



How architecture keeps its secrets

Description

Here's a basic application of the containment principle. If you put something into a cardboard box and close the lid then it's concealed from view. Buildings also conceal things.

I discussed the house-museum of the architect [John Soane](#) in a previous post. Soane was a practitioner within a secret society (Freemasonry), which in turn traded in coded messages and symbols with supposedly secret meanings. Soane's house-museum amplifies what all buildings do, and by extension what happens in cities.

Such an analysis helps me understand the idea of a *cryptographic urbanism*. Here are the seven properties of cryptography I outlined in my last post. I'll now reset and test them against architecture's operations in making and preserving secrets.

1. Conceal. Cryptography deploys ciphers for concealing messages, communicated via text, symbols or other devices.

If you put your wallet in a box, the box in a safe, the safe in a room, and the room is in a building, then the wallet is in the building. If you can't see the safe, then you can't see the wallet either, even if the box and the safe door are open. In spatial and logical terms this is the *commutative principle* of containment and visibility.

This is basic geometry, as well as an application of set theory, and of what George Lakoff and Mark Johnson in their seminal studies of metaphor called entailments of the containment metaphor. Cryptography hides messages inside code; buildings hide their contents. You can hide in a building from the elements and enemies. Architecture conceals.

In his conclusion to an interesting essay outlining the history of domestic privacy, Robin Evans remarked on how architecture (at least in the 20th century) limited the horizon of experience.

reducing noise-transmission, differentiating movement patterns suppressing smells, stemming vandalism, cutting down the accumulation of dirt, impeding the spread of disease, veiling embarrassment, closeting indecency, and abolishing the unnecessary (90).

He sees the various means by which architecture *contains* as providing a necessary but limiting conception of architecture.

2. Reveal. As well as messages, cryptography provides access to something. Or the message that it reveals affords access to a file or information, as does a key to a door.

Buildings specialise in controlled revealing. This access applies to different sensory modalities: blocking off and revealing sights, sounds, smells and what you can touch. Visitors and occupants move through doors. They can also peer through doors, windows, screens and from balconies and mezzanines. Membranes, openings, shafts, atriums and stairwells provide access to circulation, sounds and airflows.

3. Combine. Cryptography works with combinatorics: arrangements of symbols or other abstruse sequences as in a combination lock, password or [hash code](#).

Buildings are made up of arrangements of elements. By my reading this is an aspect of architectural design only nascent until twentieth century modernity.

According to Aristotle, with beautiful things “nothing can be added to them or taken away” (101). Andrea Palladio (1508–1580) amplified this assertion.

“Beauty will result from the form and correspondence of the whole, with respect to the several parts, of the parts with regard to each other, and of these again to the whole; that the structure may appear an entire and complete body, wherein each member agrees with the other, and all necessary to compose what you intend to form” (1).

Factory production, modularisation, assemblies and more complicated reflections on function and human interaction expanded architecture as an art of perfect arrangement to the deliberative assembly of parts. The task of designing a building presents architects with configurational challenges analogous to solving a puzzle.

Sometimes these configurations shift and change in real time, via furniture, moveable partitions, lifts, moving walkways, and responsive sensor-controlled architectures. Spatial arrangement offers challenges analogous to working through combinations in [cryptanalysis](#), though with no single correct or optimal “solution.”



4. Navigate. A code breaker (cryptanalyst) searches through a sequence with many branching paths to explore options, one of which leads to the plain text message. Programmers responsible for creating secure encryption invent algorithms that draw on similar processes of path navigation.

The architectural motif or the [labyrinth](#), provides a major analogue for the process of searching through combinations that eventually lead to a hidden message. Any building can present alternative paths, or a single path as in a processional journey that weaves through space.

The [Design Methods Movement](#) championed the arts of solving spatial problems as search processes, analogous to traversing a complicated and dynamic maze of possibilities.

5. Originate. Cryptography helps preserve the concept of an original, a plain text message, an original meaning. It also provides analogies for history (or historicism) as a journey into the hidden past.

Architecture's historicist theories are dedication to origins, a return to a first authentic primitive source – the garden of Eden, the primitive hut, Noah's ark, the Tabernacle, the Temple of Solomon, the Celestial City, Utopia. Looking back is also a looking forward.

In a previous post I referred to Anthony Vidler's account of Freemasonry in Architecture and its quest to –return to origins, – a motivation it shares with architecture. I would add that the quest of authentic origins extends into the Primitivist strands of modern art and architecture.

6. Transact. As with devices in written language in general, the purpose of cryptography is to preserve, but also to facilitate social interactions.

Buildings undoubtedly protect and conceal. They are also places in which transactions and interactions take place: social, economic and pragmatic. Reflecting architecture's pragmatism, Evans celebrates

–an architecture arising out of the deep fascination that draws people towards others; an architecture that recognizes passion, carnality, and sociality– (90).

The idea that architecture provides settings for meaningful human interactions pervades conceptions of contemporary urban design.

7. Risk. Cryptography plays on uncertainties. Cryptography may obfuscate the fact that it is concealing a hidden message, as in the case of [steganography](#).

Buildings and their elements are typically multifunctional. They may also confuse and obfuscate their functions and structures. Part of the pleasure and functioning of architecture comes from uncertainty about whether you are in or out, trading on the ambiguous condition of the [threshold](#) as architectural motif. It's a condition in any case of architectural interpretation. See post: [Introducing hermeneutics to an architectural audience](#).

Dissolving architecture's secrets

Various devices work to confound or supplement architecture's engagement in secret keeping – not least the inventions of photography, secretive surveillance methods, digital cameras and display screens.

References

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Note

- The image is of a tomb by the famous Edinburgh architect William Playfair (1759-1823). He was a member of the Freemasons, as reflected in this choice of a pyramidal structure. The grave is of William and Sophia Rutherford. William was high up in the Scottish legal system and had it built for his wife, who he outlived, according to a blog post by [Brian Lavelle](#).
- Today I changed the template for this blog site, which applies to all previous posts as well.

Category

1. Architecture

Tags

1. cryptography
2. secrets
3. Soane

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