A tail of a generic real Classifying invariants for E_1

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We will see some structural results about this model. The main topic of this talk is: what do the properties of this model tell us about E_1 ?

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E is **Borel reducible** to *F*, $E \leq_B F$, if there is a Borel reduction. \implies Classifying invariants for *F* can be used to classify *E*.

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Question: is (1) optimal? Cichon-Pawlikowsky: $\mathfrak{b}^{V[x]} = \mathbf{add}(\mathcal{B})^V$

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$$\begin{array}{rl} - E_1 \text{ on } (2^{\omega})^{\omega}, x E_1 y \iff (\exists n)(\forall m > n)x(m) = y(m). \\ - \text{Fix } x \in (2^{\omega})^{\omega}. \text{ Given } f \in \omega^{\omega}, \text{ Let } [x \upharpoonright f] \\ \text{ be the set of all finite changes of } x \upharpoonright f. \\ x \\ \text{This is } E_1\text{-invariant. } ([x \upharpoonright f] \text{ is an } E_0\text{-class.}) \\ 1 & 0 & 1 & 1 & 0 \\ 0 & 1 & 1 & 1 & 1 \\ 1 & 1 & 0 & 0 & 1 \\ 1 & 0 & 0 & f \\ 1 & 1 & 0 & 0 & 1 \\ 1 & 0 & 0 & 1 \\ 1 & 1 & 0 & 0 & 1 \\ \end{array}$$

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Note: Given Cohen-generic x, $\langle [x \upharpoonright f_{\alpha}] \mid \alpha < \mathfrak{b} \rangle \in M$. Claim $\langle [x \upharpoonright f_{\alpha}] \mid \alpha < \mathfrak{b} \rangle$ has no choice function in M.

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Thanks for listening!