Taper: Creative Constraints and Minimalist Design in a Computational Poetry Publication

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Figure 1: Timeline showing thumbnails from 13 issues of *Taper*

ABSTRACT

In an era defined by rapid technological evolution, digital publications are not only effective means of distribution; they also advance creativity, collaboration, and cultural impact.

This paper explores the seven-year journey of *Taper*, a magazine for computational poetry, broadly defined, that invites computational creativity and uses a minimal design. By embracing deliberate constraints, including a restriction on program/poem size and different themes for different issues, *Taper* fosters innovation through remix culture, experimentation, and collaboration. These approaches nurture a dynamic community of practice at the intersection of literary art and programming while advancing grassroots strategies for sustainable growth and long-term viability. Reflecting on *Taper*'s evolution, this paper illustrates how minimalist design principles and computational frameworks can amplify creative expression, strengthen community engagement, and cultivate ecosystems capable of addressing pressing societal challenges. These findings demonstrate how a collectively-edited project can spur artistic innovation and "creativity for change," enabling lasting impact in a shifting creative landscape.

CCS CONCEPTS

• **Applied computing** → **Arts and humanities**; • **Social and professional topics** → *Sustainability*; • **Human-centered computing** → Collaborative and social computing.

KEYWORDS

Creativity, digital poetry, constrained writing, Oulipo, open-source

1 INTRODUCTION

Taper (https://taper.badquar.to [20]) is an online literary magazine dedicated to publishing small computational poems, broadly defined to include textual, visual, and sound pieces of many sorts. Issued twice yearly since its inception in 2018, it serves as a long-term experiment in sustainable publishing, as shown by the timeline of its 13 issues in Figure 1.

Taper is rooted in Oulipian constrained writing[15] and the demoscene's *sizecoding* practices—where strict program size limits foster creative innovation[11]. By minimizing byte count, artists push computational boundaries, using constraints as artistic tools rather than limitations. *Taper* applies structured constraints in a similar spirit, encouraging literary experimentation through minimalist design and computational poetry. *Taper* is managed by a dedicated editorial collective of remotely located volunteers. Hosted by Bad Quarto—a small private press dedicated to fostering creativity through teaching and exchange—*Taper* exemplifies minimalist design, constrained creativity, and grassroots collaboration.

This paper reflects on seven years of editing *Taper*. It explores the successes and challenges of building a platform that supports sustainable growth, collaborative dynamics, and minimalist design. By embracing deliberate constraints—including minimalism, constrained creativity, and computational art-inspired principles such as sizecoding, a free software ethos, and HTML standards— *Taper* has established itself as a sustainable and vibrant hub for computational poetry, showing alternatives (along many dimensions) to the way many other sorts of literary publications, old and new, work.

2 BACKGROUND

Taper emerges at the convergence of digital poetry and computational art, two overlapping realms that expand creative possibilities in the digital age. Digital poetry publications offer platforms where text and technology intersect, encouraging innovation through computational techniques and interactivity [25] (see Figure 2). Many such publications adapt traditional print-style poetry for online display. Computational art venues, in contrast, emphasize programming, multimedia, and aesthetics, enabling works that move beyond static words on a screen. *Taper* evolves within this space, drawing influence from electronic literature and creative coding communities to explore possibilities in digital poetic expression.
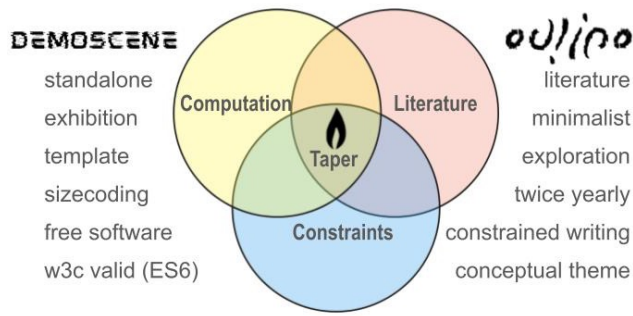
Figure 2: *Taper* **draws on the demoscene and Oulipo to explore creativity through constraint.**

2.1 Related Organizations and Projects

Several publishers and curators have presented computational poetry and art, including the Electronic Literature Organization (ELO), *Rhizome*, the journal *New River*, and Turbulence.org. An important annual event for computer-generated text is NaNoGenMo (National Novel Generation Month) [8], which promotes the creation of 50,000+ word texts and has an international scope. *Taper* presents a distinct body of work, as contributors craft projects specifically for the magazine, aligning with its size constraints and editorial themes.

2.2 The Demoscene Influence

The demoscene has established a strong tradition of sizecoding and technical creativity, fostering a collaborative community that inspires digital artists and programmers. This subculture centers on creating programs that push the limits of hardware and software. Demoparties are in-person gatherings that allow members to share their work, collaborate, and celebrate their unique digital art form. *Taper* puts a stronger emphasis on language than is typical in the demoscene and presents work via an online journal rather than at live events. A core demoscene practice that informs our work is sizecoding: embracing strict constraints on total program size to inspire creative use of platforms—in our case, the Web browser. JS1K, a JavaScript code-golf competition, has been a major influence on *Taper* in both form and spirit [13].

2.3 Social Media

Digital creative work is also shared via social media, for instance on Instagram and tumblr. While social media excels in accessibility and community engagement, the works featured there often lack the thematic cohesiveness and cross-platform robustness that *Taper* strives to ensure. Few informal venues, except dwitter.net, embrace minimalist constraints or foster free software for sustainability and collaboration.

3 CONSTRAINTS AS CATALYSTS FOR COMPUTATIONAL CREATIVITY

3.1 History and Evolution

At the heart of *Taper* lies the idea that constraints are not limitations, but powerful engines of creativity. This principle aligns with theories of computational creativity, which suggest that structured limitations can foster innovation by encouraging problem-solving and divergent thinking.

Taper draws inspiration from both the Oulipian tradition of constrained writing and the demoscene's culture of technical ingenuity. It emerged as an experiment in applying these ideas to digital poetry.

The publication traces its origins to The Trope Tank, Nick Montfort's lab and studio for poetic practice and digital media. In 2017, researchers at the Trope Tank hosted an open meeting titled "Salon 256," which explored sizecoding techniques inspired by both the Oulipo and the demoscene [5]. The event revealed strong interest in creative coding with constraints and led to the founding of *Taper* as a venue for constrained computational poetry.

3.2 The Act of Tapering

The process of "tapering" creative work—scaling it down to fit specific constraints—was enthusiastically embraced by practitioners. Constrained environments compelled them to explore new artistic possibilities, much like experimental works such as Raymond Queneau's *Cent mille milliards de poèmes* demonstrated the transformative power of structured limitations. For contributors to *Taper*, these constraints became a space for deep artistic exploration and inventive thinking. By embracing constraints like sizecoding, *Taper* stimulates cognitive processes such as divergent thinking and associative creativity, enabling contributors to explore novel poetic forms.

3.3 Constraints in Practice: The Initial Issue

From the outset, *Taper* emphasized strict constraints to drive creativity, beginning with a maximum limit of 1 kilobyte (1KB) for the computational content. Submissions had to be standalone, relying solely on JavaScript embedded within a predefined template. This ensured concise, innovative works blending poetry with computational techniques like generative text, interactive elements, and algorithmic structures.

The inaugural issue, *A Minimal Labyrinth*, launched in Spring 2018, was inspired by Jorge Luis Borges's "El jardín de senderos que se bifurcan." It featured nine constrained works by Trope Tank researchers, presented during a one-day exhibition with an opening event.

The first issue of *Taper* was a closed call, limited to Trope Tank researchers as we explored whether a computational poetry magazine could be built with each piece strictly capped at 1KB. At the time, we believed this had never been attempted before and weren't certain if it could be done. The challenge was both technical and poetic, requiring careful consideration of how works would be submitted and structured within the available space. As we refined the process, we developed the foundational template that would support subsequent issues. This early experimentation demonstrated that the format was viable, leading us to open future issues to broader participation.

After raising the limit to 2KB in Issue 2 and 3KB in Issue 3, *Taper* settled on 2KB as the optimal constraint, balancing review complexity and author inspiration based on reflections from editors and authors.

3.4 Creativity-Support Tools: Infrastructure Decisions

Beyond thematic and size constraints, several infrastructure choices have supported *Taper* as a platform for creativity. These include:

D1 **A Minimalist Template:** Designed as a virtual gallery space, the template aesthetically frames works of computational poetry. Readers can explore each piece in full-screen mode, enhancing focus on individual contributions while maintaining thematic cohesiveness.

D2 **Technical Constraints and Open Standards:** Submissions adhere to ES6 standards[12] and W3C compliance, ensuring cross-browser compatibility and accessibility. Embracing open-source principles, *Taper* works utilize an all-permissive free software license, encouraging educational reuse, remix culture, and exploratory programming [16].

D3 **A Collaborative Editorial Model:** Volunteer editors oversee calls for submissions, review works, and reflect on sociopolitical contexts for upcoming themes. The collective invites new editors to join who have been *Taper* contributors, fostering community engagement and sustainability.

3.5 Theoretical Alignment with Computational Creativity

Taper exemplifies creativity support tools by providing a structured yet flexible environment for innovation. Its thematic and sizecoding constraints align with computational creativity theories [6, 14], fostering novel outputs through exploiting tools [22] and poet-designed interfaces [7]. Like bot-generated poetry [9], *Taper* uses constraints to spark creativity, but emphasizes human-driven exploration, remixing, and collaboration.

4 COMMUNITY GROWTH AND DYNAMICS

4.1 Quantitative Metrics and Engagement

Taper's growth as a digital poetry platform is reflected by quantitative metrics, including submission records, engagement data, geographic reach, and a rising number of repeat contributors. Analysis of these metrics highlights *Taper*'s success in building a sustainable community at the intersection of computational and literary art [21]. As shown in Figure 3, published works per issue grew from an average of 9 to 28 over seven years. Figure 4 shows the increasing share of non-editor contributions, reflecting broader community participation. Collaborative works, consistently featured in later issues (Figure 5), further underscore *Taper*'s role in fostering creative partnerships.

The editorial composition across 13 issues depicts a gradual integration of new editors, primarily selected from published authors, as depicted in Figure 6. Guided by *Taper*'s original vision, each editorial collective selects new themes and refines constraints for the issue. This approach ensures continuity of *Taper*'s ethos while promoting a collaborative leadership model. A team of four to six editors has since curated each issue, with many serving across multiple terms. The last founding editor, Angela Chang, shaped the magazine through issue 13 before stepping down as issue 14 began.

As of its 13th issue, *Taper* has published 250 works by over 140 contributors, blending poetry, programming, and sizecoding.
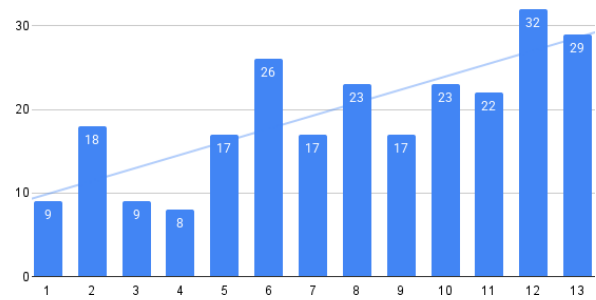
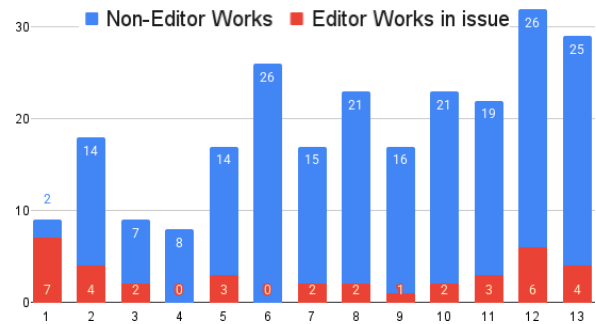**Figure 3: Growth: Published Works per Issue Rise from 9 to 28 Over Seven Years.**

Figure 4: Rising Trend: Non-Editor Published Works Increase Over Time.
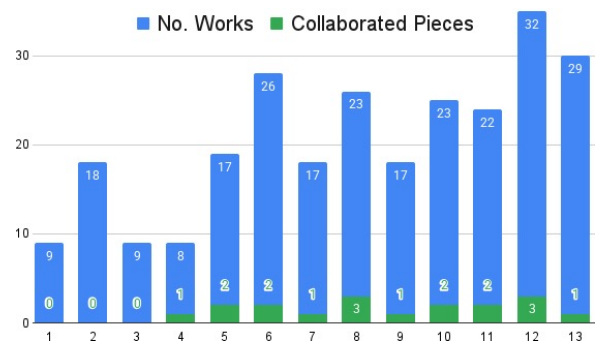
Figure 5: Joint Work: Collaborative Works Published in Later Issues.

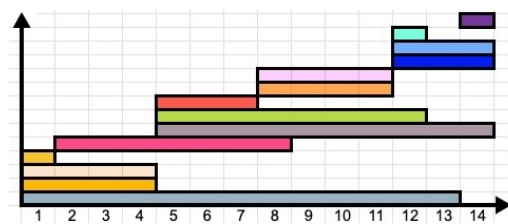The network diagram in Figure 7 shows the community's many connections across issues.

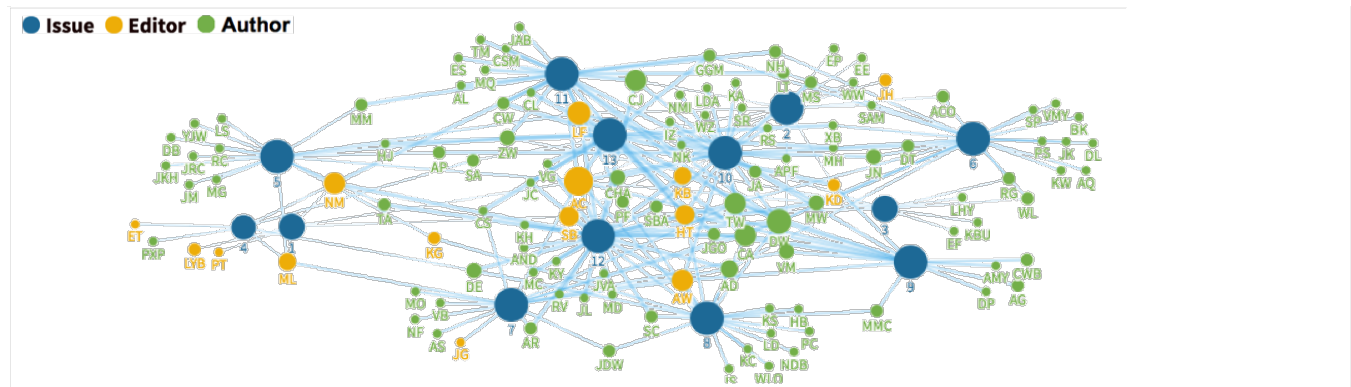**Figure 6: Editorial Makeup: New editors, who contributed as authors before, join the team over time.**

Figure 7: Network of authors (green), editors (yellow), and issues (blue) across 13 *Taper* issues.

4.2 Remix Culture and Collaboration

The sustained growth of *Taper*'s community is further evidenced by its vibrant remix culture. Many pieces from earlier issues have been re-imagined, expanded, or woven into new thematic explorations. For example, one author revisits the subject of emojis, while others develop fresh takes on visual puns. Many contributors have submitted work to multiple issues, as presented by the arc diagram in Figure 8, which highlights three authors appearing across seven issues.

This dynamic exchange of ideas demonstrates *Taper*'s role as a catalyst for collaborative creativity. For example, one duo has consistently submitted collaborative works, highlighting the platform's collaborative potential.

Beyond the magazine, *Taper*'s influence has extended into external academic and creative settings. Its works have been referenced in university courses, cited in academic publications, and used in workshops. There are a few notable spin-off projects, such as:

- **Ensemble Park**[18], a journal exploring human-computer collaborative writing founded by two former *Taper* editors.
- **Sea of Po**[3] is a computational poetry anthology collaboration with 52 artists. The project was inspired by "Sea of Po" [2], originally published in *Taper 9*. Jim Andrews reflects on its development in his essay *Sea of Po* [4] (Figure 9).
- **Dim Sum**, a collection of dual-language poetry from four Asian women (including Chang) explored the Chinese diaspora through the lens of iconic dim sum dishes [17].

Figure 10 shows how select remixed works evolve across *Taper* issues, underscoring its remix culture.

5 MOTIVATING CONTRIBUTIONS AND FEEDBACK CULTURE

Without monetary incentives for contributors or editors, *Taper* relies on its unique constraints and community ethos to inspire participation. For many, the thematic and size constraints themselves present an irresistible creative challenge, as demonstrated in themed issues like "Pent-Up," developed during the pandemic [26]. For others, the opportunity to engage in remixing existing works offers a space for intellectual discourse and playful creativity.

Contributors often cite the remix culture within *Taper* as particularly impactful, encouraging them to expand on existing work and reinterpret ideas within a digital poetry framework. The 2KB code size constraint is a key factor that motivates *Taper*'s contributors,
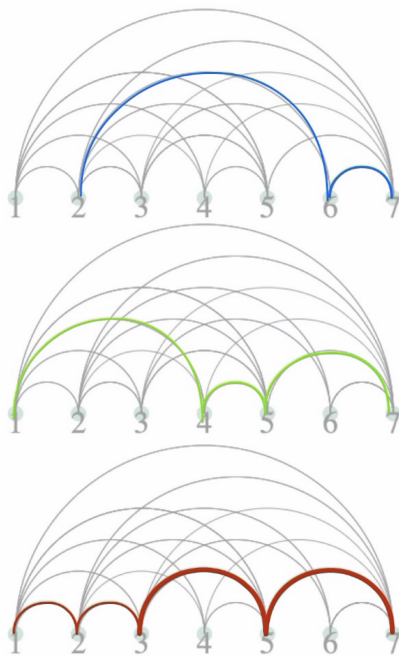

Figure 8: Three authors who had works published in multiple issues of *Taper*.
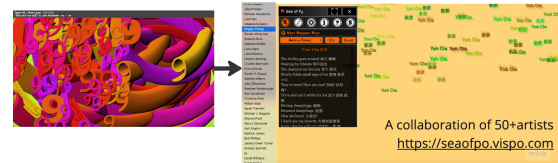

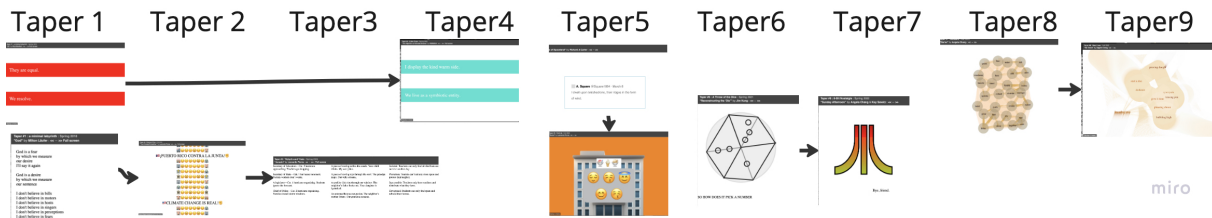Figure 9: *Sea of Po* extends Andrews' *Taper 9* entry.

Figure 10: Select remixed works across *Taper* issues.

offering a unique challenge that distinguishes the publication from other web-based platforms. One anonymous author reflects on the thrill and challenge of meeting this requirement:

> "What I was getting to is the stated maximum 2KB code requirement for publication in *Taper*—this requirement sets *Taper* apart from the many web publications without such a restriction. It is the challenge to meet this requirement that makes working on a submission for *Taper* so much fun! I mean, it's challenging to do (and make something worthwhile), and it's a huge thrill to succeed and be published at *Taper*." – Anonymous Author

Taper's commitment to diversity and inclusion has been instrumental in shaping its global community of digital poets and artists. The fifth issue, "Pent-Up," marked significant milestones with the debut of works in French, Spanish, and Wixárika, as well as the magazine's first works published from Africa [19]. Authors in this issue, the pandemic issue, came from five continents (see Figure 11). This issue featured *Taper*'s first dual-language computational poem in Spanish and Wixárika, likely the first of its kind globally [10], shown in Figure 12. It also included *Taper*'s first two works from Africa, shown in Figure 13 [23][24]. Notably, the African works catalyzed the African electronic literature movement (AELA & ADELI (https://africanelit.org) [1]), demonstrating *Taper*'s potential to inspire regional creative ecosystems.

By amplifying diverse voices and fostering cross-cultural exchanges, *Taper* enriches the field of digital poetry while creating a more inclusive platform for experimentation and innovation.

6 REFLECTIONS ON IMPACT

Through its minimalist editorial processes (cf. D1) and collaborative ethos (cf. D3), *Taper* has cultivated a sustainable and engaged community built around creative constraints (cf. D2), feedback, and global connections. By emphasizing the value of representation and fostering diversity, *Taper* serves as a vibrant model for integrating literary and computational creativity. Its evolution demonstrates how thoughtful design principles and community-driven approaches can transform limitations into engines of innovation, yielding enduring contributions to digital art and poetry.

The spirit of collaboration (cf. D3) has evolved into one of *Taper*'s defining features. Works published through the platform have catalyzed ambitious projects, creative collaborations, and spin-off initiatives such as journals, workshops, and interactive poetry collaborations. *Taper* not only fosters individual creativity, but also

cultivates a shared purpose, enriching the community with collective engagement. Minimalism (cf. D1) and creative constraints (cf. D2) remain underexplored in digital poetry publications. The approach employed by *Taper* shows how a collective, non-institutional project can foster the growth of a community and new practices. These approaches provide insights into the intersection of literary and computational art communities, offering pathways for sustainably developing digital creative works. By showcasing the impact of minimalist design (cf. D1) and collaborative strategies (cf. D3), *Taper* exemplifies how digital publications can support remote artists, educators, and programmers in creating vibrant creative niches.
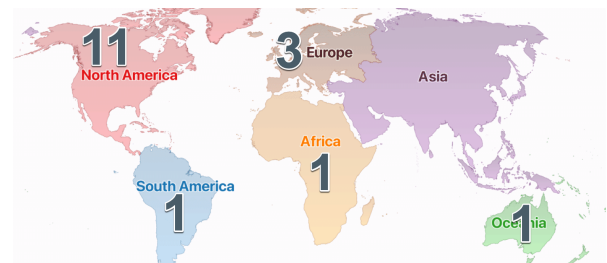

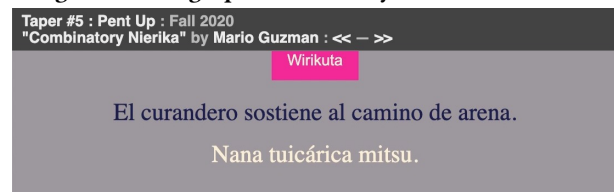**Figure 11: Geographical diversity of Issue 5 authors.**

Figure 12: Issue 5 debuted a dual-language computational poem in Spanish and Wixárika.

Figure 13: Issue 5 included its first two computational works from Africa [23, 24].

7 LESSONS ON FOSTERING A COMPUTATIONAL POETRY PUBLICATION

Building on *Taper*'s community-driven impact, the following lessons highlight strategies for sustaining computational poetry publications.

The lessons learned through *Taper*'s evolution highlight how minimalist design and community-driven editorial practices can foster sustainable creativity. By embracing constraints—both thematic and technical—*Taper* has cultivated an environment where experimentation, intellectual engagement, and collaboration thrive. These constraints serve not just as artistic challenges but as practical mechanisms for ensuring long-term sustainability.

Taper also demonstrates the value of exploratory programming principles, including remix culture, collaborative authorship, and hands-on creative engagement. These approaches are not intended as a blueprint to replicate *Taper* itself but rather as adaptable strategies that creatives and publishers can leverage in their own projects. The emphasis on structured limitations and iterative feedback loops provides insight into how constraints can fuel artistic innovation without restricting creative autonomy.

Taper's seven-year journey shows that constraints can serve as catalysts for new forms of digital poetry. What began as 256-byte experiments in the Trope Tank has evolved into a globally recognized platform for computational poetry, proving that small-scale programming can yield expansive creative possibilities. Its guiding principles—adherence to ES6 standards for accessibility, collective editorial practices for grassroots resilience, and structured open calls—illustrate how digital publications can achieve sustainability without requiring extensive resources.

Rather than prescribing a single approach, *Taper* encourages creatives to experiment with different kinds of constraints. While *Taper* embraces sizecoding as a primary constraint, other creative models leverage time-based limitations, such as hackathons, game jams or creative coding challenges like NaNoGenMo. These structured limitations not only challenge creators to think resourcefully but also foster collaboration and innovation in unique ways. By prioritizing accessibility, sharing code openly, and ensuring compatibility across platforms, *Taper* extends its impact beyond digital poetry, demonstrating that minimalist design and collaborative authorship can cultivate sustainable creative ecosystems.

ACKNOWLEDGMENTS

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