► LUIS ESTRADA-GONZÁLEZ, *On some alleged irrelevances in inconsistent mathematics (and elsewhere).*
Instituto de Investigaciones Filosóficas, UNAM.
E-mail: loisayaxsegrob@comunidad.unam.mx.

Many practitioners of inconsistent mathematics, who are otherwise sympathetic to relevance logics and the philosophies commonly associated with them, give up those sympathies in light of certain implicative results where any significant content-sharing between antecedent and consequent is missing. One of those results is Meyer's proof that every self-identity in arithmetic is implied by any true identity —i.e. $(m = n) \to (k = k)$, for every m, n and k in $\mathbf{R}^\sharp$, Peano arithmetic on top of the logic $\mathbf{R}$—. Some of those irrelevant implications, like $(0 = 1) \to (m = n)$, for any m and n, resonate deeply, being valid under stricter relevant logics, such as $\mathbf{DK}$.

There are other implications in the same family, known in classical mathematics, that have not garnered much attention in the inconsistent mathematics community, but whose proofs require weak logical assumptions, for example,

- $(\mathbf{1} \cong \mathbf{0}) \to (A \cong B)$ in category theory, with $\mathbf{1}$ and $\mathbf{0}$ terminal and initial objects in a given category, respectively, and A and B any two objects in the same category;
- $(\top \dashv\vdash_{\mathbf{L}} \bot) \to (\phi \dashv\vdash_{\mathbf{L}} \psi)$, for any ϕ and ψ, and with $\top$ and $\bot$ (Churchian) truth and falsity constants, respectively, in a given formal language.

In this talk, I will show that there is nothing irrelevant *in the proofs*, and that the implications, as usually presented, misrepresent what is actually proved.