Day 8 Doodlings

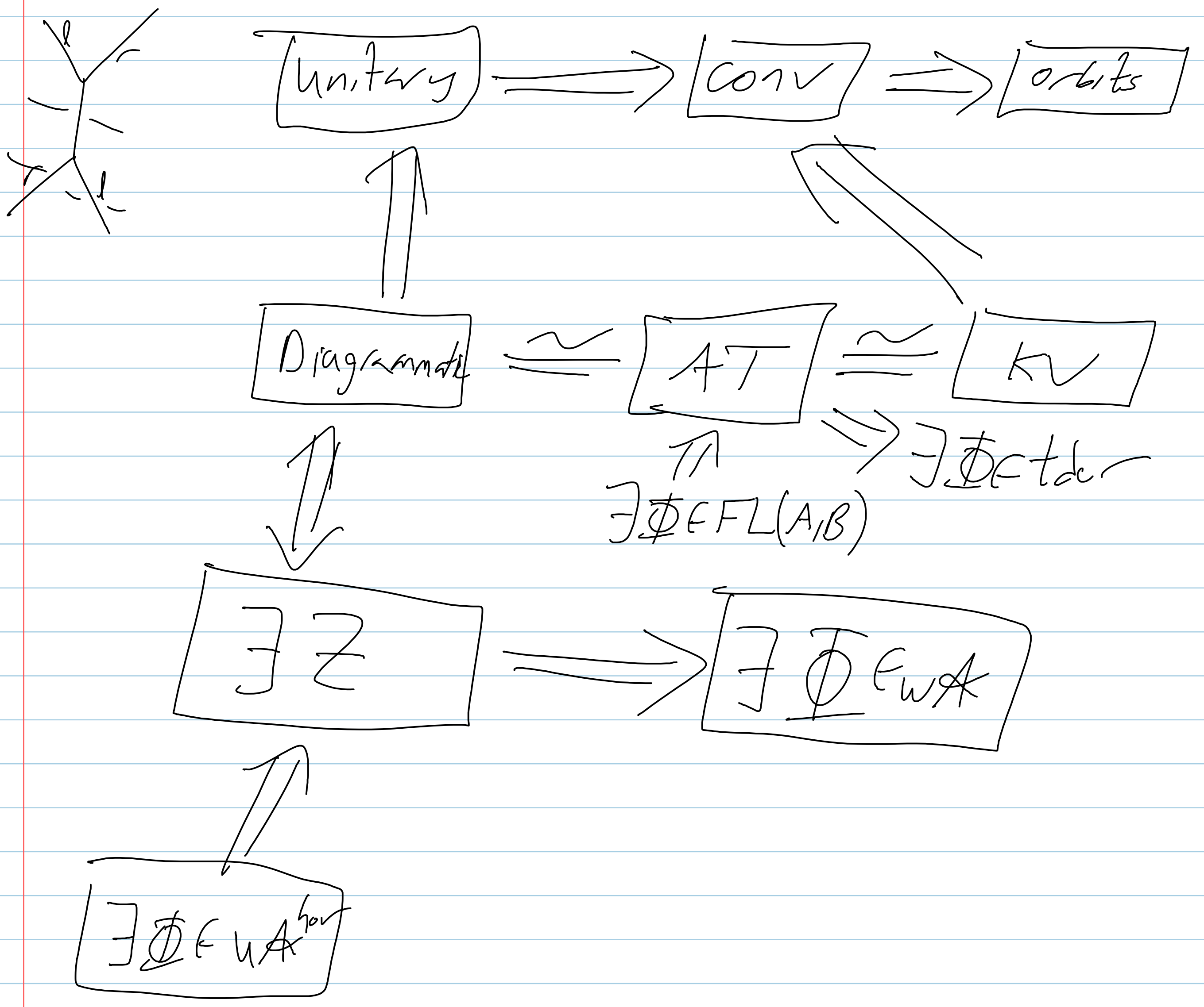
June-05-13
1:52 PM

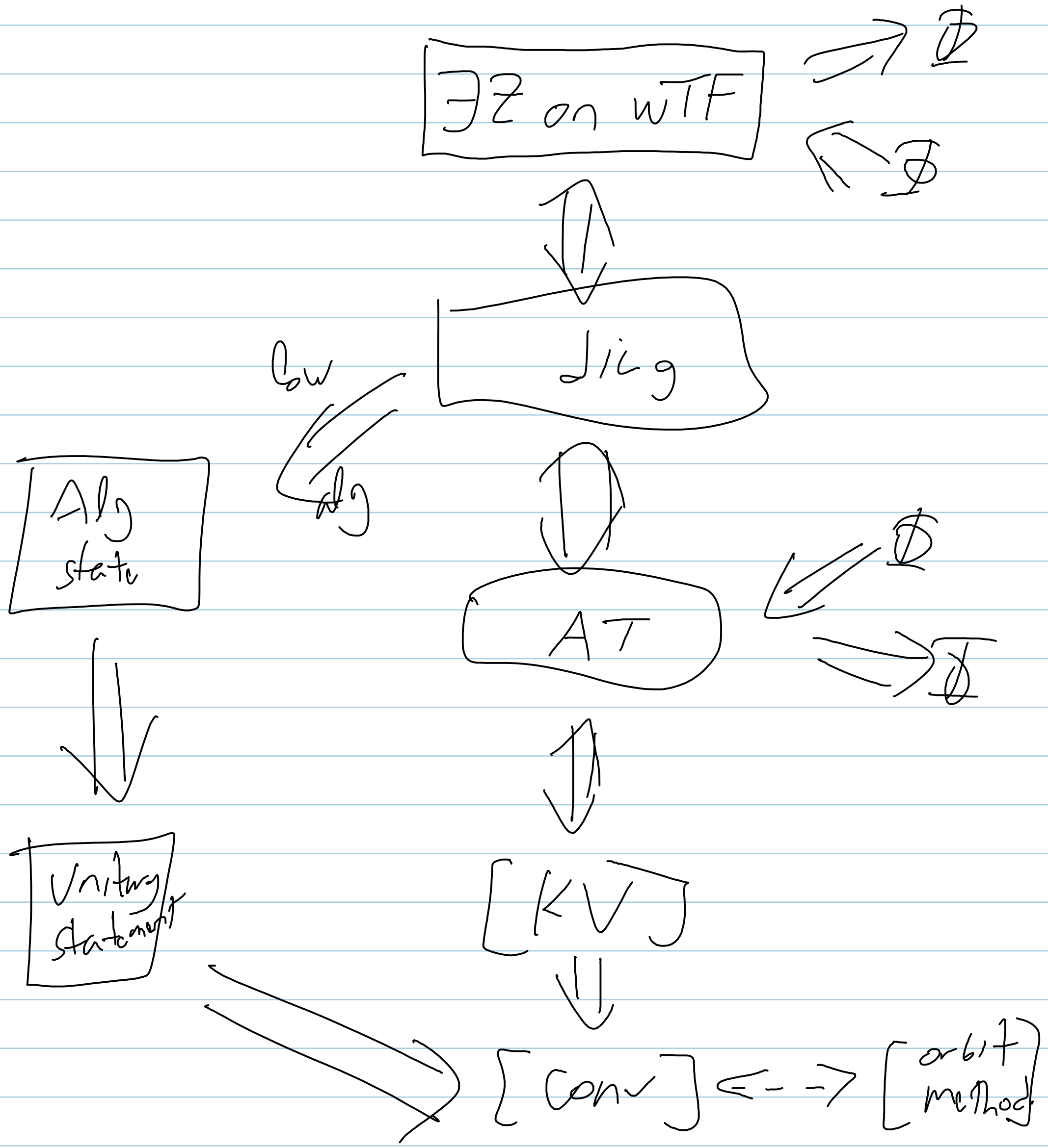
Unitary statement. There exists $\omega \in \mathrm{Fun}(\mathfrak{g})^G$ and an (infinite order) tangential differential operator V defined on $\mathrm{Fun}(\mathfrak{g}_x \times \mathfrak{g}_y)$ so that
(1) $V\widehat{e^{x+y}} = \widehat{e^x}\widehat{e^y}V$ (allowing $\hat{\mathcal{U}}(\mathfrak{g})$-valued functions)
(2) $VV^* = I$ (3) $V\omega_{x+y} = \omega_x\omega_y$

which completion?

The Orbit Method. By Fourier analysis, the characters of $(\mathrm{Fun}(\mathfrak{g})^G, \star)$ correspond to coadjoint orbits in $\mathfrak{g}^*$. By averaging representation matrices and using Schur's lemma to replace intertwiners by scalars, to every irreducible representation of G we can assign a character of $(\mathrm{Fun}(G)^G, \star)$.

* Implies convolutions; which implies




∃Z on wTF
alg
Alg state
AT
Unitary statement
[KV]
[Conv]
[orbit method]