Moerdijk: Dendroidal sets and infinity-operads

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8:52 AM

Today an Operad means "coloured operad" — a pair (C, P):

C — a set of "colours"

For each sequence $c_1 \dots c_n; c$ $(n \geq 0)$ a set $P(c_1 \dots c_n; c)$ of "operations"

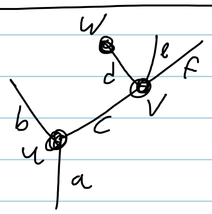
w/ std. axioms

(has unit 1_c for every $c \in C$)

A P-algebra is $\{A_c\}_{c \in C}$ w/ . . . . .

A Category w/ objects $= C$ is a "linear only" coloured operad.

A map between coloured operads $(C, P) \to (D, Q)$ may change colours?

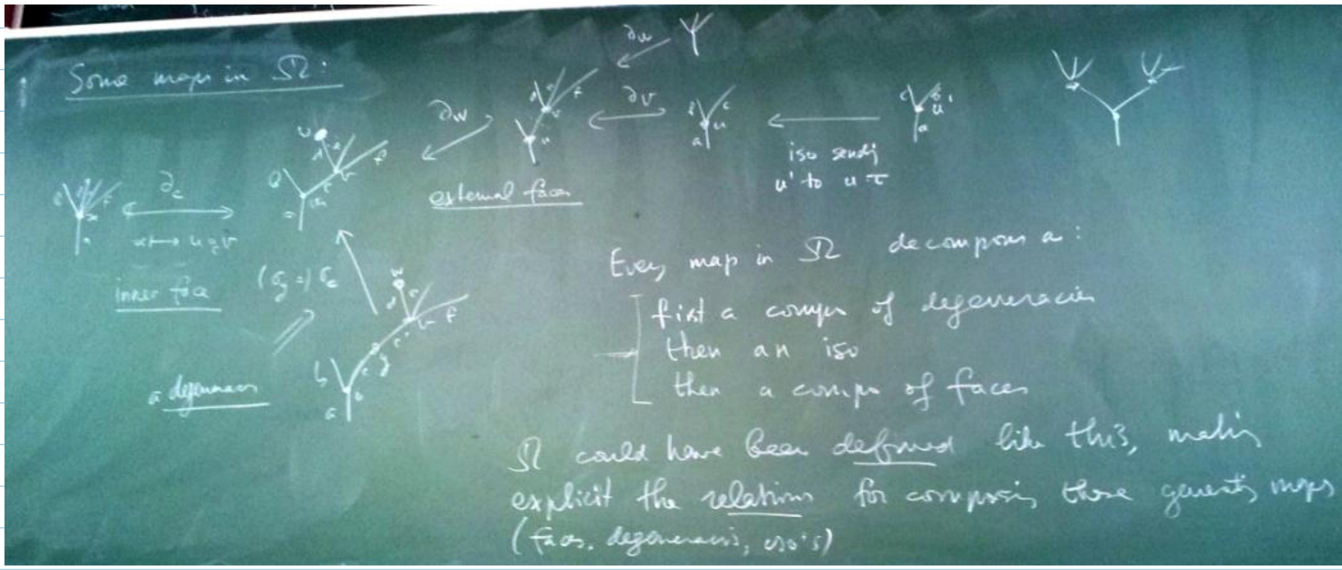
Labeled trees  generate operads

w/ colours = edges

ops $\Leftrightarrow$ generated by verts.

more in video

There are plenty maps between these operads.



There is an embedding $\Delta \overset{i}{\hookrightarrow} \Omega$ by

$$[n] \longrightarrow$$

Def The category dSet of "dendroidal sets" is the category of set-valued pre-sheafs on Ω:

$$dSet = Sets^{\Omega^{op}} = \hat{\Omega}$$

more in video

"dendroidal sets are a convenient category for taking nerves of operads, like simplicial sets are for nerves of categories"

"Dendroidal inner Kan complexes"

— me been outmathed.