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RESEARCH ARTICLE

Segregated Design: A New Way of Thinking About ERVs

By Donny Budinsky

Author's Note

This article continues my active research project on endogenous retroviruses (ERVs). In a previous post, I explored polymorphic solo LTRs in humans and mice. Here, I take the next step: presenting a fresh concept called *Segregated Design*—a way of explaining why some ERVs appear unfixed, yet still show signs of purpose and function.

The Challenge: Functional but Unfixed

Creationists have long distinguished between two categories of ERVs:

- **Fixed ERVs**: functional, designed units of DNA that serve essential purposes (such as embryological development or gene regulation).
- **Unfixed (polymorphic) ERVs**: genuine viral insertions, often neutral or harmful, found in some individuals but not all.

This framework works well—until we encounter cases where **unfixed ERVs or solo LTRs appear to have functional roles.** Critics seize on this as evidence that creationists cannot consistently explain the data.

But is that true? Not necessarily.

The Segregated Design Hypothesis

Here's a new way forward:

Some ERVs and solo LTRs may have been **originally created as functional elements and fixed across the population.** However, due to post-Flood history—bottlenecks, recombination events, population dispersal (like Babel), and genetic drift—these once-universal sequences may now appear as *unfixed*.

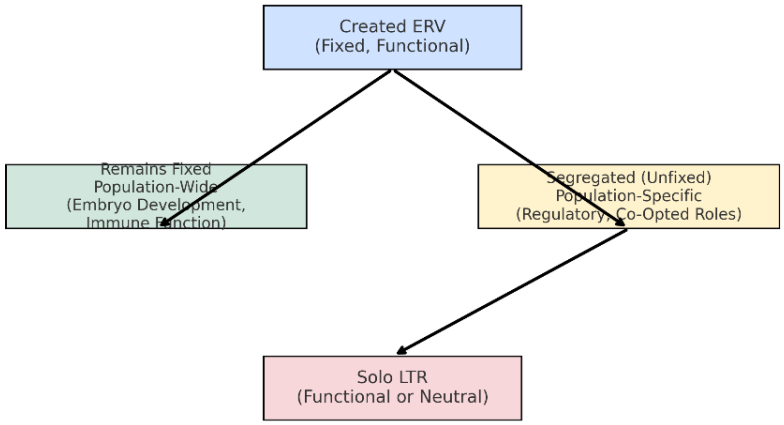

Figure 1. Expanded Segregated Design Model.
Created ERVs begin as fixed, functional elements within the genome. Over time, some remain fixed with essential roles (such as in embryological development and immune function), while others become population-specific (unfixed) through segregation,

bottlenecks, or drift. These unfixed ERVs can sometimes exist as solo LTRs, which may be neutral or retain regulatory functions. This model helps explain both fixed and unfixed ERVs within a creation framework while highlighting the genome's built-in capacity for adaptability.

In other words:

- What looks like a "recent viral insertion" may actually be the remnant of a **designed feature that became segregated** across populations.
- Today, we see it as a polymorphic ERV or solo LTR, but its origins point to creation, not infection.

This idea is what I call **Segregated Design**.

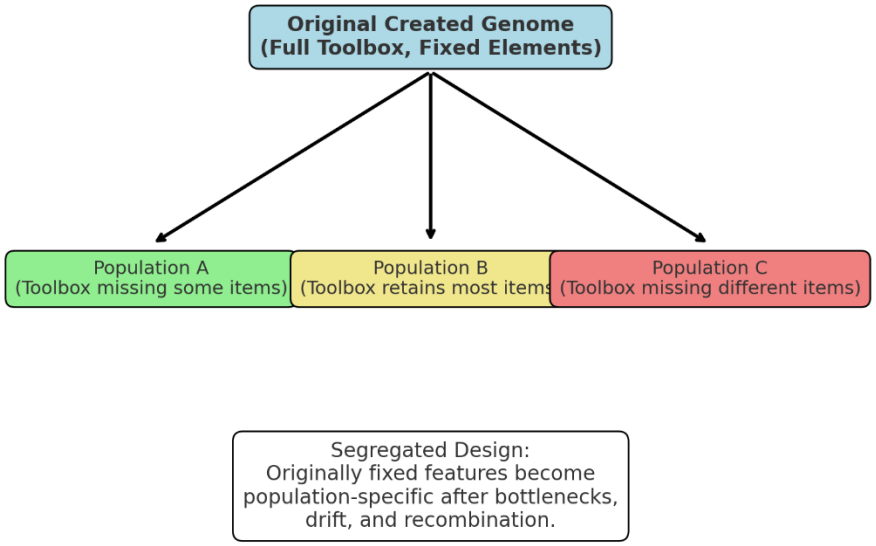

Figure 2. Segregated Design Further Illustrated.

The original created genome can be thought of as a "full toolbox," with all necessary functional elements fixed in place. After population bottlenecks, drift, and recombination, different populations may lose or retain different elements of that toolbox. Population A is missing some items, Population B retains most, and Population C is missing different ones.

This illustrates how originally fixed features can appear “unfixed” or population-specific today, without requiring evolutionary invention.

Why This Matters

Segregated Design helps resolve a key challenge:

- It explains why some unfixed ERVs still look functional.
- It preserves the core prediction of the creation model: truly essential, foundational functions should remain tied to **fixed, created ERVs.**
- It opens a new line of research into how designed sequences might become segregated, and how often this occurred in post-Flood history.

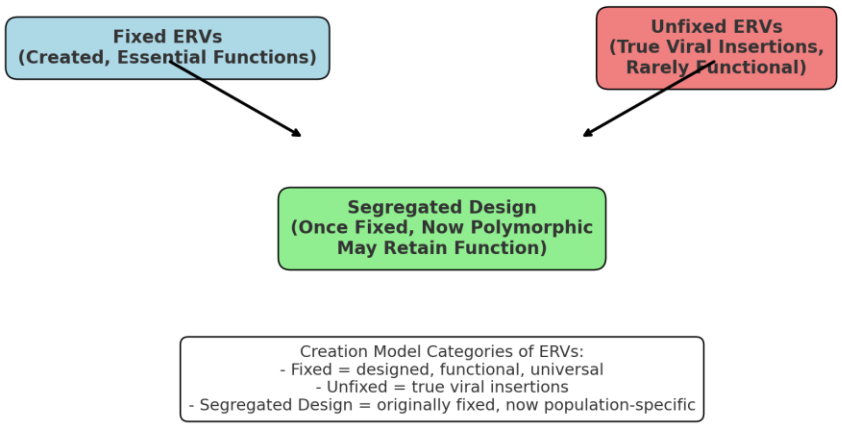

Figure 3. The Three-Category ERV Model in a Creation Framework.
Fixed ERVs represent created, functional, and universal features. Unfixed ERVs are true viral insertions that rarely provide essential functions. Segregated Design explains elements that were once fixed but became polymorphic after events like bottlenecks or drift, while still

potentially retaining function. Together, these three categories provide a comprehensive framework for interpreting ERVs in light of design.

Predictions of the Model

Like all good models, Segregated Design makes testable claims:

1. **In humans**:
   – Essential ERV functions (e.g., embryological roles) will always be fixed.
   – Polymorphic ERVs may show secondary or regulatory functions, but not indispensable ones.
2. **In animals with rapid reproduction (like mice):**
   – More segregated design will be visible, with polymorphic ERVs reaching higher frequencies.
   – Some will even appear to have immune-related functions, consistent with created design later segregated across populations.
3. **Tracing retroviruses back to their hosts:**
   – Harmful exogenous retroviruses (like HIV) likely originated in a host where they were less harmful, aligning with the idea that they began as functional elements before crossing into new species.

Why This is Exciting

Far from being a problem for creation, polymorphic ERVs and solo LTRs are an opportunity. They allow us to refine our model, generate predictions, and show that creationist thinking is not static—it grows, adapts, and expands as the data demands.

The **Segregated Design** concept is still early, but it adds another tool to the creation model of ERVs. Instead of being forced into the evolutionary box, we can provide a framework that is consistent, explanatory, and testable.

Additional Reading

Budinsky, D. (2025, September 7). *Do unfixed ERVs challenge the creation model?* Standing For Truth Ministries (Patreon). **https://www.patreon.com/posts/do-unfixed-ervs-138408790**

Budinsky, D. (2025, September 7). *The future of ERV research: Predictions, models, and surprises*. Standing for Truth Ministries. **https://standingfortruthministries.com/the-future-of-erv-research-predictions-models-and-surprises/**

PDF Article

Budinsky, D. (2025). *Rethinking endogenous retroviruses*. Standing for Truth Ministries. https://standingfortruthministries.com/wp-content/uploads/2025/09/Rethinking-Endogenous-Retroviruses-by-Donny-Budinsky.pdf

Book (Black & White Edition)

Budinsky, D. (2022). *The endogenous retrovirus handbook: Dismantling the best evidence for common descent* (Black and white ed.). Amazon. https://www.amazon.com/dp/B0B14KHL8G

Book (Full Color Edition with Variant Cover)

Budinsky, D. (2022). *The endogenous retrovirus handbook: Dismantling the best evidence for common descent* (Full color ed., Variant cover). Amazon. https://www.amazon.com/dp/B0B1B1N8F6