

CONSTRAINT AND CREATIVITY: QUEERING THE FORMAL SYSTEM



→ What is a formal system?

- Start with an axiom/material (the gay experience)
- Continue with a rule or self-imposed constraint (a specific sexual ethic)
- Finish with the result of the process (the side B experience and its creative solutions)

→ Fleshing-out the formal system:

(Definition loosely based on Hofstadter's Gödel, Escher, Bach (GEB) and personal experience)

- Start with an axiom (in mathematics) or material (creative fields)
 - A given truth or idea or experience
- A rule or constraint develops the initial idea, material, or axiom
 - In formal systems developed by human beings, these constraints are either consciously self-imposed or selected for based on specific desirable outcomes or goals (see the work of Tymoczko and Huron regarding tonality and psychoacoustics)
- The result(s) of the process is/are the formal system itself and what the mathematician or artist or thinker chooses to do with it. The formal system typically offers consistency, if not always completeness (see these descriptions of Gödel's work in GEB). In mathematics, this allows for the use of mathematical induction to ensure logical consistency. In creative fields, consistency allows for organic, unified, and integrated development of the creative project, often with slight imperfections due to human error. (These can be quite beautiful and significant!)

→ Examples from art music:

- J.S. Bach & Johannes Ockeghem: canons, fugues, chorale preludes, any self-referential, tightly-constructed contrapuntal work
- Berg and Webern: formal and serial structures (Berg's *Wozzeck*, Webern's opus 21)
- Minimalist music of the variety of Steve Reich, Simeon ten Holt, (some) Philip Glass, Tom Johnston, James Tenney, etc.
- Thomas Adés: interval pairings in the Violin Concerto, and fugues in *In Seven Days*
- Hans Abrahamsen: the canonic and formal structure of *Schnee*
- Andrew Norman: dynamic orchestration in *Play*
- Schenker's analysis of the *Ursatz* (fundamental structure) in Bach, Beethoven, Brahms, etc.
- Post-tonal music theory: total serialism, transformation theory, spectralism, Computer-Assisted Composition

→ Examples from Mathematics:

- Euclid's *Elements*: use of mathematical induction in geometry
 - Later developed into hyperbolic and spherical geometry
- Alfred North Whitehead and Bertrand Russel: *Principia Mathematica*

- Kurt Gödel: Incompleteness Theorems
- Charles Babbage, Alan Turing: early computational machines
- David Hilbert's Twenty-Three Problems

→ Examples from Literature:

- Raymond Queneau: stylistic/genre constraints in *Exercises in Style*
- Tom Phillips: erasure poetry and visual art in *A Humument*
- Georges Perec: use of lipogram in *A Void*; mixing of formal constraints in both the structure and narrative content of *A Void* and *Life a User's Manual*
- Christian Bök: **extreme** formal constraints and word games in *AEIOU*, *The Xenotext*, *Crystallography*; *The Xenotext* features poetry that has been constrained so as to be successfully embedded into the genetic structure of a living microorganism.
- Anthony Etherin: multitudes of remarkable structural constraints

→ An example from Law: Peter Suber's constraint-based self-referential game *Nomic*.

→ Reflections:

The side B position itself seems to me to be the result of two almost paradoxical truths: "I'm a Christian with a particular belief about sexual expression," and "I'm gay." Through the arduous constraints of theology, deliberation, and lived experience, we create a very messy, beautiful, and compelling piece of art using the logic of our own lives.

Much as a casual observer might wonder why Perec goes to the trouble to write a novel without the letter "e," we are faced with similar questions from both sides of the culture war: "why do you insist on describing yourself as gay?" or "why don't you just have sex with the people you like?" Outside observers don't always realize that when I impose a constraint on my musical ideas or my own existence in the world, I can arrive at a creative freedom which enables discoveries and experiences of the surprising and the sublime. This very community is a testament to both God's grace in our lives as well as the amazing and resourceful ways that side B people create connection, intimacy, and chosen family in the face of self-imposed constraints.

To be very clear: there is way too much complexity concerning sexuality and the side B experience for the concept of a formal system to adequately encapsulate. Additionally, the creative freedom which self-imposed constraint often encourages does not cancel out the difficulty and heartache of our constraints entirely. Even as we are ingenious and creative and insightful, our lives continue to be difficult in ways that they never should have been. I am not interested in the toxic lie that artists or LGBT+ people must struggle in order to arrive at greatness.

*I hope, though, that formal systems will remind us that there is much beauty and freedom and truth to be discovered when **we** choose a difficult path.*

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