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Leaky Gut, Leaky Boundaries

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At the time of this writing, the hashtag “leakygut” has over half a million Instagram posts. A colloquial term used to index increased intestinal permeability, “Leaky Gut Syndrome” has become part of a particularly simmering set of debates over the validity of functional health diagnoses. Responding to anxieties over leaky gut, digital alternative health practitioners bombard their followers with content about sealing their gut lining and defending their intestinal barrier from breach by peddling supplements and detoxes. This discourse circulates within Make America Healthy Again networks, mobilizing anxieties about toxicity that map bodily sovereignty onto national sovereignty.

My project examines how digital platforms produce health knowledges that naturalize anxieties about borders and permeability using the language and affective validation of biology. Through analysis of Instagram posts about leaky gut collected during my fellowship with the Advancing Digital Health Humanities Institute at UCSF, I demonstrate how “leaky gut” discourse transforms the gut from a selectively permeable membrane into a defensive barrier requiring constant fortification against invasion. Platform affordances privilege specific bodily imaginaries while marginalizing others, producing an alternative health epistemology that feels more trustworthy than institutional medicine, but that inherits national anxieties about the compromising of bodily purity.

Analysis

During the fellowship, I used corpus linguistics software (AntConc) to analyze the textual content of an initial sample of 50 Instagram posts tagged #leakygut. The findings are striking: the word “barrier” appears 27 times. “Wall” appears 7 times. “Membrane”—the scientifically legible term for the intestinal lining—appears zero times.

A membrane's function is typically to mediate passage and to allow nutrients through while blocking pathogens. But when the scientific term “permeability” does appear in the corpus I study (24 instances), it is largely pathologized. Every instance I found connected permeability to damage, toxins or inflammation.

The three instances of “sealing” in the corpus appear alongside “heal” and “repair,” constructing impermeability as virtue and permeability as pathology. Substances external to the gut are consistently described through the language of trespass: slipping, seeping and leaking. This language constructs bacteria as intentional actors moving covertly, exploiting weakness and entering without authorization.

Visual content reinforces these patterns: diagrams on Instagram consistently depict the gut lining not as an interface but as a defensive wall under siege. Arrows point inward, showing invasion. “Foreign particles” are rendered in threatening reds and blacks, crossing from contaminated exterior to clean pink interior. Before/after comparisons show the “healthy gut” with thick, impermeable barriers and the “leaky gut” with gaps, breaks, and breaches. The visual grammar produces an anxiety about invasion rather than about restriction.

This asymmetry, I argue, reveals a psychic anxiety about the horror of failed boundaries. At the heart of my analysis is a crucial distinction between the interface and the barrier. Physiologically, the intestinal membrane functions as a sophisticated interface. It is selectively permeable, mediating necessary exchange between inside and outside, and requires productive friction to operate effectively. But leaky gut discourse reimagines the gut as a barrier that should remain perpetually sealed. This fantasy of impermeability maps directly onto fantasies of sealed borders.

The language and framing of leaky gut produces material interventions that are worth interrogating. The barrier framework drives people toward extreme elimination diets and gut cleanses that pathologize the leakiness inherent to bodily function.

Historical work

The discourse of Leaky Gut of course has a history. Through archival research at the National Library of Medicine, I am tracing how intestinal permeability became understood as “leakiness.”

In the 1960s, Jacob Fine proposed a contested hypothesis that gut permeability in medical shock allows bacterial toxins to leak from the gut into the bloodstream. Many contemporaries seemingly resisted his work, unable to replicate his findings. But Fine's framework provided the template needed for contemporary “leaky gut” discourse: permeability as a cause for chronic illness. In the 1980s-1990s, research on hemorrhagic shock and sepsis identified tight junctions between intestinal cells as the site of permeability. The discovery of zonulin, a protein regulating tight junctions, in 2000 provided a measurable biomarker for studying leakiness.

I am now exploring how “Gulf War Syndrome” research in the 1990s may represent a crucial hinge point when intestinal permeability shifted from acute infection to chronic environmental exposure. The relationship between increased intestinal permeability and the mysterious “Gulf War Syndrome” created the cultural conditions under which intestinal permeability became a compelling framework for understanding what happens when bodies encounter “the outside.”

Functional medicine popularized this contested, marginal research in the 2000s through books like Elizabeth Lipski's *Leaky Gut Syndrome* (1998) and Gloria Gilbere's *I Was Poisoned by my Body* (2001). Across these transformations, the concept maintained a core anxiety around the permeable gut as a site of failure. Platform affordances have more recently amplified this anxiety by, for example, collapsing the affective distance between fear of substances crossing the gut lining and fear of bodies crossing the border.

Resisting the desire to operate purely from a hermeneutic of suspicion, I take seriously what draws people to this discourse. Many people engaging with leaky gut content are exhausted with medical systems that dismiss their symptoms. The pleasure of diagnostic self-recognition is real and worth sitting with. Nonetheless, treating leaky gut discourse as a kind of necessary epistemic resistance misses how it gets mobilized within reactionary politics. Leaky gut is increasingly a coherent alternative epistemology with its own methods of knowledge production and validation, circulating within MAHA networks that link bodily purification to national hygiene.

Taking Abigail Dumes' important work on chronic Lyme as a model, I ask how we can preserve the creative, participatory, pleasurable dimensions of vernacular health knowledge while resisting the nationalist body politics it has been coopted into. How do we intervene without reproducing the expert/lay hierarchies that created distrust in the first place?

My attempt at an intervention uses resources I plan to collect from the NLM to produce a public-facing digital timeline that historicizes leaky gut discourse, showing participants where their frameworks come from. My hope is that this timeline will visibilize the somewhat suspect origins of leaky gut as a pathology without folding back into a debate over whether leaky gut is "real" or not.

The timeline will be accompanied by a piece I hope to submit to the journal *Medical Humanities* in 2027. Drawing on Jasbir Puar's theorization of debility, my essay will examine how leaky gut discourse marks feminized, racialized, and disabled bodies as inherently permeable. As feminist sociologists studying the "leaky body" have shown, leakiness has always been feminized. The gut joins menstruation, lactation, pregnancy as sites where female bodies supposedly leak inappropriately. Through my attempt to link Gulf War Syndrome to leaky gut, I show how this anxiety is also racialized.

I end by asking: what if we used different metaphors? What if platforms could encourage the language of the interface instead of the barrier and complexity instead of purity? Could different languages give us different ways of relating to bodies that might intervene in our broader political imagination about the body as a site of intervention?

These questions matter urgently as digital health discourse feeds directly into policy. Understanding how alternative biolegitimacy operates and where scholars can intervene without reifying historically suspect expert/layperson hierarchies is essential work for anyone invested in more equitable health futures.