The House that Governs Itself

What coliving teaches digital governance

Daniel Kronovet

I. The American Polycrisis

In 21st-century America, housing is expensive, and people are lonely.

Housing advocates increasingly call for an embrace of pro-development politics. By building more densely, and more cheaply – the argument goes – housing costs can be reduced. Stacked against this "abundance" agenda, however, are major obstacles: NIMBYist neighborhoods, spiraling construction costs, and hostile regulators. Lower costs and more permissive municipalities draw development to the exurbs, leading to sparse and isolating built environments. Alienated from others, people spend more time on screens, eroding attention spans and their ability to connect with those outside their own narrow bubbles.

To address these challenges, we should revisit a classic approach: creating housing not by building *out*, but building *in* – through coliving. By embracing housing layouts where many bedrooms share common infrastructure, we can create more housing dollar-for-dollar, while offering powerful opportunities for connection. Coliving is not "new" – having arguably been the default for most people for most of history – but has remained niche in America's yeoman imagination, at least until now.

The economic and social advantages of coliving are clear. The challenge is *governance* – managing the complexity of people sharing space. Governance is an *economic multiplier*: done well it keeps groups coherent over time, done poorly it leads to chronic vacancies and financial loss. It is *governance* that turns coliving from "that crazy thing I did in college" into a real solution to America's affordability and loneliness crises. The line between dirty dishes and expensive housing is straight, and not particularly long.

These problems are not new. Historically, housing communities have relied on various flavors of in-person process to make decisions, which can be prohibitively time-consuming, or on social filtering and informal hierarchy to maintain alignment, which limits accessibility and is overly dependent on strong personalities. For coliving to become a viable – and buildable – housing category, governance must be made more *accessible, inclusive, and robust*.

From Communes to Cyberspace and Back Again

This is easier said than done. The last two centuries are filled with communal catastrophes, from the 19th century utopian efforts of Robert Owen and Charles Fourier to the back-to-the-land movements of the post-war counterculture. Through all these failures run common threads –

fragile economics, lax accountability, inadequate tools for information-processing, lax accountability standards, and naïveté about politics and power. As labor leader Dorothy Day famously observed: “Everybody wants a revolution, but nobody wants to do the dishes.”

As chronicled by Fred Turner in *From Counterculture to Cyberculture*, the failures of the experiments of the 1960s and 70s reoriented the utopian impulse away from collective living towards liberation through technology. The internet, not the commune, became the frontier.

As with the communes, however, reality would clash with ideals: in the three decades since John Perry Barlow’s “A Declaration of the Independence of Cyberspace,” the internet has become contested territory. Powerful organizations wield outsized control over their digital domains, while efforts to pioneer internet-native forms of governance are hitting walls of pseudonymity, ease of exit, and a fragmenting sense of shared reality.

The path forward may in fact lead back to our own doorstep.

Here is the crux: counterintuitively, the housing setting *inverts* many of the structural challenges of the internet, making it fertile ground for contemporary governance innovation. Instead of pseudonymity, residents are known to each other. A high cost of exit gives participants “skin in the game” and incentive to act pro-socially. The shared physical setting makes information cheap and decisions legible – it is easy to tell if the dishes are done.

In the 21st century, digital governance and coliving are each other’s missing piece. By taking ideas from digital governance and applying them to housing, and taking lessons from housing and applying them to digital governance, we can realize a vision of abundance based on shared infrastructure and rich relationships, while advancing the practice of digital governance broadly.

Enter Zaratan

There is a hole in the housing market.

On one side, we have real estate developers, whose job is to productively deploy capital into the built environment. In an industry characterized by eye-watering sums and long time horizons, developers skew conservative, doubling down on what works. On the other, we have private individuals seeking more relational lifestyles. These groups are pushing boundaries but remain relatively niche, consisting mostly of activists with organizing skills or those affluent enough to buy property.

Between these two camps is abundant white space for new institutional visions. By articulating a robust model of coliving governance, we can bridge the gap between development capital and the millions of people seeking quality housing they can afford.

After several years developing mechanisms for DAO governance, some friends and I decided to take matters into our own hands, founding Zaratan Coliving in early 2020. Pooling our skills and

our savings, we bought a run-down old Craftsman in Los Angeles' trendy Highland Park neighborhood, and spent the two years of the pandemic transforming the structure into a 9-bedroom coliving house called Sage. At the same time, applying skills we'd acquired in the trenches of crypto governance, we developed an open-source suite of digital self-governance mechanisms called Chore Wheel to serve as the house's institutional core.

Sage House opened in the fall of 2022 and has been operating continuously – and profitably – ever since. The house has maintained an occupancy rate of 98% and below-market rents, with minimal external management, one monthly meeting, and zero paid cleaners. 22 people have lived at Sage since opening, staying for an average of 14 months. Many did not know each other in advance, most had no prior community experience… and multiple residents have described Sage as *the best housing experience they have ever had*.

While cannot prove causality from field data – and residents themselves have questioned the relative importance of the mechanisms, compared to their personal contributions – it is hard to find cases where so many people have lived together for so long, and so successfully, without reliance on costly management, rigid hierarchy, or tedious deliberative processes. With this in mind, we should seek to understand the lessons that Chore Wheel and Sage House hold for digital governance more broadly.

Disclosure: I co-own Sage House and maintain Chore Wheel.

II. Chore Wheel: myth and mechanism

Imagine: Bayo gets home around 6pm, with plans to meet up with friends in an hour. He takes out his phone, opens his house's shared Slack, and sees that "Trash Takeout" is worth 8 points. He spends ten minutes taking out the trash, then "claims" the chore through the app. His claim is posted to a public channel, where his housemates can see and endorse his contribution.

Mechanisms

Chore Wheel is a suite of complementary mechanisms, in which shared design principles – a lack of privileged roles, simple and intuitive inputs, human sensing with machine bookkeeping, and always-on asynchronous processes – are flexibly recombined to address specific power-and-accountability challenges that emerge in shared housing contexts.

These mechanisms can be understood as expressing and integrating three strands of governance thought: that of institutional accountability, digitally-mediated decision-making, and organizations as sites of personal development.

Chores

Chore Wheel's first mechanism, the titular "Chores," is a system of labor accounting in which tasks are not assigned in advance, but continually auctioned at increasing valuations and

claimable by residents at any time. Residents commit to earning 100 “points” per month, with claims evaluated through lightweight peer review. The ultimate effect is that the longer a chore goes undone, the more points it will be worth – and the more challenging to complete, as the underlying mess will have increased. Participants make personal judgments about when and how to contribute, based on their subjective assessment of task difficulty and personal capacity.

This design evokes the work of Stafford Beer, the British management theorist who helped popularize the idea of “cybernetics.” For Beer, digital technologies were *indispensable* for helping people keep pace with an increasingly complex world, by enabling decisions to be reframed around the *continual governance of resource flows* instead of the one-off movement of a fixed asset.

Chore points are ephemeral – expiring at the end of each month – and function primarily to account for labor contributions. Participants govern the system by *proposing new chores* and adjusting the *relative rates* at which chores gain points. The cumulative result is a *distributed, dynamic, self-regulating* system where participants contribute under conditions of their choosing, subject to clear expectations and peer accountability.

Hearts

Chore Wheel’s second mechanism, “Hearts,” is a reputation and dispute-resolution system in which a symbolic ledger of “hearts” tracks long-term contributions. Participants begin with five hearts, gaining them by exceeding obligations and earning karma, and losing them by shirking chores or violating shared norms.

This design drew directly on the work of economist Elinor Ostrom, whose research on the communal management of shared resources earned her the Nobel Prize in 2009. Ostrom’s work highlighted the importance of simple and graduated accountability structures in keeping institutions functional and legitimate over time.

Hearts “regenerate” continually, *institutionalizing forgiveness as a first-class construct*, and allowing hearts to serve as a kind of shared memory. The loss of a few hearts is purely symbolic, while the loss of all hearts represents a major rupture and can be the catalyst for escalated – and contextually determined – consequences.

Overall, Hearts helps mediate a “shared reality” of accountability, enabling participants with different norms, values, and cultures to share space by converting what would otherwise be private perceptions and peer-to-peer gossip into shared, legible measures of participation and engagement.

Things

Chore Wheel’s third mechanism, “Things,” is a practical tool for spending shared funds. Residents propose purchases, which are subject to an adaptive vote growing with the size of

the purchase (e.g. a 2-upvote minimum for a $50 purchase, 3 for $75). Mechanistically simple, Things enables a functional, low-overhead division-of-labor for managing inventory: sensing is distributed to the residents, and fulfillment performed by a third party.

As with Chores and Hearts, inviting residents into their own governance has the second-order effect of cultivating individual capacity. Studies of self-managing organizations show that high-trust structures can stimulate “virtuous cycles” of self-development; giving participants greater agency would often lead to a growing ability to act agentically.

Design Dynamics

The examples of Chores, Hearts, and Things show how core design principles can be flexibly recombined to address domain-specific challenges. Let’s dive deeper into Chore Wheel’s emergent dynamics and explore some of the more nuanced governance implications.

Claiming chores

Structured properly, the most innocuous behaviors become surprisingly significant. When a resident performs a chore, they are implicitly and instantaneously “computing” over three values: the objective points-value of the chore, which is itself a function of the *intersubjective prioritization* of the task and the *objective time elapsed* since its last completion, as well as their *subjective assessment* of both their own capacity and the difficulty of the task. Fundamentally, the chore claim integrates not only multiple signals, but multiple *epistemologies* – objective, subjective, and intersubjective.

Chore claims also *produces* two outputs: a cleaner space, and a public record of contribution. The production of a cleaner space is the core commons-management output and the primary goal of the enterprise. The second output, a public attestation, serves as an entry-point for peer accountability, and a foundation for building relationships across social distance. I may not look like you or talk like you, but I can recognize your contribution to our shared space.

Within this institutional context, doing a chore becomes a richly layered act of self-governance. Instead of governance being the “making of decisions,” it becomes the *continuous, collaborative construction* of a shared context. Instead of *exit versus voice*, we have *stability versus leverage* – creating tools for converting *individual initiative* into *collective outcomes,* while preventing misaligned actors from creating outsized disruption.

Points and hearts

Semantically, chore points exist somewhere in between a labor credit and a community currency. Accruing continuously and minted through the performance of chores, they function as a way to account for shared contributions. Bounded transferability allows for emergent “social markets” of task-splitting and bounties, while ephemerality prevents naive accumulation and financialization, preserving token semantics.

Hearts have similar properties but are defined by different logics. Unlike chore points, which are earned directly and framed in reference to a quota, hearts are earned indirectly and framed as deviations from a baseline. Multiple complementary mechanisms for gain and loss make hearts more semantically dense than points – as they incorporate a greater diversity of signals – making them more effective for general-purpose, long-term social accounting.

Accessible interactions

When designing Chore Wheel, we wanted the system to be as *accessible* and *legitimate* as possible, which turned into a prejudice against harder-to-access synchronous processes like in-person meetings, and harder-to-interpret statistical inference like machine learning and artificial intelligence.

Every decision, whether claiming a chore, approving a proposal, or setting a priority, can be made *simply, intuitively, and asynchronously*, requiring no external knowledge or special training. Subjective judgments are "correct by construction," shared physical space makes information cheap to access, and a background of regular personal interactions ensures that conflict resolution occurs inside of a rich social context. Inputs become governance outputs through simple and deterministic computational processes, making it easy for participants to understand the link between cause and effect, and ultimately to act with agency.

Time and Authority

One surprising outcome was that *time* emerged as a foundational mechanic for converting inputs into outcomes. Chores gain points over time, hearts regenerate over time, and decisions are made asynchronously within voting windows. By using time to drive core mechanisms, simple and intuitive inputs can be levered into complex and emergent behaviors, *without* flattening human agency or opening the door to abuse.

The end result is that "governance" ceases to be a task which people *do*, but rather the emergent outcome of organic daily interactions.

At first glance, Chore Wheel might seem "high-control" – a modernist structuring of what might otherwise be experienced as an intimate and informal domain. The reality, however, is closer to the opposite: with thoughtful structure, a domain often characterized by passive-aggressive resentment and social policing becomes a site of freedom, competence, and belonging.

III. From Dishes to DAOs

As we have argued throughout this essay, the shared housing setting constrains the governance problem in favorable ways. The physical environment, in which identity, stake, and legibility are built-in, serves as an "incubator" through which we can understand more clearly how abstract mechanisms work in practice, over long periods of time and with a diversity of participants. By

clearly isolating the essential interactions, it becomes possible to derive mechanistic primitives with confidence.

From this position of knowledge, mechanisms can be scaled out to the more adversarial setting of the pseudonymous online. After stripping away confounders and clarifying core dynamics, it becomes easier to navigate the challenges and tradeoffs of scaling without losing sight of the fundamental interactions which must be preserved.

Chores as continuous funding mechanism

Over the last several years, a major trend in digital governance has been the funding of public goods. Unlike binary pass/fail voting, capital allocations can be represented as lists of real numbers, enabling the expression of more nuanced preferences. However, while the last several years have seen a proliferation of such mechanisms, the problem remains unsolved. Periodic funding "epochs" demand high levels of engagement, and large numbers of applicants create information overwhelm and reduced decision quality.

Now consider the chores system: if a mess is seen as a "public bad," and the removal of the mess through performance of a chore is a "public good," then the chores system can be understood as a working *end-to-end mechanism for continuous public-goods-funding*. The system orchestrates a *continuous auction for the provision of public goods*, subject to a *pairwise governance process of distributed oversight*. The iterative nature of the mechanisms allows for a broad base of participants to participate in the ongoing governance of funding decisions, providing incremental inputs in response to new information.

As Stafford Beer wrote, human flourishing in a technological society calls for a reimagining of resources as *dynamic flows* instead of *static assets.* Chore Wheel's chores system, designed for continuous use and guided by intuitive inputs, is a real-world, multi-year case study of just such an approach.

Legible and deterministic processes

Another emerging trend in digital governance is the use of machine intelligence to augment human judgment, with solutions ranging from simple AI summarization to "digital twins" voting on our behalf.. Such solutions promise to lighten the cognitive load of governance, but carry risks: of complex and opaque solutions alienating participants, or of concentrating power in the hands of technological elites.

One moderating approach is to develop legible and deterministic *core processes*, with machine intelligence augmenting and extending that core. To retain legitimacy, cause and effect must be clearly linked: a pairwise input shifts a relative funding allocation, an upvote approves a direct resource claim. Artificially-intelligent models may summarize discussions, suggest group priorities, or draft proposals, but they don't directly manage resources.

As Elinor Ostrom wrote, participatory decision-making is vital for the health of a commons. The richer and more accessible we can make our legible and deterministic governance processes, the more confidently we can build augmenting layers of machine intelligence on top of them.

Emphasis on relationships over modeling

An error of crypto's early DAO pioneers was their over-emphasis on game-theoretic modeling in lieu of the cultivation of social spheres of norms and values. To borrow a Buddhist metaphor, structure and culture are "two wings of a bird" – without either, it cannot fly.

Humans are not objects to be acted upon, but conscious agents who reflexively respond to constraints placed upon them. This "three-body-problem" is increasingly understood by governance practitioners, who have begun emphasizing the pairing of mechanistic affordances with "sub-symbolic" social information-processing and culture-building. At Sage House, a monthly meeting creates an informal space for participants to discuss issues, establish norms, and calibrate expectations for the weeks ahead – and laying the groundwork for effective asynchronous decision-making. On the open internet, this takes the form of memetic sub-cultures, "dark forest" Discord servers, or digital-art fandoms, all shaping group identity and values, and creating the cultural pre-conditions for effective coordination.

On some level, this posture requires institutional designers to develop a sense of *trust* – in the people seeking to govern themselves, and in their ability to create and sustain culture beyond the scope of formal systems. As other self-managing organizations have shown, trust can beget trust; there may be no other way.

Conclusion

Governance is often said to be an art. In a deep way, this is true: like artists, governance participants are constantly engaging with and responding to the circumstances around them. There is no purely rational form of organization – and Chore Wheel does not aspire to be one.

What *is possible* is to design institutional arrangements which are *better* able to channel conflict, and to tailor them to the specific domains in which they are deployed, making failure *less likely*. A community with a 10% chance of collapse in a given year is statistically likely to fail within 7 years. If that likelihood drops to 2%, that community is likely to last for 35 – and justify an initial investment into that community.

By diving deeply into the specific challenges of the coliving environment, we were able to develop a "chassis for intersubjective signals processing," making individual judgments legible at the group level and supporting the collective governance of a shared environment. This new institutional framework de-risks the model, making it a more viable candidate for large-scale development.

Further, as we have argued, coliving is governance's new "base case" – an action arena which is legible, has high cost of exit, and built-in opportunities for culture-building. By exploring the way that Chore Wheel balances *leverage* and *stability* in its context, we can articulate general lessons which can be applied to other, more challenging settings.

By looking to coliving communities as sites for governance innovation, we all stand to benefit: through better *housing* for ourselves and our loved ones, and through better *knowledge* of how to live freely within a complex society – not by removing constraints, but by embedding them in institutions people can see, trust, and shape.