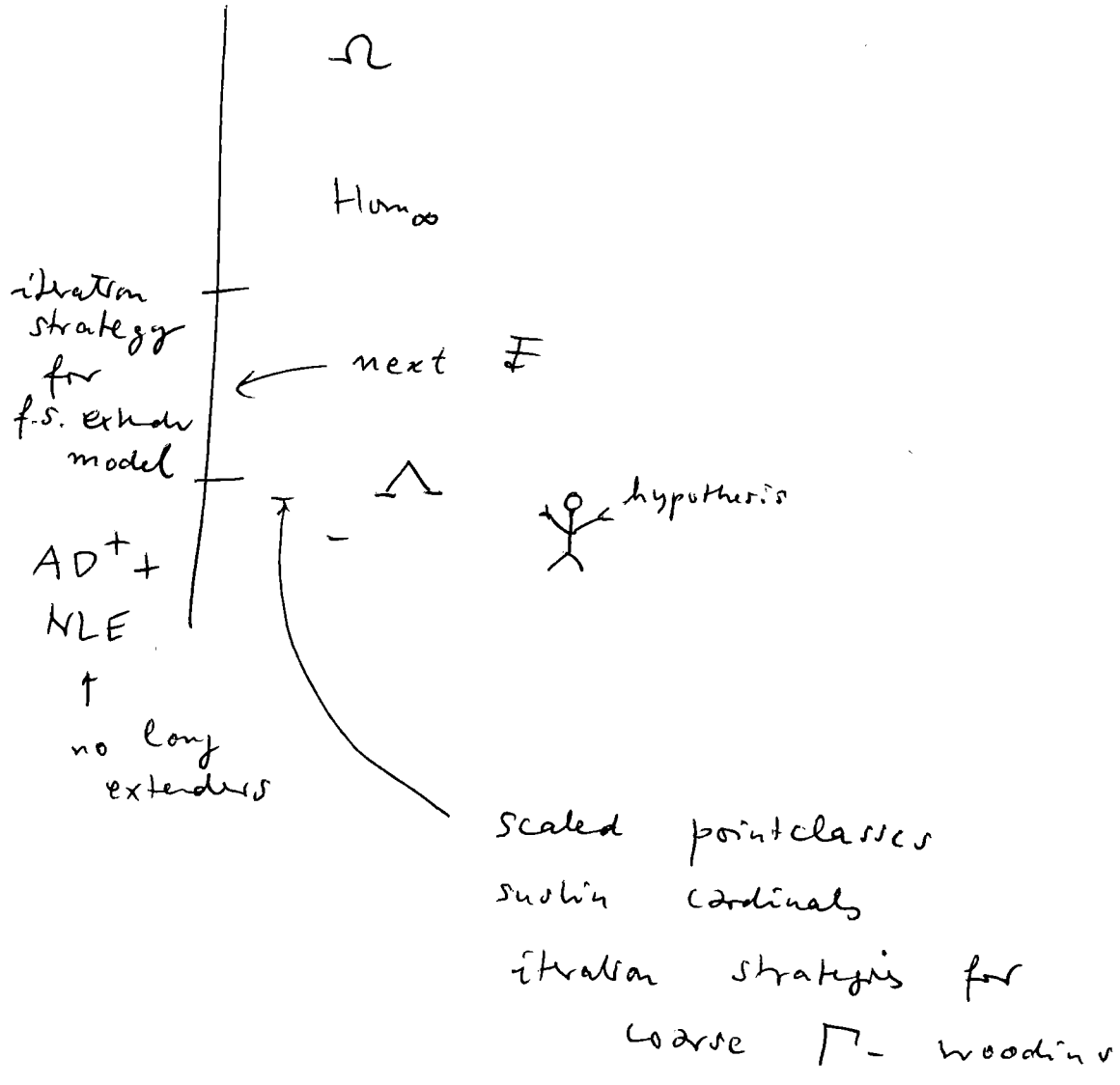


John.



iteration strategies for fine structural structures.

assume AD⁺ + NLE = then is no
iteration strategy for a pure
extend pm with a by
extend.

a pure extend pair is a pair

(P, Σ) s.t.

- P is a pure extend premouse, cM.,
(λ -indexed — no would be okay)

every P has a degree of soundness,
 $k(P)$, attached.

$$\rho(P) = \rho_{k(P)+1}(P)$$

$$p(P) = p_{k(P)+1}(P)$$

- $P \upharpoonright \langle \lambda, k \rangle =$ initial seg. Q of P
s.t. $\hat{\sigma}(Q) = \lambda,$
 $k(Q) = k$.

- Σ is a II. strategy for P with
scope HC,

a winning strategy for II in

$$G^+ \left(\overset{P}{M}, w_1, w_1 \right)$$

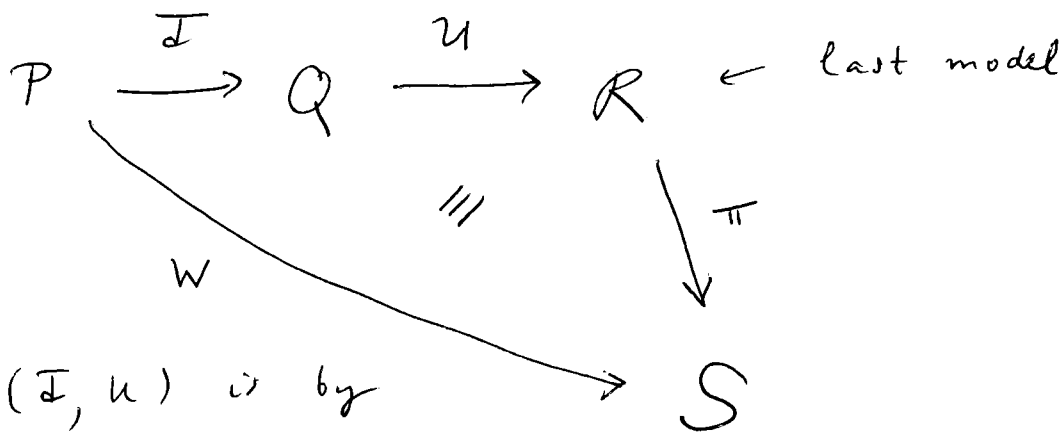
↑

I, II produce stack of weakly normal trees
on P .

- Σ normalizes well + has my hunk condensed.

normalizes well:

(\mathcal{I}, u) a stack by Σ .



$W = W(\mathcal{I}, u)$ is by Σ

W normal

what:

$$\underbrace{\left(\Sigma_{W, S} \right)^\pi}_{\text{pullback of } \Sigma_{W, S} \text{ via } \pi} = \Sigma_{\mathcal{I}, u, R}$$

pullback of $\Sigma_{W, S}$
via π .

that's 2-normalizes well.

Σ normalizes well iff
every tail Σ_S 2-normalizes well.

strong hull ~~also~~ condensation:

if \mathcal{U} is a normal tree on P
by Σ , and $\Phi: \mathcal{I} \rightarrow \mathcal{U}$ is a
"pseudo hull embedding," then \mathcal{I} is by
 Σ .

rmk. a least branch hod pair (l.b. hod
pair) is a (P, Σ) ~~pair~~ s.t.

- P is a least branch premouse
(constructed for \vec{E} and strategy
info $\dot{\Sigma}^P$).
- Σ normalizes well.
- $\dot{\Sigma}^P \subset \Sigma$, in fact if S is a

-5-

stack by Σ with last model R ,

then $\sum^{\circ} R \subset \Sigma_{S,R}$.

1st part from "normalizing iterated trees
and comparing iterated strategies"

2nd part: handwritten notes.

both are on web page.

def. a mouse pair is a (P, Σ) of
one of the two variations.

basic theory of mouse pairs:

comparison, Dodd-Jensen, background construction,
lbr hod pairs used to code HOD
in a particular case.

question on complexity of (P, Σ) ,
in part, optimal surjective representations.

Comparison sketch Σ, Ψ rustin, co-rustin.

assume AD^+ , and let $(P, \Sigma), (Q, \Psi)$ be pure extendw pairs.

wat to find (R, Φ) , a par, s.t. for some \mathcal{I} by $\Sigma + \mathcal{U}$ by Ψ ,

either (1) P -to- R does not drop

"
coarse last model;
allow final drop.

$$\text{and } \overline{\Phi} = \sum_{\mathcal{I}, R} = \Psi_{\mathcal{U}, R},$$

or (2) Q -to- R does not drop, and

$$\overline{\Phi} = \sum_{\mathcal{I}, R} = \Psi_{\mathcal{U}, R}.$$

prp-: let N^* be a coarse Γ -woodin,

w/ $P, Q \in HC^{N^*}$, and Σ, Ψ as

seen in Δ , captured by N^* .

N^* has a $\leq \delta^{N^*}$ u.b. representation

for Σ, Ψ .

$$\text{In } \mathbb{D} = \left((M_{\ell, k}^{\mathbb{C}}, \Omega_{\ell, k}^{\mathbb{C}}) : \ell \leq \omega, k < \omega \right),$$

a background constr. in N^* .

show: this is for $(M_{\ell, k}^{\mathbb{C}}, \Omega_{\ell, k}^{\mathbb{C}})$ which is an iterate of (P, Σ) , for (Q, Υ) .

why?: take any $(R, \underline{\Phi}) = (M_{\ell, k}^{\mathbb{C}}, \Omega_{\ell, k}^{\mathbb{C}})$ compare with (P, Σ) .

(a) no strategy disagreements shows up.

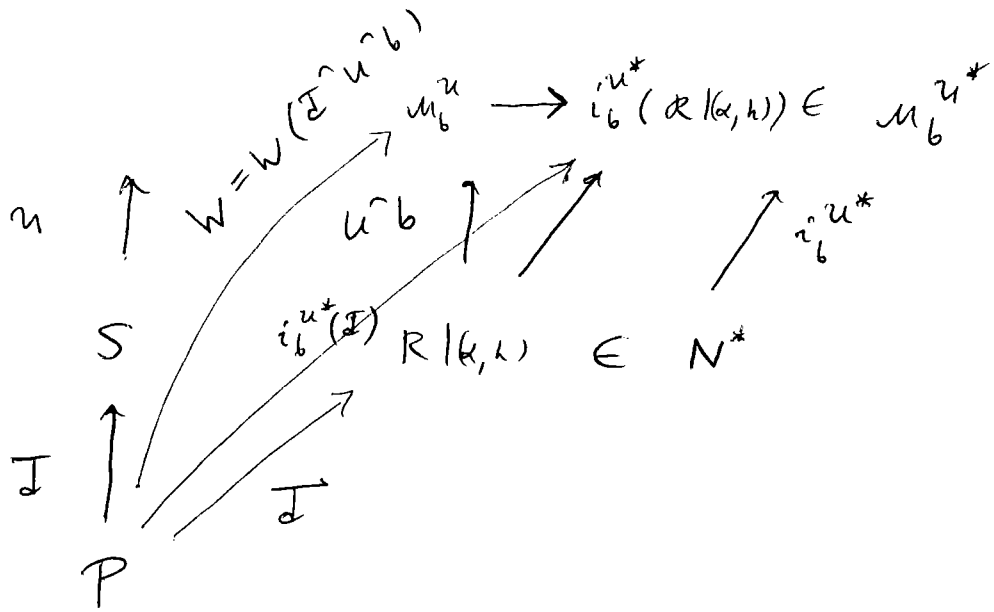
(b) only the P -side moves.

↑
1980's.

(a) : say $P \xrightarrow{I} S$

$$S|(\alpha, k) = R|(\alpha, k)$$

and $\sum_{I, S(\alpha, k)} \neq \underline{\Phi}_{R|(\alpha, k)}$.



$$u \text{ on } S(\alpha, k) \text{ s.t. } \sum_{\mathbb{I}, S(\alpha, k)} (u) \neq \bigoplus_{R(\alpha, k)}$$

u.b.-ness of \sum in N^* :

$$i_b^{u^*}(\mathbb{I}) \text{ is by } \sum .$$

[branch condensation would then give $b = \sum_{\mathbb{I}, S(\alpha, k)} (u)$.]

but :

W hull of $i_b^{u^*}(\mathbb{I})$,

hence W is by \sum , by the strong hull condensation.

so (\mathbb{I}, u^b) is by \sum . \dashv