

# Dror's Dream Map of Quantum Groups $\subset$ Knot Theory

Drinfel'd, Etingof-Kazhdan

Prehistoric

## Hallucinations

about  
Khovanov



C A T E G O R I F I C A T I O N

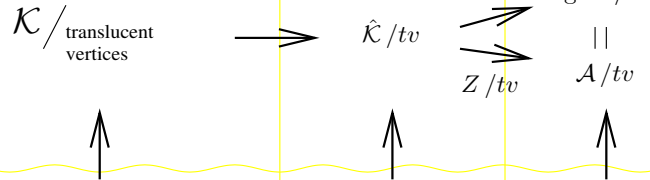


## Some harsh reality.

EK mix tangles and braids  
and algebras and Verma modules

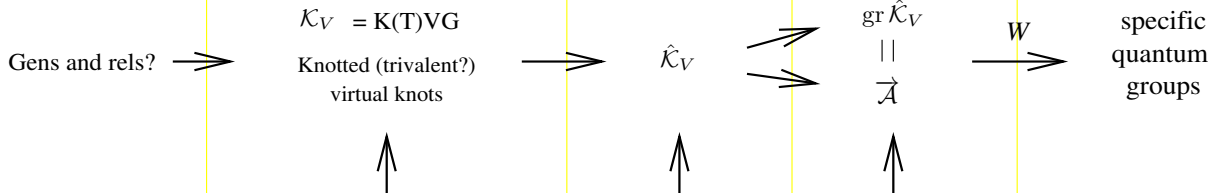
## Night Time Dreams

about  
Etingof - Kazhdan



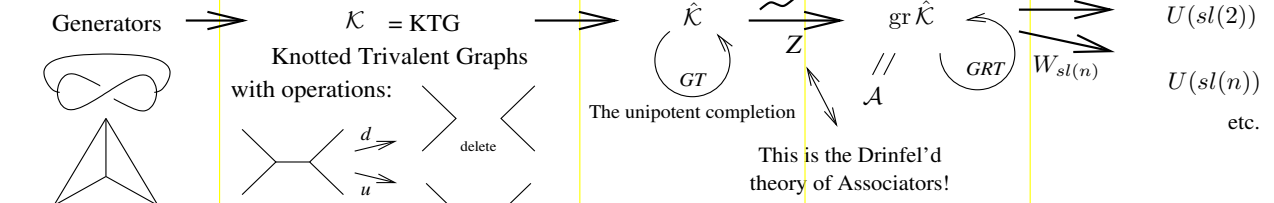
Day Time Dreams

about Reshetikhin  
- Turaev & quasi  
triangular quasi  
Hopf algebras



Reality

of associators, FT  
invariants and  
co-commutative  
quasi-Hopf  
algebras



## Why should we care?

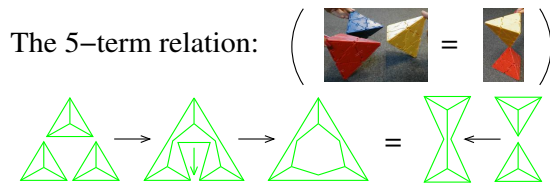
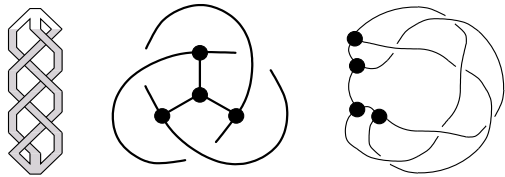
1. Usefulness!
2. Beauty!
3. Guidance!
4. Confidence!
5. Grothendieck-Teichmuller!



Fushimi-Inari

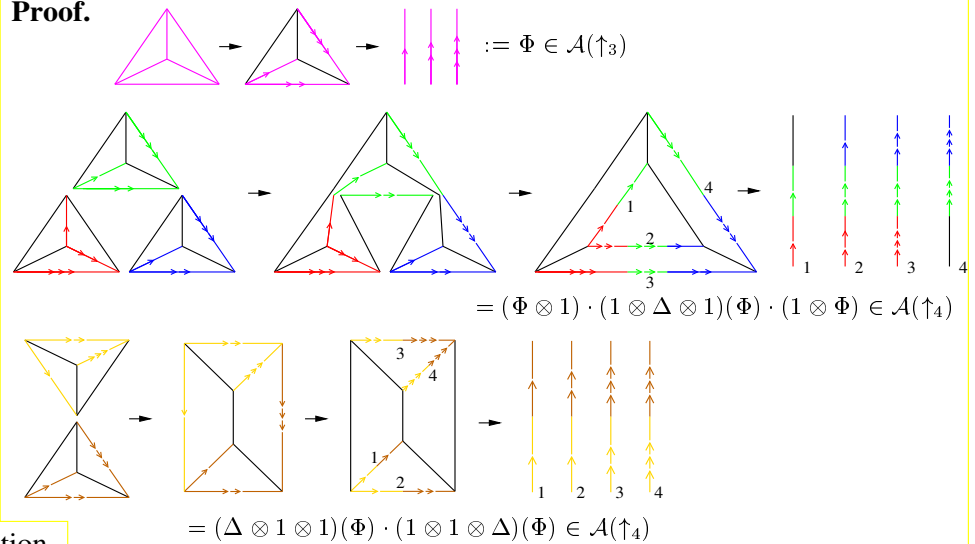
## A La Carte Drawings

Knotted Trivalent Graphs (KTG's):



**Claim.** With  $\Phi := Z(\Delta)$ , the above relation is equivalent to the Drinfel'd's pentagon equation.

## Proof.



Drinfel'd



Etingof



Kazhdan



J. Murakami



Ohtsuki



Kauffman



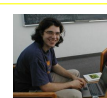
Goussarov



Polyak



Viro



D. Thurston



Haviv