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On the construction of the EO_n 's

André

①

$$\left(\begin{array}{l} \text{reduce} \\ \text{mod} \\ M \end{array} \right) \cdot \pi_0 : A_{\infty}^{LT} \longrightarrow \mathcal{Fg}_{\text{sep. closed}}^{\text{or}}$$

Seminar
on the
Hopkins
Miller thm

is an equivalence of topological categories, i.e.

- essentially surjective
 - fully faithful in topological sense :
- } have shown this in Vignati's talk

$$A_{\infty}^{LT}(E, F) \longrightarrow \mathcal{Fg}((\mathbb{R}_2, \Gamma_2), (\mathbb{R}_1, \Gamma_1))$$

is a homotopy equivalence.

discrete topology

$$E_2 \in A_{\infty}^{LT} \longmapsto (F_4, \Gamma_2)$$

$$G = \tau^* \times \mathbb{Z}/12$$

↕ binary tetrahedral group

tetrahedral group (order 12) $\subset SO(3)$

look at preimage in univ. cover of $SO(3)$

i.e. in $SU(2)$,

this is a central extension (universal one)
there is

an action of $\mathbb{Z}/2$ on the tetrahedral

$$1 \rightarrow A \rightarrow \overline{G} \rightarrow G \rightarrow 1$$

group corresponding to the outer autom we get by exchanging vertices & faces. $\rightsquigarrow \times$

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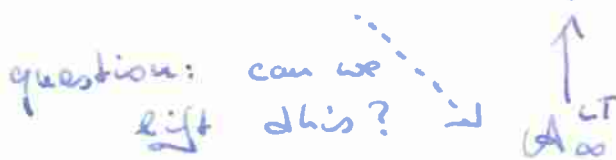
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Also write G for the category \mathcal{G}_G .

②

We have $G \rightarrow \text{Fig}^{\text{op}}$

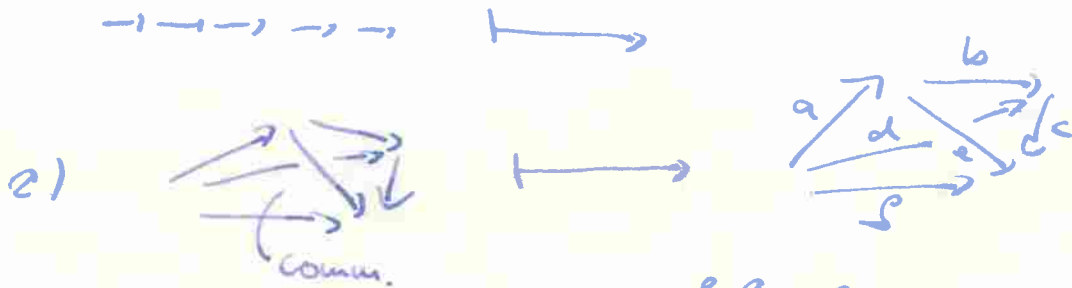
Seminar
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Once we lift it (for a good model of E_2 that has strict action of G).

We can form $EO_2 = E_2^{hG} = F(EG_+, E_2)^G = \frac{\text{Equiv } E_2}{G}$

① Relax notion of functor



3) ... cube ...

$$\begin{matrix} ea & \approx & f \\ 21 & \text{||||} & k \\ cba & \approx & ccb \end{matrix}$$

htpy's come from first step, square extra piece

will allow us to def some notion of E^{hG}

② second idea:

$$\begin{array}{ccc} \tilde{G} & \longrightarrow & A_{\infty}^{LT} \\ \cong \downarrow & & \downarrow \cong \\ G & \longrightarrow & \text{Fig}^{\text{op}} \end{array}$$

$$\tilde{G} = \left\{ \begin{array}{l} 1 \text{ object} \\ \text{morphisms} = A_{\infty}^{LT}(E_2, E_2) \\ \text{that map to } G \\ \text{i.e. has 24 connected components} \dots \end{array} \right\}$$