DESIGN AS IMPROVEMENT AN ARCHITECTURAL APPROACH TO LOOKOUTS

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In this essay, I examine lookouts from the standpoint of architectural design. Over two consecutive semesters (Spring and Fall 2024), I proposed this topic in my design studios not only because of its eccentricity compared with more conventional assignments—such as designing a library or a private house—but also because it offered an opportunity to reconsider what truly constitutes a problem of architectural design. In this sense, the theme served both as an object of research and as a pedagogical tool for the students who participated in these courses.

Because lookouts are often located in remote and environmentally exposed sites, their structures must be strong enough to withstand severe seasonal stresses—particularly wind and harsh weather—while at the same time allowing unobstructed observation of the surrounding territory. For this reason, lookout cabins are typically characterized by walls that are extensively glazed or otherwise perforated along the entire perimeter. Reconciling structural resistance with visual openness is therefore one of the fundamental challenges embedded in their design. Taken together, these conditions frame the lookout primarily as a problem of engineering design—often a complex one—while aesthetic or symbolic considerations, typically associated with architecture, might appear secondary.

Yet the story does not end there. Over time, hikers and lookout enthusiasts have come to recognize these structures

as meaningful elements of the landscapes. Far from being perceived merely as functional devices, lookouts have acquired a distinct aesthetic presence within forests and mountain ranges. This reception is particularly interesting because it emerged largely outside the domain of professional architectural design. Most lookouts were not conceived by architects, and their aesthetic value therefore belongs to what might be described as an aesthetics of reception[1]—an appreciation that developed spontaneously through use, experience, and cultural memory rather than through formal design intention. For this reason, their aesthetic significance cannot easily be explained through the conventional frameworks used to describe the conventional contribution of architectural design to the built environment.

In recent years, this phenomenon has gained new relevance as recreational uses increasingly accompany the traditional service functions of lookouts. Many structures have been restored or reconstructed after damage or collapse, and some have been adapted to serve as overnight shelters for hikers and tourists.[2] These transformations inevitably introduce new questions: technological upgrades, functional adjustments, and possible modifications to the appearance of the structures themselves. In such contexts, professional architects are often called upon to intervene.

These interventions can generate new trajectories in the evolution of lookout structures, but they also carry certain risks. When architectural design is not grounded in a careful understanding of the historical and cultural logic of lookouts, it may inadvertently lead to their "homogenization." Under the influence of commercial architectural conventions and market-driven expectations, the distinctive character of lookouts may be diluted, replaced by forms that respond more to tourism imagery than to the historical logic of the structures themselves.

At the same time, the reflections developed here are not motivated by nostalgia. The argument presented in this essay is not an attempt to preserve lookouts as relics of a bygone era or to transform them into museum objects. Rather, it seeks to explore how architectural design might contribute to their future development without severing the connection with their

1 Hans Robert Jauß, *Toward an Aesthetic of Reception* (Brighton: Harvester Press, 1982).

2 Seaborn Larson, "Former Fire Lookouts a Tool for Tourism," *The Western News*, December 6, 2016. See also Tish McFadden and Tom Foley, *How to Rent a Fire Lookout in the Pacific Northwest* (Berkeley, CA: Wilderness Press, 2005).

historical evolution. In other words, the goal is not conservative resistance but a form of critical reflection oriented toward the future—one that treats historical memory as a resource rather than as a constraint.

Seen in this light, architecture can intervene not only as a creative activity but also as a form of knowledge. Its role is not simply to produce new objects but to interpret existing ones, to understand their internal logic, and to guide their transformation over time.

A useful precedent for this approach can be found more than a century ago in the early years of the U.S. Forest Service under the leadership of its first Chief, Gifford Pinchot. Pinchot understood that the construction of buildings for administrative personnel was not merely a practical matter. It was also a strategic means of shaping a recognizable public image for the newly created federal agency.

In his view, the ranger station functioned both as an operational base and as a point of contact with the public. In the *Use Book*,[3] Pinchot describes in detail the criteria for locating, organizing, and equipping the cabins that formed the basic units of these stations. Alongside these technical instructions, however, he also addressed the question of appearance. His prescriptions were brief and almost military in tone:

> *"these cabins should be built of logs, with shingle or shake roofs."*[4]

This choice of logs was not arbitrary. Logs provided practical advantages in remote environments, but they also carried symbolic significance. They conveyed an image of rustic authenticity that allowed the new federal agency to communicate its mission and identity to the public.

This dual framework—practical function combined with symbolic identity—continued to shape the work of the Forest Service's technical divisions in the decades that followed.[5] Administrators and architects refined Pinchot's initial guidelines, particularly by paying greater attention to local contexts. Beginning in the 1920s, architects working in

3 United States Forest Service, *The Use Book: The Use of the National Forest Reserves* (Washington, DC: Government Printing Office, 1905).

4 United States Forest Service, *The Use Book: Regulations and Instructions for the Use of the National Forests* (Washington, DC: Government Printing Office, 1907), 147.

5 Kay Atwood et al., *Utility and Service Combined with Beauty: A Contextual and Architectural History of USDA Forest Service Region 6: 1905–1960* (Washington, DC: U.S. Government Printing Office, 2005).

regional offices—among them William J. Fox[6]—developed projects that sought to reconcile technological modernization with stylistic and landscape integration.[7]

Interestingly, this framework applied primarily to ranger stations and not to lookouts. Within the broader building program of the Forest Service, lookouts remained largely outside the sphere of architectural design. For most of their history they were constructed without any explicit attempt to reconcile technical efficiency with aesthetic expression.

Only a few examples break this pattern. One of the most notable is the *La Cumbre Peak Lookout*, designed in 1945 by Kepler Johnson in the Los Padres National Forest.[8] Johnson proposed an experimental structure in which a steel frame supported a continuous band of glass between the walls and the roof, slanted outward along the entire perimeter. The design sought a coherent integration of structural innovation and architectural form. Yet precisely because of its sophistication—and the cost and technical expertise it required—it never became a widely reproducible prototype.

Most lookouts evolved along a very different path. Their development was less the result of architectural planning than of incremental adjustments to individual components. Over time, these adjustments often centered on the cabin itself. Although the cabin is only one element within the lookout system, it gradually became the principal reference point for typological classification.

This circumstance produced a somewhat paradoxical situation. Referring to a cabin type such as the L-4 does not necessarily indicate whether the structure stands on a tower, rests on concrete piers, or sits directly on a rocky outcrop. In other words, the final form of the lookout—the complete assembly of its components—never acquired a systematic classification of its own.

For this reason, the lookout may be understood less as a building in the conventional architectural sense than as a technical assemblage. In the terms proposed by Gilbert Simondon, it

6 "William Fox, a Butte native and recent graduate of the University of Washington's School of Architecture, was hired as the first architect." John R. Grosvenor, *A History of the Architecture of the USDA Forest Service (*Washington, DC: U.S. Government Printing Office, 1999), 33.

7 See, for instance, the Fenn Ranger Station (1936), Nexperce National Forest, Region 1. Idaho Heritage Trust, Fenn Ranger Station, accessed March 14, 2026, https://www.idahoheritagetrust.org/projects-grants/fenn-ranger-station/

8 Grosvenor, *A History of the Architecture of the USDA Forest Service*, 99.

resembles a "technical object": an entity composed of multiple components that cooperate functionally while maintaining a certain autonomy.[9] Each component—cabin, tower, stair, walkway—follows its own trajectory of development.

This characteristic helps explain why the lookout resists interpretation through traditional architectural categories. Architects usually conceived buildings as unified compositions governed by a coherent internal logic. Lookouts, by contrast, behave more like "machines" assembled from parts that respond to different operational logics.

Before the USFS began to develop a systematic technical knowledge of these structures in the mid-1910s,[10] the basic configuration of lookouts had already emerged through the practical experiences of the people who used them. Many of these experiences were adventurous, and some were even tragic. In the early decades, lookouts were essentially the product of spontaneous experimentation.

Rather than comprehensive redesigns, most changes took the form of small adjustments responding to immediate needs: a component that had failed, a feature that proved inconvenient, or a practical improvement suggested by daily use. In this sense, the history of lookouts is deeply connected to the everyday ingenuity of those who inhabited them.

Some early examples illustrate this process particularly well. Elijah "Lige" Coalman, for instance, modified a frame cabin by adding a glazed cupola above the roof, allowing observation in all directions.[11] His *Summit House* became the prototype for what later came to be known as the D-6 cabin type. Similar experiments led to the development of the D-1 cabin, where a log structure was vertically extended to create an elevated observation space.[12]

Although only a few dozen examples of these prototypes were built, they prepared the ground for a major step forward: the introduction of the L-4 cabin. Unlike earlier developments, the L-4 relied on prefabricated components that could be

9 Gilbert Simondon, *On the Mode of Existence of Technical Objects, trans. Ninian Mellamphy* (London: University of Western Ontario, 1980).

10 "Forests in Region 1 began to experiment with lookout construction as early as1915. The first lookout tower in Region 1 was erected in 1916; it comprised a small cab mounted on a windmill tower." Grosvenor, *A History of the Architecture of the USDA Forest Service*, 96.

11 Mount Hood History, "Elijah 'Lige' Coalman – Mount Hood Legend," accessed March 14, 2026, https://mounthoodhistory.com/mount-hood/elijah-lige-coalman/

12 Ray Kresek, *Fire Lookouts of the Northwest* (Spokane: Historic Lookout Project, 1984).

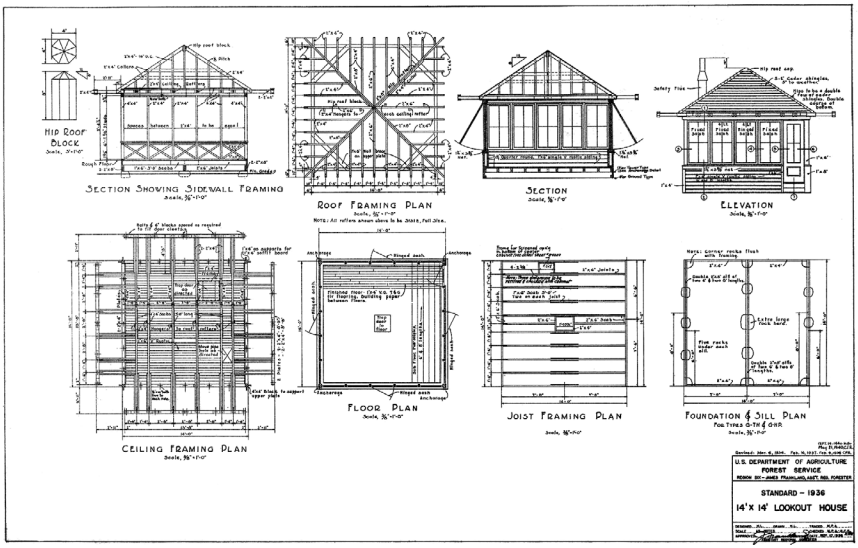

Fig. 1
Board extracted from the *Standard Lookout Structure Plans* (1938) showing the structure and standardized components of a fourteen-by-fourteen-foot cabin.

reproduced on a large scale. Standardized in the 1938 handbook *Standard Lookout Structure Plans*, prepared by the USFS Division of Engineering under T. W. Norcross,[13] the system enabled the construction of thousands of similar structures across the United States (fig. 1).

Parallel developments affected other components of the lookout assembly, including towers, stairways, and walkways. From the earliest crow's nests—or even from the simple use of natural ridges as observation points[14]—the problem of vertical access emerged as a central theme. The relationship between cabin and tower therefore evolved in close dialogue with the specific conditions of each site.

Seen from this perspective, the lookout form is not imposed by a single design gesture, but is best understood as the result of a logic of assembly that extends from the landform itself.

At this point a methodological question arises: what role can architectural design play within such a logic of assembly?

13 T.W. Norcross, *Standard Lookout Structure Plans* (Washington D.C.: U.S. Department of Agriculture, 1938).

14 "The earliest lookouts were high peaks with an unobstructed view, with tents as shelters and short mapboard stands for pinpointing the smoke on maps." Grosvenor, *A History of the Architecture of the USDA Forest Service*, 96.

Traditional architectural practice relies on composition—the search for a unified form in which individual elements are subordinated to the overall image.[15] The lookout, however, follows a different logic. Its components retain their individuality even when combined with others.

Instead of producing a unified image, the process generates a multiple image, in which each component remains legible as a distinct item. The lookout therefore appears less as a finished object than as the cumulative result of many partial interventions carried out over time.

This condition brings the lookout close to the concept of "adhocism," described by Charles Jencks and Nathan Silver as the practice of "making do with whatever is at hand."[16] In their *Adhocist Manifesto*, they describe creative moments in which hybrid forms emerge through the conjunction of previously separate systems. In architecture, adhocism is less a stylistic code than a practical attitude, closely related to the idea of bricolage. As Irénée Scalbert has argued, bricolage is not limited to artistic practice but reflects a broader mode of engaging with reality.[17] Even the most abstract forms of knowledge, he suggests, must sometimes rely on what Claude Lévi-Strauss calls the "science of the concrete"—a form of thinking that embraces circumstance and accident.[18]

Few artifacts embody this principle more clearly than lookouts, whose development has historically been shaped by precisely such circumstances. Yet acknowledging their affinity with adhocism also raises an important question. How far can we rely on the logic of improvisation alone? Can we build a coherent understanding of lookouts if we explain their evolution only through isolated moments of ingenuity or accidental discovery?

If taken too far, such an approach risks reducing their history to a series of anecdotes—a narrative populated by unexpected events and sudden flashes of brilliance. While these stories are often compelling, they may obscure the deeper processes that have shaped the evolution of the structures themselves.

15 See "Composizione/Progettazione," in *Casabella*, vols. 520–521, 1986.

16 Charles Jencks and Nathan Silver, *Adhocism: The Case for Improvisation* (Cambridge, Massachusetts: MIT Press, 1972).

17 Irénée Scalbert, "The Architect as Bricoleur," *Candide. Journal for Architectural Knowledge 4* (2011): 69–88.

18 "To a degree all constructions, all knowledge involves bricolage. Even the most abstract science must sometimes appeal to the science of the concrete." Ibid.: 81. See also, Claude Lévi-Strauss, *The Savage Mind* (Chicago: University of Chicago Press, 1962).

For this reason, it may be more productive to shift the focus from "improvisation" to "improvement."

Improvement introduces a different conceptual framework. Rather than emphasizing isolated moments of invention, it highlights a continuous process linking past and present. Each intervention becomes part of an ongoing trajectory in which earlier conditions are not erased but transformed.

Understood in this way, design no longer aims simply at producing novelty. Instead, it generates innovations that acknowledge both a point of departure and a provisional point of arrival. The old and the new become inseparable elements of the same process.

This perspective brings design and preservation into alignment. An act of design becomes simultaneously an act of continuation.

A similar insight appears in Stewart Brand's influential book *How Buildings Learn* (1994).[19] Drawing on analogies with biology, Brand suggests that buildings behave like organisms: they adapt, evolve, and accumulate traces of their past transformations. From this point of view, buildings do not simply change from one state to another. They pass through successive phases while retaining the memory of previous configurations. As Brand famously remarks: "*It is much easier to continue than to begin*."[20]

Improvement therefore becomes a method of working with existing structures rather than replacing them. Each intervention addresses a specific problem while preserving the traces of earlier solutions, much like a black box that records the history of its own adjustments.

Although Brand rarely discusses architecture in strictly aesthetic terms, his argument opens the possibility of what might be called an "aesthetics of transition"—an appreciation of forms that exist between established stylistic codes. Seen in this light, improvement becomes less a supporting tool within architectural practice than a conceptual shift. It invites us to reconsider architecture not as the creation of isolated objects but as participation in a continuous process of transformation shaped by circumstances and time.

Lookouts provide an especially clear illustration of this

19 Stewart Brand, *How Buildings Learn: What Happens after They're Built* (New York: Penguin Books, 1995).

20 Brand, *How Buildings Learn: What Happens after They're Built*, 105.

process. Within them, the improvement directives issued by the U.S. Forest Service coexist with countless spontaneous modifications carried out by the personnel who inhabit these structures. Historically, these informal adjustments have often been the true drivers of their evolution.

The question that follows is whether such improvements can move from spontaneity to method—from improvisation to design. In my own teaching, I have explored this possibility by introducing improvement as a distinct phase within the design process.[21] Situated between investigation and innovation, this phase focuses on identifying a specific component of an existing lookout and exploring how it might be transformed without disrupting the overall logic of the structure.

One example may help illustrate this approach. Because the cabin has historically functioned as the primary parameter of typological classification, the project focused on improving a cabin type rather than a specific lookout. The case concerns the L-4 cabin, whose interior space measures fourteen by fourteen feet within a light wood frame. Around this enclosed space runs a three-foot-wide catwalk bordered by a guardrail. The catwalk serves both as an observation platform and as the point where the stairway arrives before entering the cabin. It therefore acts as an intermediate zone between exterior and interior.

Recognizing this space as an external extension of the cabin, one student explored the relationship between visibility and security. The proposal relocated the cabin's glazed walls outward to the perimeter of the catwalk, extending them to meet the ends of the roof rafters and creating a new enclosed volume measuring twenty by twenty feet (fig. 2).

This intervention increased privacy and safety while also producing a new aesthetic effect: once the external guardrails were removed, the cabin's stereometric clarity became more evident. Because the project preserved the original structure while integrating it into a larger enclosure, it could be understood as an improvement rather than a replacement.

Not every intervention labeled as improvement, however, produces positive results. When an intervention fails to recognize the lookout as an assembly of autonomous components, it risks

21 Andrea Alberto Dutto, "Lookout Towers Go to College," *Lookout Network: Quarterly Publication of the Forest Fire Lookout Association 35*, no. 2 (2024): 8–9 (Vienna, VA: Keith Argow Publisher). See also, Andrea Alberto Dutto, "Recreation, Preservation, and Repair: Architecture of the U.S. National Forest System," in *ACSA 113th Annual Meeting: Repair*, ed. Sara Jensen Carr and Rubén García Rubio (Washington, DC: ACSA, 2025), 112–119.

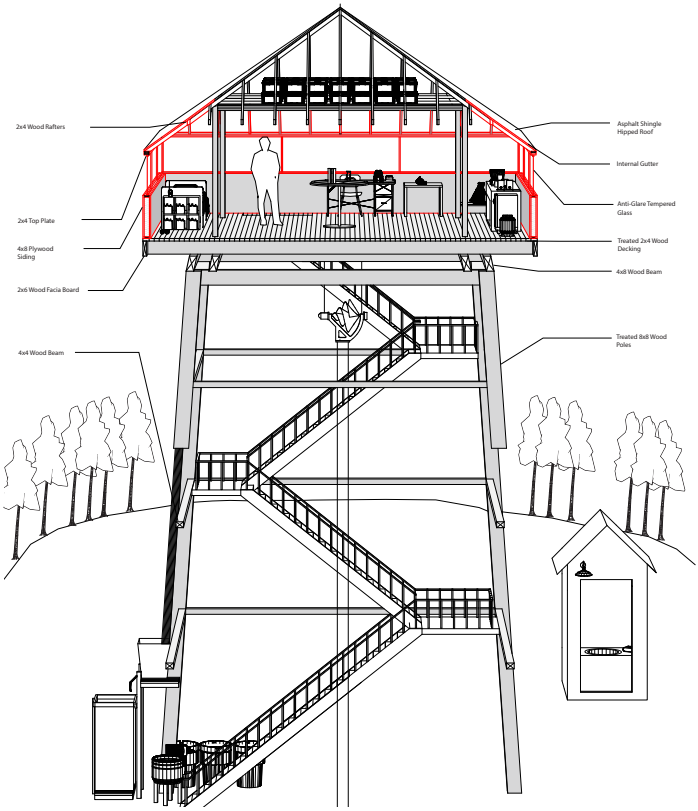

Fig. 2
Improvement project for an L-4 cabin developed as part of Design Studio ARCH 454, held at the Department of Architecture, University of Idaho, Fall 2024. Student: Mauricio Lagunes.

distorting its underlying logic. In such cases, the damage is not necessarily material but typological: the coherence of the structure's internal system is compromised.

At the same time, preserving lookouts does not mean freezing them as historical images. Attempts to replicate their past appearance without understanding their internal logic may prove just as harmful as insensitive redesigns.

Only by striving to understand the underlying mechanism—the "machine" of the lookout—can architectural intervention become genuinely constructive. Returning to the premise of this essay, it is precisely this attitude that can ensure the authenticity of future architectural contributions to the heritage of lookouts, both those that already exist and those yet to be built.

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