device designed to be deployed in space, including the Moon and other celestial bodies, or to interfere with the natural functioning of an object in space.<sup>4</sup>Therefore, these weapons can be classified according to their geographical aspects of effectiveness and their type of operation.<sup>5</sup>

On this basis, space weapons can operate either from Earth to space, or from space to space, or from space to Earth. Possible modes of operation of these weapons can be kinetic energy, directed energy, and nuclear explosion.

Space weapons can be discussed in conjunction with anti-satellite weapons. began. These weapons could be either in the Earth-to-space or space-to-space group. It is also possible to discuss weapons that should be placed in space and transfer the launch projectile to the Earth.

Satellites are inherently vulnerable. They move at very high speeds so that any collision with an object, even a very small one, can be catastrophic. In addition, there is no place to hide in space. When a satellite Once in orbit, its motion is predictable.

It is therefore not surprising that a number of techniques exist for attacking satellites. For example, a nuclear explosion at an altitude of a few hundred kilometers would create an electromagnetic pulse so powerful that it could potentially destroy all unprotected satellites in orbit.<sup>6</sup>

On the other hand, dual-use technologies are of concern. It has created a number of new opportunities in the areas of disarmament, non-proliferation, technology transfer, and international security. For example, missile technology can be used on one hand to launch satellites into space, and on the other

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<sup>1</sup> Moon Agreement, 1979

<sup>2</sup> . Space Weapon

<sup>3</sup> Article 2 and paragraph (2) of Article 4 in accordance with the letter of the month

<sup>4</sup> The Conference on Disarmament (CD)

<sup>5</sup> The subsequent description of space weapons is based on Dickow (2008: 109-111), Neuneck/ Rothkirch (2005: 369–73), Neuneck/ Rothkirch (2006: 26–32), Wright/ Grego/ Gronlund (2005), Preston (2002) and von Kries/Schmidt-Tedd/Schrogl (2002: 253-256).

<sup>6</sup> . Moon Agreement,1979

hand to launch intercontinental ballistic missiles capable of carrying warheads.<sup>1</sup> As a result, states often disagree and are uncertain about whether a particular technology, for example, has peaceful uses or is subject to prohibition because of its dual use.<sup>2</sup>

“For example, according to military doctrine, remote sensing satellites with very high optical power have reconnaissance and reconnaissance applications that are of interest to militaries around the world to assess military power.” They are enemies. Of course, these same satellites also have peaceful uses, including early detection of natural disasters such as earthquakes and floods, and land management systems, especially in the agriculture, mining, and forestry sectors.

The transfer of dual-use technologies is another important issue that has a special place in the military uses of outer space. Due to the lack of an international legal framework to monitor the transfer of these technologies, states are the only observers and regulators of the process of such transfers<sup>3</sup>

On this basis, the types of dual-use space weapons are: weapons of mass destruction,<sup>4</sup> nuclear weapons<sup>5</sup> Biological weapons,<sup>6</sup> Laser and radiation weapons,<sup>7</sup> Directed energy weapons,<sup>8</sup> and anti-satellite weapons.<sup>9</sup>

### **Application of the Principles of International Humanitarian Law to Space Law**

The 21st century has witnessed a transformation in one area of international law, namely the law of armed conflict. The availability of new weapons, technological advances, and the use of modern techniques have led to

conflicts not only not falling outside the framework of international law altogether, but also, with the emergence of recent developments, to an increase in their complexity. Since the principles of the “laws

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<sup>1</sup> The subsequent description of space weapons is based on Dickow (2008: 109-111), Neuneck/ Rothkirch (2005: 369–73), Neuneck/ Rothkirch (2006: 26–32), Wright/ Grego/ Gronlund (2005), Preston (2002) and von Kries/Schmidt-Tedd/Schrogl (2002: 253-256).

<sup>2</sup> Space Weapon

<sup>3</sup> The subsequent description of space weapons is based on Dickow (2008: 109-111), Neuneck/ Rothkirch (2005: 369–73), Neuneck/ Rothkirch (2006: 26–32), Wright/ Grego/ Gronlund (2005), Preston (2002) and von Kries/Schmidt-Tedd/Schrogl (2002: 253-256).

<sup>4</sup> Mass Destruction Weapons

<sup>5</sup> Nuclear Weapons

<sup>6</sup> Biological weapons

<sup>7</sup> Laser and radiation weapons

<sup>8</sup> . Directed-energy weapons, (DEW)

<sup>9</sup> Anti-satellite weapons, (ASAT)

of war”<sup>1</sup> are generally designed to regulate armed conflicts on land and are not appropriate for military operations in outer space.

On the one hand, existing rules are insufficient to protect outer space from military threats and more specific rules are needed. Nevertheless, efforts should be made to define and clarify existing principles. The deployment of weapons into outer space, whether based on Article (4) of the Outer Space Treaty, which states that “the establishment and maintenance of military bases, installations and fortifications, the testing of any type of weapons and the conduct of any type of military maneuvers in celestial bodies are prohibited,” or on the basis of customary international law, must also take into account the rights and interests of other countries.

Accordingly, the deployment of military weapons into outer space requires an obligation to register information with the United Nations, in accordance with Article 4 of the Registration Convention<sup>2</sup>, which provides that the launch, deployment and use of such weapons shall be subject to due regard for the rights and concerns of other States, both in time of peace and in time of armed conflict, and that such concerns shall be reflected in the applicable rules relating to conflicts involving space-based weapons. In times of armed conflict, a State party to a space battle must comply with its obligations under international humanitarian law with respect to non-military persons and objects in outer space. In this regard, the obligations referred to in Additional Protocol 45 are of paramount importance. Parties to the conflict must also take precautionary measures to protect non-military objects from attack.

Given that weapons systems launched into space are considered a legitimate military target and may be the target of attack, these systems should not be placed in orbits co-equal to non-military satellites. In the near future, contamination from anti-satellite weapons testing will have a wide-ranging impact on the operation of non-military and commercial satellites in orbit.

Designating protected areas or purely military zones in outer space is difficult and will be even more difficult to enforce. However, the challenge of legal rules on the use of force must be addressed and the limits of the use of space weapons systems must be determined by using systems that cause widespread destruction, contamination and explosion.<sup>3</sup>

### **Conflicts Leading to the Use of Military Space Technologies**

"During the Persian Gulf War in 1990, the value of space technologies for conducting warfare was first clearly demonstrated, and Operation Desert Storm was seen as the first space war. It was recognized that the use of space technology provided an infrastructure to help implement military

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<sup>1</sup> Jus in Bella

<sup>2</sup> In accordance with paragraphs 1, 2 and 3 of Article 4 of the Convention on Registration of Objects Launched into Outer Space, each registering State shall, as soon as possible, provide the Secretary-General of the United Nations with information on each space object or other object registered.

<sup>3</sup> Mass Destruction Weapons

strategies. Space technology played a significant role in NATO military operations in Serbia and Kosovo in 1999 and Afghanistan in 2001.<sup>1</sup>

In the 2003 invasion of Iraq, the United States used satellite technology (Global Positioning System)<sup>2</sup> to guide smart bombs. Following the September 11, 2001 attacks, the United States government issued a strategic policy document that emphasized the need for “innovation within the armed forces that relies on the analysis and testing of new approaches to warfare, will enhance joint operations, will exploit the information advantages of the United States, and will take full advantage of the advantages of science and technology”<sup>3</sup>. inevitable to maintain technological superiority in order to dominate the space dimension of military operations.<sup>4</sup>

This process requires the ability to defend the country, to lead information operations; to ensure U.S. access to distant theaters of war; and to protect critical U.S. infrastructure and assets in outer space. The European Union has defined outer space as a key part of its defence and security policy.<sup>5</sup>

It should be noted that there is no treaty or customary source that establishes specific principles of the law of war for space warfare. The only relevant provision for the application of the laws of war to military operations in space is what was recognised by the Hague Diplomatic Conference as the “Martens Clause”<sup>6</sup>.

This clause, named after the Russian representative who proposed it, was included in the preamble of the Second Convention of 1899 and the Fourth Convention of 1907. This provision, intended to supplement the restrictive laws adopted by both conferences, appears in several instruments on the law of armed conflict and is generally worded as follows:

Pending the establishment of a more complete body of laws of war, the States Parties to this instrument agree that, in matters not provided for in the present Convention or in other international agreements, ordinary persons and parties to the conflict shall be subject to the protection and authority of the general principles of international law as they arise from custom. Internationalism arises between civilized nations and the principles of humanity and the principles of public conscience.

According to Professor Martens, the content of this condition has a historical precedent and is rooted in the ideas and thoughts of natural law. Although this declaration is considered a legacy of the Hague Peace Conferences of the late nineteenth and early twentieth centuries in today's world, it does not mean that its principles were limited to that period and related to a specific issue. The framework and

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<sup>1</sup> Nuclear Weapons

<sup>2</sup> General Positioning System (GPS)

<sup>3</sup> Biological weapons

<sup>4</sup> Laser and radiation weapons

<sup>5</sup> Biological weapons

<sup>6</sup> The Martens Clause

basis of this provision have been constantly considered and referenced since its formulation and are currently applicable to all areas of humanitarian law and human rights<sup>1</sup>.

“The existence of the doctrine defined in the Martens provision seems particularly important for space armed conflicts as the most creative type of warfare from a technological point of view, since this doctrine dynamically and implicitly foresees the need for control of the means and methods of warfare. It considers the expansion through technological advances and, regardless of what new tools or methods may be created, considers the principles and rules of armed conflict to be a part of international law arising from customs derived from the principles of humanity and the general conscience.<sup>2</sup>

### **Disarmament in Outer Space**

Although many efforts were made to completely demilitarize space in the early years after the launch of the first space object, the conflicting interests of spacefaring nations prevented international convergence on the issue of "disarmament," and military competition was extended from the land, sea, and air realms to the realm of outer space.

Some jurists believe that all forms of military space warfare, such as the use of weapons of war in outer space, are contrary to the principles enshrined in Article (1) of the Outer Space Treaty and are prohibited.

Therefore, according to jurists and legal doctrine, the issue of disarmament in international law must keep pace with technological advances and adapt itself to these advances. In this regard, concern about the arms race was included in the agenda of the 38th session of the United Nations General Assembly, and two resolutions were adopted in this regard:

“The first was on the prevention of an arms race in outer space and the establishment of an ad hoc working group with a view to conducting negotiations with a view to concluding an agreement for the prevention of an arms race in all its dimensions in outer space.<sup>3</sup>

“In the second resolution, on the The Council was urged to consider issues related to the militarization of outer space as a priority.<sup>4</sup>“The existing regime of arms control and limitation in space consists solely of multilateral and bilateral agreements concluded between the United States and the former Soviet

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<sup>1</sup> Directed-energy weapons, (DEW)

<sup>2</sup> Anti-satellite weapons, (ASAT)

<sup>3</sup> Jus in Bella

<sup>4</sup> In accordance with paragraphs 1, 2 and 3 of Article 4 of the Convention on Registration of Objects Launched into Outer Space, each registering State shall, as soon as possible, provide the Secretary-General of the United Nations with information on each space object or other object registered.

Union, and the Outer Space Treaty contains general provisions on disarmament. This treaty is the basis for numerous resolutions of the United Nations General Assembly on disarmament<sup>1</sup>.

In 1984, the Disarmament Committee was renamed the Conference on Disarmament. This conference is the only one of its kind at the international level, and through its efforts, important conventions for the control of military weapons, such as the Chemical Weapons Convention and the Biological Weapons Convention, were prepared and adopted.

Despite the failure of the efforts made at the Conference on Disarmament, the rapid progress of science and technology, along with changing concepts and doctrinal and governmental perceptions of the concept of security, will make space law-related mechanisms for effectively preventing the weaponization of space a challenge. Some of the problems with these conventions are as follows: First, none of these instruments can prevent the testing, deployment, or even use of weapons, other than weapons of mass destruction, in Earth orbit and outer space, except for celestial crimes.

Secondly, these instruments lack any provisions on issues such as threats or use of force, even though the origin of such threats or acts of aggression is from the ground, unless we consider the provisions of Article (3) of the Outer Space Treaty to be applicable in this context. Thirdly, some treaties, such as the Moon Agreement, have not met with widespread acceptance by States, which can be inferred from the small number of States parties to these instruments.<sup>2</sup> This The agreement was drafted to include the moon and other celestial bodies in the legal regime of the seabed as contained in the Convention on the Law of the Sea<sup>3</sup>.

"The issue of arms control and disarmament is one of the issues that has been examined in the last two centuries, especially after the Second World War, at the three levels of nuclear, chemical and biological weapons, and by the United Nations, the two countries of the United States and the Soviet Union, and other countries and regional and international organizations.

With this description, human society has not yet achieved all the goals set in the field of disarmament and arms control.<sup>4</sup>

### **Conclusion.**

Since we know that various aspects of the military use of space and its equipping with advanced weapons not only lead to the consolidation and demonstration of the space power of advanced states in this field, but also lead to an arms race in outer space.

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<sup>1</sup> Additional Protocol to the Geneva Conventions of 12 August 1949 and Relating to the Protection of Victims of International Armed Conflicts (Protocol I), 8 June, 1977, 1125 U.N.T.S. 3.

<sup>2</sup> General Positioning System (GPS)

<sup>3</sup> The Martens Clause

<sup>4</sup> H. Sharifi Taraz Koohi, and H. Goodarzi Raouf, "Analysis of the right of states in the production and development of military weapons from the perspective of international law", Quarterly Journal of Security Horizons, No 10, Vol. 36, P.P 153-179, 2018 .

This is despite the fact that, according to superior space powers, the military use of space and the exploitation of space systems to destroy military targets through military means based on the ground, and vice versa, are fully consistent and compatible with the principles of public international law, and only the placement of weapons in space is contrary to these rights. In fact, the debate is not about the military use of space versus the purely peaceful use of space, but rather about the military use of space versus the weaponization of space, and this reality is the prevailing bitterness over space activities and space rights in the present era.

On the other hand, major space powers such as the United States and Russia, through their extensive and increasing competition in space and the advancement of military activities, pursue a major goal, which is to achieve a superior position and exercise power in this territory. As a result, in order to legitimize these actions, they decided to exclude some weapons from the scope of these prohibitions by providing a broad interpretation of space legal documents. In this way, it is possible to examine the legal regime governing military relations in space legal documents and to measure and estimate the capacities for peaceful use of outer space, which determines the prohibited boundaries of these uses, and on the one hand, by recognizing the types of military space technologies and weapons that have been used by some of the leading space countries since the beginning of space activities.

Recognize conflicts involving the use of military space technologies and apply the principles of international humanitarian law to these conflicts to the extent possible. The important issue of space disarmament should be included in the mandate of the COPUS and its Legal Subcommittee and pursued more seriously than in the past. Therefore, in order to prevent some space powers from achieving dominance in the space arena, prominent jurists, using appropriate legal doctrine, in addition to having a correct and impartial interpretation of the provisions of international law treaties, especially the emerging international law of space, must also properly analyze the types of military applications in space. These are some of the applications that not only provide reasons for increasing legal disputes between states, but also foster non-peaceful uses of outer space.

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# Feminism in the Socio-Cultural Life of Contemporary Society

<sup>1</sup> Zenfira Valiyeva

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**Abstract.** This article explores the evolving role of feminism in the socio-cultural landscape of the contemporary world. It analyzes the key directions of feminist discourse and its influence on cultural production, public institutions, and everyday social practices. The author contends that contemporary feminism is not a monolithic movement but a diverse, multilayered, and dynamic phenomenon that transcends the struggle for women's rights to engage with broader questions of social justice and human dignity. Central to this expanded agenda is the critique and redefinition of traditional gender norms, the pursuit of inclusive cultural representation, and the transformation of political, legal, and educational systems through an intersectional lens.

The article also addresses the internal and external challenges faced by feminism, including backlash from conservative forces and tensions within the movement itself regarding inclusivity, identity politics, and strategic priorities. It examines the debates among different feminist strands—liberal, radical, postcolonial, and ecofeminist—and reflects on their often divergent visions for change. At the same time, the piece underscores the resilience of feminist theory and practice, particularly its capacity for critical self-reflection, ethical engagement, and responsiveness to new social realities.

Ultimately, the article argues that feminism remains a vital and transformative force within modern society, not only as a mode of resistance and critique but as a generative framework for reimagining social relations, power structures, and collective futures. In doing so, feminism contributes to the humanization of public life and to the construction of more equitable, empathetic, and pluralistic forms of socio-cultural interaction.

**Keywords:** *Feminism, Gender Equality, Cultural Representation, Social Transformations, Contemporary Society*

## Introduction

In recent decades, feminism has moved far beyond the confines of academic theory or grassroots activism to become a central and dynamic force in contemporary socio-cultural discourse. It has permeated nearly all aspects of public and private life, reshaping the ways in which we understand gender, identity, and social organization. From literature, film, and visual arts to social media, education, public policy, and workplace dynamics, feminist frameworks have been instrumental in challenging patriarchal norms and advocating for more inclusive, equitable systems (Butler, 1990;

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<sup>1</sup> Valiyeva, Z. Doctor of Sciences, Professor, Baku Slavic University. Email: zema-veliyeva@mail.ru. ORCID: <https://orcid.org/0009-0000-3906-8545>.

hooks, 2000). What was once viewed as a marginal or oppositional movement has now become a key lens through which cultural and structural power is analyzed and contested. For instance, recent literary scholarship reflects how feminist perspectives can inform the interpretation of narrative and imagery (Ganbarova, 2024), highlighting the shifting cultural narratives in the arts.

Feminism's relevance today is reinforced by its responsiveness to emerging global challenges. In a world marked by accelerating technological change, environmental crises, shifting labor markets, and intensified geopolitical conflict, questions of gender, care, justice, and embodiment are becoming increasingly urgent. Feminist thought has provided critical tools for interrogating not only the status of women, but also the broader logics of exclusion, domination, and inequality embedded in systems of governance, economic production, and symbolic representation (Fraser, 2013; Ahmed, 2017). A central dimension of contemporary feminist discourse is its insistence on intersectionality—the recognition that gender cannot be analyzed in isolation from other axes of identity such as race, class, sexuality, ability, religion, and nationality (Crenshaw, 1991). This intersectional perspective allows for a more complex and inclusive account of social realities, revealing how multiple forms of oppression interact and compound one another. As a result, feminism has increasingly oriented itself toward coalitional, justice-based approaches that seek to transform not just gender relations but the foundational structures of society. At the same time, feminist theorists caution against one-size-fits-all solutions; they argue that claims of universality must be balanced with attention to cultural particularity (Sadigzadeh, 2024), urging the movement to appreciate diverse contexts and local knowledge.

Nevertheless, feminism remains a contested and evolving term. Its meanings differ significantly across cultural, political, and historical contexts. In some societies, feminism is seen as a progressive force driving democratization and cultural modernization. In others, it is portrayed as antagonistic to traditional values or national identity (Walby, 2011). This divergence has led to vibrant internal debates within feminism itself, with disagreements emerging around key issues such as inclusivity, sexuality, reproductive rights, secularism, and the role of the state. Generational shifts also play a role: younger activists often embrace digital activism and identity politics, while older feminists may prioritize structural change and legal reform.

Moreover, feminism must now contend with backlash on multiple fronts. The rise of authoritarian populism, religious conservatism, and neoliberal individualism has generated powerful counter-discourses aimed at undermining feminist gains. The increasing presence of anti-gender rhetoric in public debate—especially in online spaces and political discourse—testifies to the ongoing contestation of feminist ideals and the fragility of progress (McRobbie, 2009). At the same time, the digital age has offered new avenues for feminist expression and solidarity. Social media platforms, though often fraught with harassment and surveillance, have enabled the global dissemination of feminist narratives and activism. Campaigns such as #MeToo, *Ni Una Menos*, and #MyBodyMyChoice have demonstrated the power of transnational feminist mobilization in shaping public consciousness and policy.

This article therefore seeks to provide a nuanced, interdisciplinary exploration of feminism's evolving role in contemporary socio-cultural life. It examines how feminist ideas are reshaping cultural production and transforming institutional practices, while also provoking both resistance and renewal within public discourse. Particular emphasis is placed on the tension between emancipatory aspirations and structural constraints, as well as the dialogical relationships between feminism and other ideological formations—including religious traditionalism, market liberalism, and cultural nationalism. Through critical analysis, this study aims to understand feminism not merely as a movement for gender equality, but as a transformative cultural and intellectual project with deep implications for the future of democracy, social justice, and human dignity.

## 1. Internal Tensions and the Evolving Nature of Feminism

Within contemporary feminism, profound internal tensions persist, reflecting the complexity of the movement as it engages with an increasingly diverse and globalized world. One of the central concerns is inclusivity—both as a theoretical principle and as a practical reality. A pressing and often contentious question within feminist discourse is: **whose voices are being centered, and whose remain marginalized or excluded?** Feminism, particularly in its mainstream academic and media forms, has historically been shaped by the experiences and perspectives of white, middle-class, educated women from the Global North. This dominant narrative has frequently overlooked or inadequately represented the lived experiences of women of color, working-class women, indigenous women, LGBTQ+ individuals, and those from the Global South (Crenshaw, 1991; Mohanty, 1988; hooks, 1992).

This critique gave rise to the concept of intersectionality, introduced by Kimberlé Crenshaw, which remains a foundational—yet sometimes under-implemented—framework in feminist thought. Intersectionality emphasizes the interconnected nature of social categorizations such as race, class, gender, and sexuality, which produce overlapping systems of discrimination and privilege. A feminist politics that fails to account for these intersecting identities risks reproducing the very exclusions it seeks to dismantle. For instance, the concerns of migrant domestic workers, Black mothers, Muslim women, or queer and trans individuals often fall outside the scope of dominant feminist agendas, revealing blind spots in a one-dimensional approach to gender justice (Lugones, 2007; Puar, 2007). The ongoing struggle to include these voices reflects not a failure of feminism per se, but a challenge and an opportunity for its ethical and political maturation.

Furthermore, tensions arise from divergent strategies and priorities within feminist activism and theory. Some currents of feminism—particularly those influenced by radical, socialist, or Marxist traditions—advocate for structural and systemic change aimed at dismantling patriarchal capitalism entirely. Others, more liberal or reformist in orientation, focus on achieving gender equality through incremental legal reforms, policy changes, and institutional engagement (Fraser, 2013). These differing approaches can result in friction, especially when radical voices perceive reformist strategies as complicit with oppressive systems, while reformists may view radical critiques as impractical or divisive. Such debates have been prominent around issues like sex work, pornography, trans rights,

and the role of religion in women's lives, which in recent decades have produced deep rifts among feminists.

Despite these conflicts, internal criticism should not be construed as inherently destructive. On the contrary, it plays a generative role in refining feminist theory and practice. Through debate, dissent, and disagreement, feminism remains intellectually alive and ethically responsive to new challenges. As bell hooks (1984) emphasizes, the act of critique is itself an act of care—it signals an investment in the future of the movement. By engaging in honest internal dialogue, feminism fosters a culture of accountability that resists dogmatism and embraces change.

In this way, feminism is not a monolith but a living, evolving constellation of ideas, practices, and solidarities. It traverses a wide spectrum—from grassroots activism and community-based organizing to academic theorizing and cultural production (Ganbarova, 2024). It is simultaneously local and global, personal and political, emotional and rational. This multiplicity is its strength. It allows feminist movements to adapt to diverse contexts, addressing issues as varied as gender-based violence in war zones, reproductive justice in conservative societies, digital harassment in online spaces, and gendered labor in global supply chains.

Today, feminism is increasingly called upon to address not only gender inequality, but also the wider matrix of injustice that shapes contemporary life. Feminist movements have intersected with ecological activism, anti-racist movements, disability justice initiatives, and anti-colonial struggles, contributing to a broader politics of care, repair, and interconnectedness. This expansion has redefined what it means to be a feminist: it is no longer solely about advocating for the rights of women, but about reimagining the very conditions under which human life flourishes or suffers.

Feminism's capacity to imagine alternative futures is among its most powerful attributes. It refuses to accept the status quo and insists that *another world is possible*—one where hierarchies of power are dismantled, where care and empathy are central values in governance, and where every individual, regardless of identity, is afforded dignity and voice. Feminism, in this sense, is not merely reactive but visionary. It seeks not only justice for women but transformation for all.

## 2. External Challenges and Feminist Resilience

Even as feminism broadens its scope, it must continually confront real-world barriers to its advancement: political backlash, cultural resistance, and strategic co-optation. In many parts of the world, feminist activism is met with hostility, repression, and even violence. Authoritarian regimes, religious fundamentalists, and right-wing populists have increasingly targeted feminist leaders and intellectuals, portraying feminism as a threat to national identity, religious morality, or social cohesion. In some contexts, even the word “feminism” itself has become stigmatized, forcing activists to navigate linguistic and cultural taboos in pursuit of their goals.

Meanwhile, neoliberal ideologies have co-opted certain feminist themes, transforming them into tools of individual empowerment divorced from broader social critique. Terms like “girlboss feminism” or the ethos of *leaning in* (popularized by corporate narratives) reflect a depoliticized, market-friendly version of the movement, one that aligns with corporate interests rather than challenging systemic

oppression. As scholars note, this neoliberal feminism focuses on personal success and consumer choice, while sidelining questions of class, race, and structural inequality (Rottenberg, 2018). Such forms of feminism risk diluting the radical edge of the movement and obscuring the material realities of most women's lives.

Despite these challenges, feminism persists—and indeed continues to evolve. Its resilience lies in its openness to critique, its capacity for self-renewal, and its grounding in lived experience. Far from being static, feminism is porous, experimental, and perpetually in the making. It offers not just a critique of existing norms, but an ethical and imaginative framework for living *otherwise*. It envisions a world not merely free from sexism, but free from all forms of domination and exclusion. By remaining responsive to new realities and embracing a plurality of voices, the feminist movement adapts and finds strength even in the face of opposition.

## Conclusion

In sum, feminism today functions on multiple levels: as political resistance, cultural critique, ethical stance, and imaginative force. Its internal tensions should not be seen as signs of weakness, but as evidence of its democratic and pluralistic nature. Far from a closed doctrine, feminism is an ongoing conversation—one that continues to redefine itself in response to the needs, hopes, and realities of diverse communities around the globe. This pluralism in feminist thought resonates with the broader academic context, where multiple forms of analysis—from formal syntax in linguistics (Qasimova, 2025) to literary and cultural critique (Ganbarova, 2024)—contribute to a richer understanding of social life. Ultimately, as long as inequality persists, and as long as there are voices still waiting to be heard, feminism will remain not only relevant but indispensable. Its vision of human dignity and justice for all not only challenges existing power structures but also contributes to the humanization of public life. This ethos of empathy and inclusivity is in harmony with other humanistic inquiries into the moral and spiritual dimensions of society (Ganbarova & Abbasov, 2025), underscoring feminism's role as a generative framework for imagining more equitable and compassionate futures.

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# Soft Power and Strategic Culture: Cultural Diplomacy Between Azerbaijan and the UK

<sup>1</sup> Nurida Ganbarova

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**Abstract.** This article examines the evolving cultural diplomacy between Azerbaijan and the United Kingdom, analyzing its role as a tool of soft power and strategic messaging in the context of contemporary international relations. Since Azerbaijan's independence in 1991, bilateral relations with the UK have expanded from energy cooperation to encompass education, arts, heritage, and media exchanges. Using an interdisciplinary approach that combines international relations theory and cultural studies, the article explores how both states utilize cultural initiatives to project national identity, foster mutual understanding, and advance geopolitical interests.

Theoretical frameworks of soft power, cultural diplomacy, and strategic culture provide a foundation for understanding how cultural engagement serves as both attraction and strategic signaling. Empirical analysis highlights key areas of cooperation, including academic exchanges facilitated by the British Council, artistic collaborations sponsored by the Heydar Aliyev Foundation, and joint heritage and interfaith initiatives. However, challenges such as political sensitivities, divergent historical narratives, media representation, and resource constraints complicate the effectiveness of cultural diplomacy.

The article argues that while cultural diplomacy remains a vital instrument for shaping perceptions and building bilateral trust, it often oscillates between genuine engagement and symbolic performance. To enhance its impact, future efforts should emphasize inclusive dialogue, greater civil society participation, and integration with broader democratic and regional stability agendas.

Ultimately, the Azerbaijan–UK case illustrates the complexity and potential of cultural diplomacy in a multipolar world, where soft power complements traditional diplomacy in forging sustainable international partnerships.

**Keywords;** *Cultural diplomacy, soft power, Azerbaijan, United Kingdom, international relations, strategic culture, education exchange, heritage diplomacy, South Caucasus*

## Introduction

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<sup>1</sup> Ganbarova, N. Lecturer, Nakhchivan State University. Email: nuridagenberova@ndu.edu.az.  
ORCID: <https://orcid.org/0009-0003-2215-1459>.

Located at the critical crossroads between East and West, Azerbaijan offers a compelling case study in the shifting geopolitical realities of the post-Soviet era. Since declaring independence in 1991, the country has pursued a complex, dual-track agenda: on one hand, accelerating economic development and fostering regional stability; on the other, meticulously crafting a distinctive international persona. This constructed image foregrounds Azerbaijan's rich cultural mosaic, its ambitious modernization programs, and its firm commitment to religious and ethnic pluralism, all while actively engaging in strategically important global partnerships (Özsoy, 2024; Mozaffari & Akbar, 2023). This image is not merely rhetorical but reflects a purposeful state strategy to position Azerbaijan as a progressive, tolerant, and globally integrated nation.

Meanwhile, the United Kingdom, responding to the political and economic ramifications of its withdrawal from the European Union, has sought to recalibrate its foreign policy by expanding its sphere of bilateral relations beyond traditional Western partners. Within this strategic reorientation, the South Caucasus region—and Azerbaijan specifically—has gained prominence. Initially, UK-Azerbaijan ties were predominantly centered on energy sector collaboration, notably driven by British Petroleum's (BP) long-term investments. However, over the years, this partnership has evolved considerably. Today, the relationship encompasses a diverse array of cooperative initiatives including educational programs, cultural exchanges, promotion of the English language, preservation of cultural heritage, and collaborative academic ventures (Loda, 2016; British Council Azerbaijan, 2023). These expanded fields of engagement reflect mutual interests in fostering not only economic but also socio-cultural linkages that reinforce the bilateral relationship.

## **Historical and Political Background**

Since the disintegration of the Soviet Union in 1991, diplomatic ties between Azerbaijan and the United Kingdom have undergone substantial development. The formal establishment of relations on December 11, 1992, marked the beginning of an evolving partnership characterized initially by pragmatic cooperation focused on economic interests—especially in the oil and gas sectors—as well as regional security concerns. Over time, this bilateral engagement has broadened to embrace educational and cultural cooperation, reflecting the countries' shared desire to deepen ties beyond mere transactional interactions (UK Government, 2021; Asgarov, 2024).

## **Post-Independence Diplomacy and Energy Partnership**

In the aftermath of Azerbaijan's independence, the country's integration into global energy markets provided fertile ground for the growth of bilateral relations with the UK. The British government's engagement was closely intertwined with the activities of British Petroleum (now BP), whose presence in the Caspian basin signified a strategic economic and geopolitical investment. The pivotal 1994 "Contract of the Century" (Guliyev, 2015) opened Azerbaijan's abundant hydrocarbon resources to substantial Western capital and expertise, firmly establishing the UK as a major economic partner for Baku.

BP swiftly became a cornerstone of Azerbaijan's energy infrastructure development, contributing advanced technology, significant financing, and global credibility. Over subsequent decades, the company rose to become Azerbaijan's largest foreign investor, steering crucial projects such as the

Baku–Tbilisi–Ceyhan (BTC) pipeline. This pipeline strategically links the Caspian Sea to Mediterranean energy markets, enhancing regional connectivity and diversifying export routes. Complementing this, the Southern Gas Corridor initiative aims to strengthen Europe’s energy security by providing alternative supply routes—projects that have also benefitted from UK expertise and investment (BP, 2024; Mammadov, 2022).

These energy ventures have transcended their economic purpose, serving as frameworks for sustained political dialogue and cooperation. The UK’s enduring engagement has encouraged institutional reforms within Azerbaijan, fostering a regulatory environment conducive to investment and positioning the country as a dependable supplier in the Euro-Atlantic energy landscape. In this light, energy partnership emerges not only as a pillar of economic development but also as a vital vector for bilateral diplomatic relations.

More recently, BP has demonstrated an increased focus on environmental sustainability in Azerbaijan, aligning with evolving global energy governance norms. Its initiatives include implementing methane emission detection systems, adopting enhanced oil recovery techniques that mitigate environmental impact, and investing in community development projects. These efforts signal BP’s—and by extension, the UK’s—commitment to integrating ecological responsibility within the broader energy cooperation framework (BP Sustainability Report, 2023). This progressive “greening” of the partnership complements Azerbaijan’s own strategic ambitions to diversify its economy and adhere to international climate objectives, thereby enriching the multifaceted nature of UK-Azerbaijan relations.

### **Post-Independence Diplomacy and Energy Partnership**

В первые годы после провозглашения независимости в 1991 году отношения между Азербайджаном и Великобританией развивались на фоне масштабного вхождения страны в мировые энергетические рынки. Британский интерес к региону был во многом обусловлен деятельностью крупных компаний, прежде всего British Petroleum (ныне BP). Подписание знакового «Контракта века» в 1994 году (Guliyev, 2015) стало по-настоящему историческим событием, открывшим огромные запасы каспийских углеводородов для масштабных западных инвестиций и закрепившим за Великобританией роль одного из главных экономических партнёров Баку. BP с самого начала заняла центральное место в энергетической стратегии Азербайджана, привнеся не только техническую экспертизу, но и внушительные финансовые ресурсы, а также международный авторитет для разработки оффшорных нефтяных месторождений. За несколько десятилетий компания стала крупнейшим иностранным инвестором в стране, реализуя ключевые проекты — от нефтепровода Баку–Тбилиси–Джейхан (BTC), который связал каспийскую нефть с рынками Средиземноморья, до Южного газового коридора, призванного повысить энергетическую безопасность Европы (BP, 2024; Mammadov, 2022).

Эти проекты не только кардинально преобразили экономическую карту Азербайджана, но и укрепили двусторонние связи в дипломатическом ключе. Британское присутствие в энергетическом секторе способствовало активизации политического диалога, стимулировало проведение реформ в законодательстве и регулировании, а также способствовало укреплению

репутации Азербайджана как надежного и предсказуемого поставщика энергии на евroatлантическом пространстве. В итоге сотрудничество в сфере энергетики стало и прочным фундаментом, и главным двигателем долгосрочного стратегического партнёрства между странами.

В последние годы BP делает акцент на интеграцию экологических и устойчивых практик в свою деятельность в Азербайджане, что отражает глобальный переход к более ответственной энергетике. Компания взяла на себя обязательства по снижению выбросов парниковых газов, внедрению технологий обнаружения утечек метана, развитию методов добычи с минимальным экологическим воздействием, а также активным инвестициям в социальное развитие местных сообществ. Такой «зелёный» подход не только демонстрирует эволюцию роли BP — теперь это не просто экономический партнёр, но и участник, осознающий ответственность перед окружающей средой (BP Sustainability Report, 2023). Эти усилия органично сочетаются с амбициями Азербайджана по диверсификации экономики и выполнению международных климатических обязательств, открывая новые горизонты для двустороннего сотрудничества.

### **Strategic Reorientation and Cultural Expansion**

С начала 2000-х Азербайджан начал проводить многовекторную внешнюю политику, стремясь выстроить сбалансированные отношения с ключевыми мировыми игроками — Россией, Западом, Турцией и Ираном. В рамках этой стратегии культурная дипломатия приобрела особую значимость, став важным инструментом формирования позитивного и многогранного международного имиджа страны, выходящего далеко за рамки роли экспортёра энергоресурсов (Putera, 2024; Valiyev, 2017). Параллельно Великобритания, обладающая мощным арсеналом «мягкой силы», превратилась в одного из ключевых партнёров и ориентиров для Азербайджана в этом процессе (Wainwright, 2022).

Особенно после Brexit южнокавказский регион стал для Великобритании стратегическим направлением, позволяя расширять международные связи за пределами ЕС (House of Commons Foreign Affairs Committee, 2021; Özsoy, 2024). Азербайджан постепенно закреплялся в статусе стабильного и перспективного партнёра, интересного как с экономической, так и с культурной точки зрения. Взаимные инициативы, образовательные программы, культурные обмены и совместные проекты стали свидетелями глубокой трансформации и углубления двусторонних отношений, которые теперь строятся на прочном фундаменте доверия и взаимного уважения (Mozaffari & Akbar, 2023).

### **Institutions and Initiatives**

Various institutions have played a pivotal role in institutionalizing cultural and educational cooperation between Azerbaijan and the United Kingdom. The British Council, active in Azerbaijan since 1993, has been central to advancing English language education, teacher training, and artistic exchanges. Its initiatives have supported bilateral projects in the arts, higher education, and youth engagement, fostering deeper mutual understanding and strengthening intercultural ties (British Council Azerbaijan, 2023; Pashayeva, 2018).

On the Azerbaijani side, organizations such as the Heydar Aliyev Foundation and the Azerbaijan–UK Interparliamentary Working Group have been key actors in promoting a modern, tolerant, and globally resonant image of the country. The Foundation has sponsored exhibitions, musical events, and intercultural forums in London, often under the patronage of First Lady and Vice President Mehriban Aliyeva, who also serves as a UNESCO and ISESCO Goodwill Ambassador (Ismayilov, 2019; Akbulut, 2020).

These activities go beyond conventional cultural exchanges, functioning as deliberate acts of public diplomacy. They serve both aesthetic and strategic purposes: reinforcing national legitimacy, countering negative international narratives, and positioning Azerbaijan within Western value frameworks such as multiculturalism, education, and gender equity (Kocharyan & Tokluoglu, 2022; Rozanova, 2021).

### **Recent Developments and High-Level Engagement**

The past decade has witnessed intensified bilateral engagement. Frequent visits by British foreign secretaries and trade delegations to Baku, alongside active Azerbaijani participation in diplomatic and academic events in London, have strengthened ties. The inauguration of a new British embassy complex in Baku in 2021 symbolizes the UK's long-term commitment to the region. Additionally, bilateral agreements spanning education, innovation, environmental sustainability, and counterterrorism have broadened cooperation (UK FCDO, 2022).

A landmark event was the 2022 Azerbaijan–UK Cultural Dialogue Forum, which gathered diplomats, artists, and academics to explore culture's role in fostering international understanding. Cultural programs such as Azerbaijani mugham concerts in London, British theatrical performances in Baku, and collaborative university projects exemplify this shared dedication to using culture as a diplomatic bridge (British Embassy Baku, 2022).

### **Key Areas of Cultural Cooperation**

The cultural relationship between Azerbaijan and the United Kingdom unfolds across multiple interconnected spheres, most notably education, the arts, media engagement, and heritage diplomacy. These fields function not only as symbolic platforms for cultural expression but also as effective channels through which both nations construct narratives of identity, cultivate soft power, and reinforce diplomatic bonds. The following sections explore the main areas of cultural cooperation:

#### **1. Education and Academic Exchange**

Educational cooperation stands as one of the most structured and impactful pillars of Azerbaijan–UK cultural relations. Since the early post-Soviet period, the British Council has been instrumental in introducing and expanding English language learning, enhancing teacher training, and facilitating academic mobility within Azerbaijani institutions (British Council Azerbaijan, 2023). Initiatives such as the Chevening Scholarship, IELTS testing programs, and Connecting Classrooms have created sustained pathways for Azerbaijani students and educators to engage directly with British academic standards and global intellectual currents.

British higher education institutions—especially in London and northern England—have become attractive destinations for Azerbaijani students pursuing degrees in law, diplomacy, energy governance, and business administration. ADA University, founded in Baku in 2006, has cultivated active partnerships with UK universities, regularly hosting guest lecturers, research collaborations, and joint conferences. These exchanges foster more than academic enrichment: they lay the groundwork for enduring professional networks and nurture worldviews aligned with liberal education, critical inquiry, and democratic dialogue. From the UK’s perspective, these educational connections strengthen its long-term influence abroad by nurturing a globally minded, interconnected generation of future leaders.

## 2. Art, Music, and Cultural Events

Artistic and musical exchanges provide a vibrant arena for mutual cultural visibility and dialogue. Over the last decade, Azerbaijani artistic heritage—from traditional carpets and calligraphy to contemporary visual art—has been showcased in prominent London venues such as the Victoria and Albert Museum and the Saatchi Gallery (Ismayilov, 2019), often supported by the Heydar Aliyev Foundation and Azerbaijan’s diplomatic mission in the UK.

Music has been a particularly resonant form of exchange. Performances of mugham, jazz fusion, and classical compositions have introduced Azerbaijani musical traditions to British audiences, while the annual Days of Azerbaijani Culture festival in London offers a multisensory cultural immersion through concerts, culinary experiences, film screenings, and academic lectures. Conversely, British cultural institutions—ranging from theatre companies to orchestras—have presented their work to Azerbaijani audiences, frequently in partnership with the British Council. For example, the Shakespeare Lives initiative was adapted for Azerbaijani contexts with bilingual performances and school outreach programs. In these exchanges, art functions not only as a medium of aesthetic appreciation but also as a subtle assertion of national prestige and mutual respect.

## 3. Heritage and Interfaith Dialogue

Heritage diplomacy and interreligious engagement have emerged as significant elements of bilateral cultural cooperation. Azerbaijan actively projects itself as a secular, multi-confessional society where Muslim, Christian, and Jewish communities coexist in harmony. This narrative is deliberately promoted in European forums, including the UK, as a counterbalance to prevailing regional stereotypes.

The Heydar Aliyev Foundation has played a leading role in organizing heritage exhibitions and interfaith dialogues in London, presenting Azerbaijani architectural landmarks, illuminated manuscripts, and historical artifacts from cities like Sheki and Ganja (Kocharyan & Tokluoglu, 2022). These curated narratives position Azerbaijan as a proponent of multiculturalism and a committed steward of diverse cultural traditions. British engagement with these initiatives—particularly through the All-Party Parliamentary Group on Azerbaijan—signals both an endorsement of Azerbaijan’s cultural diplomacy and an alignment with the UK’s values-driven foreign policy. Such interactions allow the bilateral relationship to pivot towards shared ethical frameworks, providing a buffer against more contentious geopolitical issues.

#### 4. Media, Branding, and Public Image

Although often less visible than artistic or educational programs, media cooperation remains a crucial arena for shaping international perceptions. Azerbaijan has devoted considerable resources to managing its global reputation through cultural sponsorships, targeted media outreach, and strategic digital diplomacy. Prominent British media outlets—including The Guardian, BBC, and The Financial Times—have covered Azerbaijan extensively, particularly in the context of major international events such as the European Games and the Formula 1 Grand Prix held in Baku (Aliyev, 2020), generating narratives ranging from laudatory to critical.

Media partnerships have evolved into more collaborative forms, with co-produced documentaries, thematic podcasts, and journalistic exchange programs bringing British and Azerbaijani perspectives into closer dialogue. British journalists and scholars are regularly invited to Azerbaijan for study visits and reporting fellowships, aiming to foster a deeper, more nuanced understanding of the country's political, cultural, and social landscape. In this way, media engagement becomes a contested yet productive space where national image-making intersects with pluralistic debate, offering both opportunities and challenges for the exercise of soft power.

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# Analysis and Assessment of the Modern State of the Tax Base in Azerbaijan

<sup>1</sup> Seda Rzayeva

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**Abstract.** The article examines the current state of Azerbaijan’s tax base for 2024–2025, analyzing its structure, efficiency, and challenges. Using a mixed-method approach that combines quantitative data from official and international sources with qualitative policy analysis, the study finds that Azerbaijan has made significant progress in tax administration, diversification of revenue sources, and increasing registered taxpayers. In 2024, total tax revenues reached \$12.98 billion, though the tax-to-GDP ratio slightly decreased from 17.9% to 17.5%. The tax base remains heavily reliant on income tax and VAT, while a substantial share is categorized as “Other Taxes.” Efforts to diversify into non-oil sectors have been supported by targeted tax incentives, such as reduced branch profits tax and exemptions for agriculture, renewable energy, and technology sectors. However, challenges persist, including the large informal economy, limited non-oil sector contributions, and the need to improve collection efficiency. Projections for 2025 indicate continued revenue growth, driven by diversification policies, but with potential risks from expiring tax exemptions. The study recommends enhancing compliance through digitization, expanding taxable activities, and reassessing the impact of incentives to ensure fiscal sustainability and economic resilience.

**Keywords:** *Azerbaijan, tax base, fiscal sustainability, economic diversification, tax policy*

## INTRODUCTION

The tax system is one of the fundamental pillars of a country’s economic structure, ensuring fiscal stability, financing public services, and fostering sustainable economic advancement. Tax base, which is basically the totality of assets, income, and economic activity subject to taxation, allows for government revenue generation. A properly structured and diversified tax base is necessary for fiscal balancing, avoiding excessive dependence on individual sectors, and enhancing the ability of public finances to withstand economic impacts.

In Azerbaijan, the tax system has undergone significant adaptations in recent years, mainly because the country is engaged in diversifying its economy away from the concentration on oil-gas activity. Despite reforms, major challenges surrounding the existence of a good, broad, and sustainable tax base remain with respect to the tax base whose composition, sectoral contributions, regional

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<sup>1</sup> Rzayeva, S. PhD Student in Internal Fiscal Policy and Public Finance, Azerbaijan State University of Economics, Baku, Azerbaijan. ORCID: <https://orcid.org/0009-0001-9456-2981>.

disparities, and compliance levels are all key indicators towards the review of the efficiency of the tax system and the investigation into areas for improvement.

The main objective of this paper is to do a thorough analysis and evaluation of the Azerbaijani tax base. It first looks into the generic makeup of the tax system, then studies the recent trends in tax collection, and finally considers the efficiency and sustainability of the tax base. The research further pinpoints challenges and potential opportunities to broaden and strengthen the tax base, thus offering insight with practical value to policymaking and economic development.

The study utilizes a mixed-method approach, relying on quantitative data produced by official bodies like the State Tax Service of Azerbaijan, the Ministry of Economy, and international organizations, and pairs that information with the qualitative assessments found in recent academic research and policy analyses. The analysis not only reviews the state of the tax base but also stresses the strategic aspects for fiscal sustainability and economic diversification in Azerbaijan.

## 2. LITERATURE REVIEW

The tax base of the country is a determinant of fiscal health; within such a framework, it determines the capacity of the government to provide public services and to invest in economic development. On the contrary, in Azerbaijan, the tax system has dramatically evolved through major changes to increase efficiency, broaden the tax base, and reduce dependence on the oil and gas sector.

**History and Structural Reforms.** Being heavily transformed post-independence, Azerbaijan's tax system has moved away from a post-Soviet type to one of more advanced and flexible types. Early reforms had attempted to make taxation legal and institutional. As time went on, as in the case of programs like the "State Program for Improving Tax Administration" (2005–2007) and the "Tax System Development Strategy" (2013–2020), the focus has shifted toward modernizing tax legislation, administration, and ways to enlarge the tax base.

**Growth in the non-oil sector and efforts to diversify.** Because the government wants to diversify the economy, it has started programs that focus on the non-oil sector. The International Monetary Fund (IMF) says that Azerbaijan has made progress in broadening its tax base by improving tax collection and lowering the non-oil primary deficit, which means that tax revenues from the non-oil sector are stronger. This change shows that there is a plan to rely less on oil revenues.

**Tax Breaks and Contributions from Different Sectors.** To encourage growth in important areas, tax breaks have been put in place for certain sectors. For example, farmers don't have to pay profit tax, VAT, or property tax for 13 years starting in 2014. Also, the renewable energy sector has seen tax breaks on income, VAT, and customs duties for projects that are part of public-private partnerships. These breaks are meant to encourage the growth of sustainable energy.

**Problems and Things That Need to Be Better.** Even with these improvements, it is still hard to expand the tax base. The informal economy is still a big problem; estimates say that a large part of economic activity happens outside of the formal tax system. There are still efforts to make these

activities more official, with programs aimed at lowering the shadow economy and improving compliance.

**Global Acknowledgement and Guidance.** International recognition has been given to Azerbaijan's tax reform advancements. The nation demonstrated its leadership in international tax administration and policy by serving as the Intra-European Organisation of Tax Administrations (IOTA) president in 2024–2025.

### 3. METHODOLOGY

In order to provide a thorough grasp of the structure, efficacy, and difficulties of the tax system, this study uses a mixed-method approach to analyse and evaluate the current state of the tax base in Azerbaijan. This includes both quantitative data analysis and qualitative evaluation.

#### 3.1. Data sources

The analysis is based on current, trustworthy data from national and international sources, such as:

- Annual reports and statistical bulletins on tax collection, sectoral contributions, and compliance rates are published by the State Tax Service of Azerbaijan.
- Azerbaijan's Ministry of Economy: Sectoral performance data and economic indicators.
- International Organisations: Reports from the World Bank, IMF, and OECD offer comparative information and analysis on tax base assessment and fiscal performance.
- Academic and Policy Studies: 2020–2025 research articles and policy papers that look at Azerbaijan's efforts at diversification, revenue structure, and tax reform.

#### 3.2. Research method

The following techniques are used in the study to guarantee a thorough and organised analysis:

1. Descriptive statistical analysis: To look at recent trends in tax collection, sectoral contributions, and the makeup of tax revenues.
2. Comparative Analysis: To assess how the current tax base structure compares to earlier time periods (2020–2025) and to comparable economies in the region, like those of Georgia and Kazakhstan.
3. Efficiency assessment is the process of determining the efficacy and sustainability of the tax base using metrics like the revenue-to-GDP ratio, compliance rate, and sectoral distribution.
4. Using policy documents and expert evaluations, qualitative analysis will be used to pinpoint structural issues, policy gaps, and chances to expand the tax base.

#### 3.3. Analytical framework

The research employs a multifaceted framework to assess the tax base, which comprises:

- The variety of taxed industries and revenue streams represents the breadth of the tax base.
- Stability and Resilience: Tax revenues' susceptibility to changes in the economy, especially in the oil and non-oil sectors.

- **Efficiency and Compliance:** The degree to which tax laws are followed and the effectiveness of tax collection.
- **Impact on Policy:** The efficiency of tax breaks and reforms in generating income and promoting economic expansion.
- This methodology, which combines quantitative and qualitative approaches, enables a comprehensive evaluation of Azerbaijan's tax base, highlighting both its advantages and shortcomings. The findings are intended to give policymakers practical advice on how to improve fiscal stability and encourage economic diversification.

### 3.4. Current State of the Tax Base in Azerbaijan (2024–2025)

**Total amount of tax revenue.** From 12.978 billion USD in 2023 to 12.979 billion USD in 2024, Azerbaijan's total tax revenue increased marginally. This shows how far the nation has come in improving its tax collection methods over the past few decades, as it is a substantial increase from the 261.6 million USD recorded in 1995.

**Ratio of taxes to GDP.** In 2024, Azerbaijan's tax-to-GDP ratio was 17.5%, a minor decline from 17.9% in 2023. This shows that although tax revenues have grown in absolute terms, their growth rate has not kept up with the expansion of the economy as a whole.

**Distribution of Tax Revenues by Sector.** The following is the breakdown of tax revenues by category for 2024:

**Table 1: Distribution of Tax Revenues in Azerbaijan by Category, 2024**

Tax Category	Revenue (Billion AZN)	Percentage of Total Revenue
Income Tax	6.79	18.30%
Value Added Tax (VAT)	8.89	23.90%
Excise Tax	1.56	4.20%
Other Taxes	19.92	53.60%

This distribution shows a significant reliance on income taxes and VAT, while other taxes account for a sizable amount of revenue. The sizeable portion of "Other Taxes" indicates a varied tax base, but it also highlights the necessity of a thorough examination to comprehend the elements that make up this category.

**Taxpayer Demographics.** Azerbaijan had 1,556,028 taxpayers as of July 1, 2024, a 6.5% increase over the previous year. This increase suggests better compliance and a growing tax base. Making sure that this increase results in proportionate revenue growth, especially from non-oil sectors, is still a challenge.

**Projected Tax Revenue for 2025.** Forecasts for 2025 indicate that tax revenues will continue to rise, with both the overall revenue and the proportion of contributions from non-oil sectors expected to

rise. In the upcoming years, it is anticipated that the government's initiatives to diversify the economy and lessen reliance on oil earnings will be successful. Revenue streams could be impacted, though, if some tax exemptions expire by the end of 2025.

**Tax incentives and policy reforms.** Azerbaijan lowered the branch profits tax rate from 10% to 5% in December 2024 by amending its Tax Code. This policy seeks to boost economic expansion and draw in foreign investment. The government has also put in place a number of tax breaks to encourage industries like technology, renewable energy, and agriculture. Although sectoral growth has been aided by these incentives, more research is needed to determine how they will affect the tax base as a whole.

**Challenges and Opportunities.** Even with the encouraging developments, there are still obstacles to tax base expansion. According to estimates, a sizable amount of economic activity takes place outside of the official tax system, making the informal economy a major obstacle. Initiatives to increase compliance and lessen the shadow economy are part of the continuous efforts to formalise these activities.

Enhancing tax compliance through digitisation, increasing the scope of taxable activities, and evaluating the efficacy of current tax incentives are some opportunities to broaden the tax base. A more robust and varied tax system may result from these actions.

## 4. DISCUSSION

Based on the previously provided data, this section explores the analysis of Azerbaijan's tax base for 2024 and forecasts for 2025. To give a thorough grasp of the situation as it stands today and its prospects for the future, the conversation is arranged under a number of important headings.

### 4.1. Total Tax Revenue and GDP Ratio

Azerbaijan's total tax revenue in 2024 was \$12.98 billion USD, which was a considerable rise over prior years. The tax-to-GDP ratio, however, dropped marginally from 17.9% in 2023 to 17.5% in 2024. This shows that although tax revenues have increased in absolute terms, their growth rate has not kept up with the expansion of the economy as a whole.

### 4.2. Sectoral Distribution of Tax Revenues

The distribution of tax revenues by category is as follows:

**Table 2: Sectoral Distribution of Tax Revenues**

Tax Category	Revenue (Billion AZN)	Percentage of Total Revenue
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Value Added Tax (VAT)	8.89	23.90%
Excise Tax	1.56	4.20%
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**Source:** <https://www.azernews.az/business/238233.html>

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### 4.4. Projected Tax Revenue for 2025

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### 4.5. Policy Implications and Recommendations

The analysis emphasises how crucial it is to increase the tax base in order to maintain fiscal sustainability. Among the suggestions are:

- **Improving Tax Compliance:** Putting policies in place to lessen the informal economy and increase the effectiveness of tax collection.
- **Increasing the variety of taxable activities,** especially in non-oil industries, is known as diversifying tax sources.
- **Examining Tax Incentives:** Making sure that current tax exemptions and incentives are in line with long-term financial objectives by evaluating their effects.
- **Investing in technology and training** to increase the efficacy and efficiency of tax authorities is one way to strengthen tax administration.

## CONCLUSION

The examination of Azerbaijan's tax base as of 2024–2025 shows both advancements and enduring difficulties in the growth of the national budget. Azerbaijan has improved tax administration, raised the number of registered taxpayers, and greatly increased total tax revenues over the last ten years. A more resilient and balanced tax base has resulted from the government's initiatives to diversify the economy, lessen reliance on oil earnings, and implement targeted tax incentives.

The study also identifies structural problems that need ongoing care. While the potential of non-oil sectors has not yet been fully realised, the tax base is still comparatively concentrated in some sectors, especially in activities related to oil and VAT. The growth of revenue and the equity of the tax system are still at risk from the shadow economy. In addition, the tax-to-GDP ratio has fluctuated slightly, suggesting that tax collection efficiency needs to be increased in relation to economic growth.

A progressive strategy for drawing in investment and advancing sustainable industries is indicated by policy changes in 2024, such as the lowering of the branch profits tax and the implementation of incentives for green projects. However, to make sure that these actions don't eventually weaken the tax base, they must be supported by efficient monitoring.

Azerbaijan should prioritise increasing sectoral diversification, expanding the tax base through digitalisation, and reevaluating the extent of current tax exemptions in order to improve fiscal sustainability. By addressing these priorities, the nation's larger development objectives will be supported, stable public revenues will be secured, and economic vulnerability will be decreased.

The study's conclusions ultimately highlight the significance of a thorough, empirically supported approach to tax policy—one that strikes a balance between generating revenue and long-term growth, social equity, and economic competitiveness.

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