PSEUDO-TRISECTIONS of 4-MANIFOLDS WITH BOUNDARY

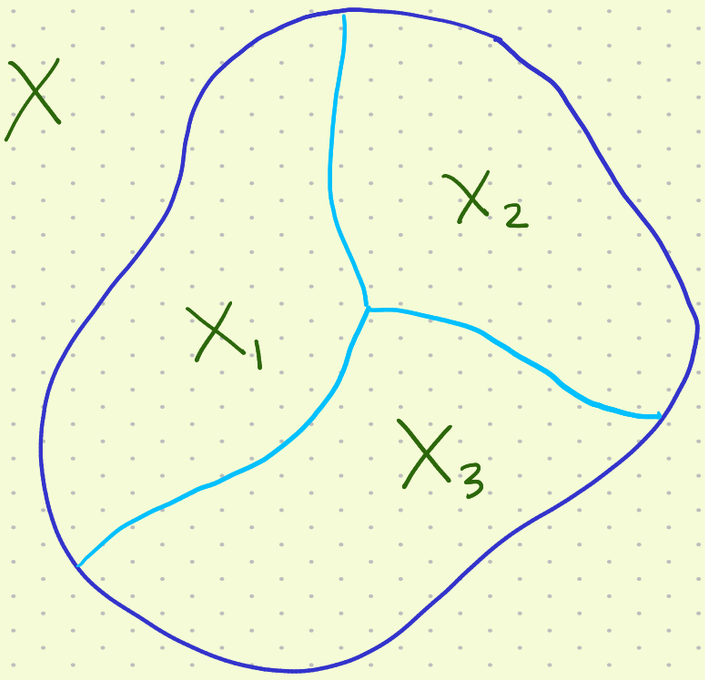
SHINTARO FUSHIDA-HARDY

STANFORD UNIVERSITY

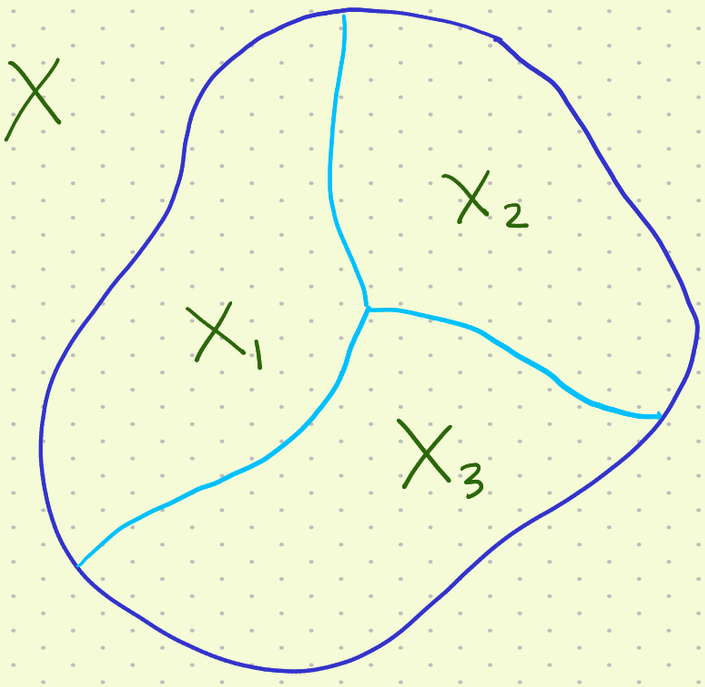
TRISECTIONS

GAY, KIRBY (2012)

4-MANIFOLD $\rightsquigarrow$ THREE 1-HANDLEBODIES



TRISECTIONS



GAY, KIRBY (2012)

4-MANIFOLD $\rightsquigarrow$ THREE 1-HANDLEBODIES

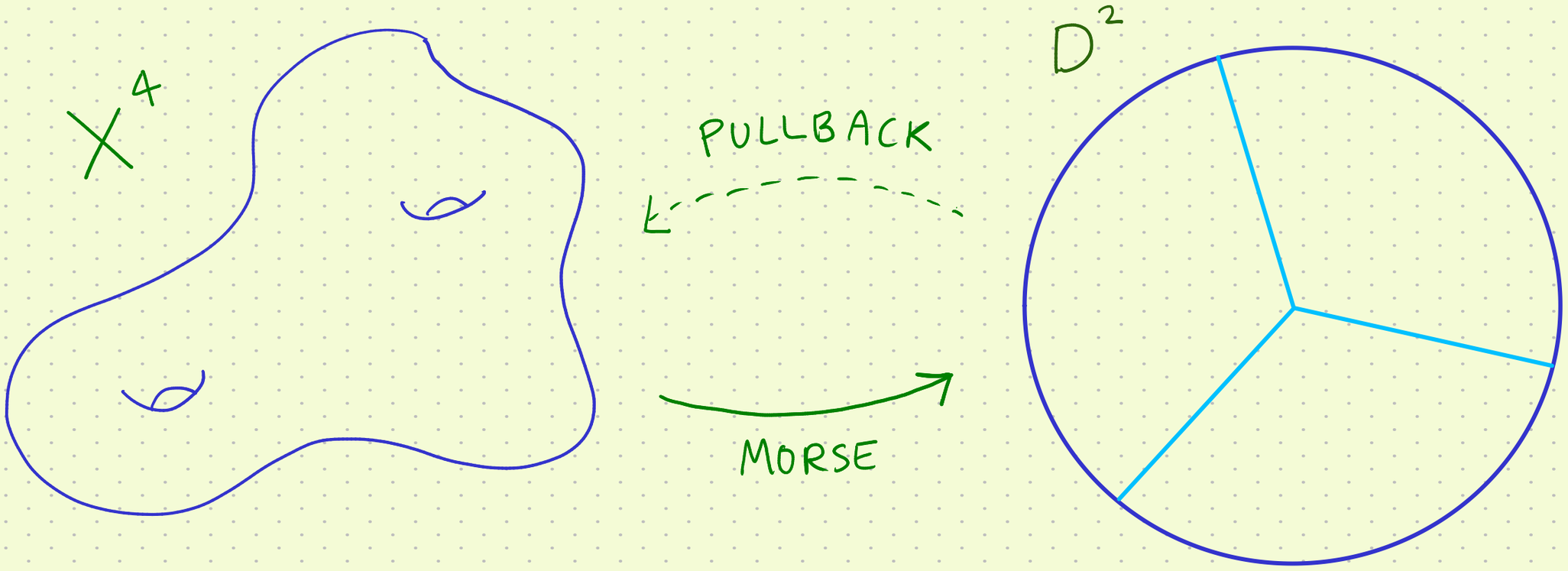
RUBINSTEIN, TILLMANN (2018)

(PL) n-MANIFOLD $\rightsquigarrow$ $\lfloor \frac{n}{2} \rfloor + 1$ 1-HANDLEBODIES

KOENIG (2018)

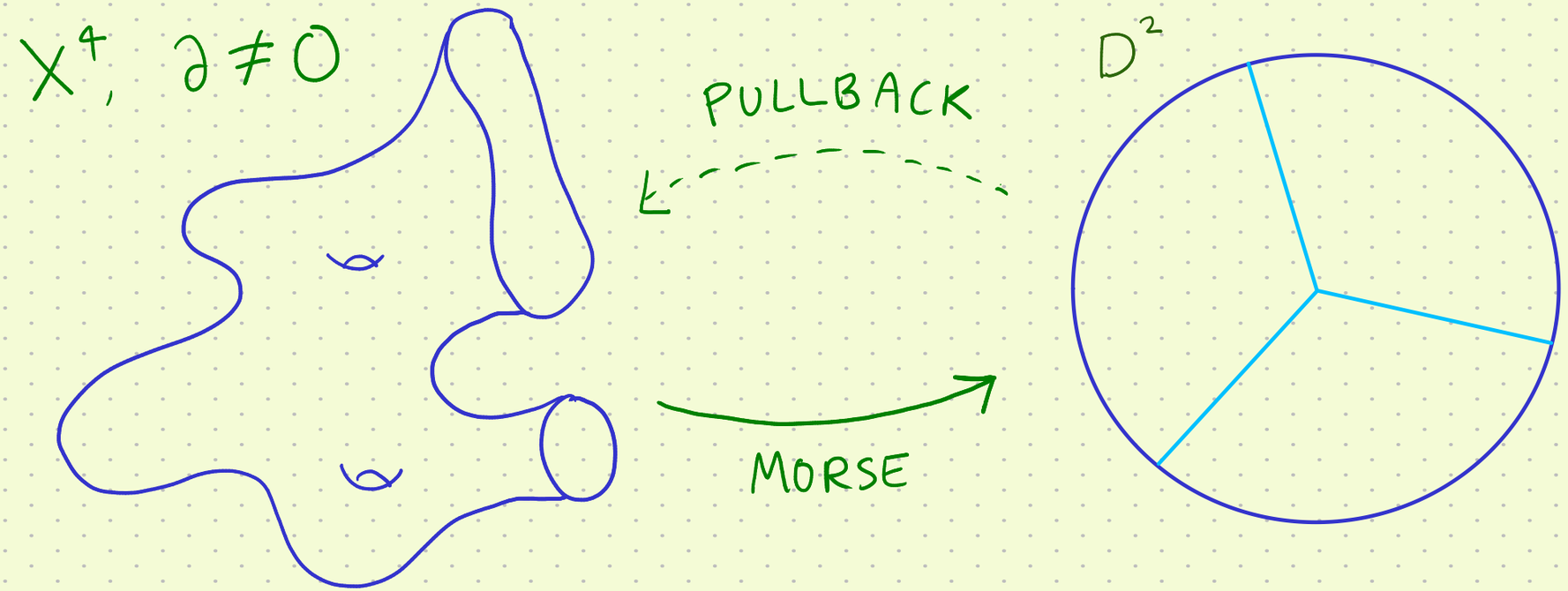
3-MANIFOLD TRISECTIONS

WHERE DO THEY COME FROM?



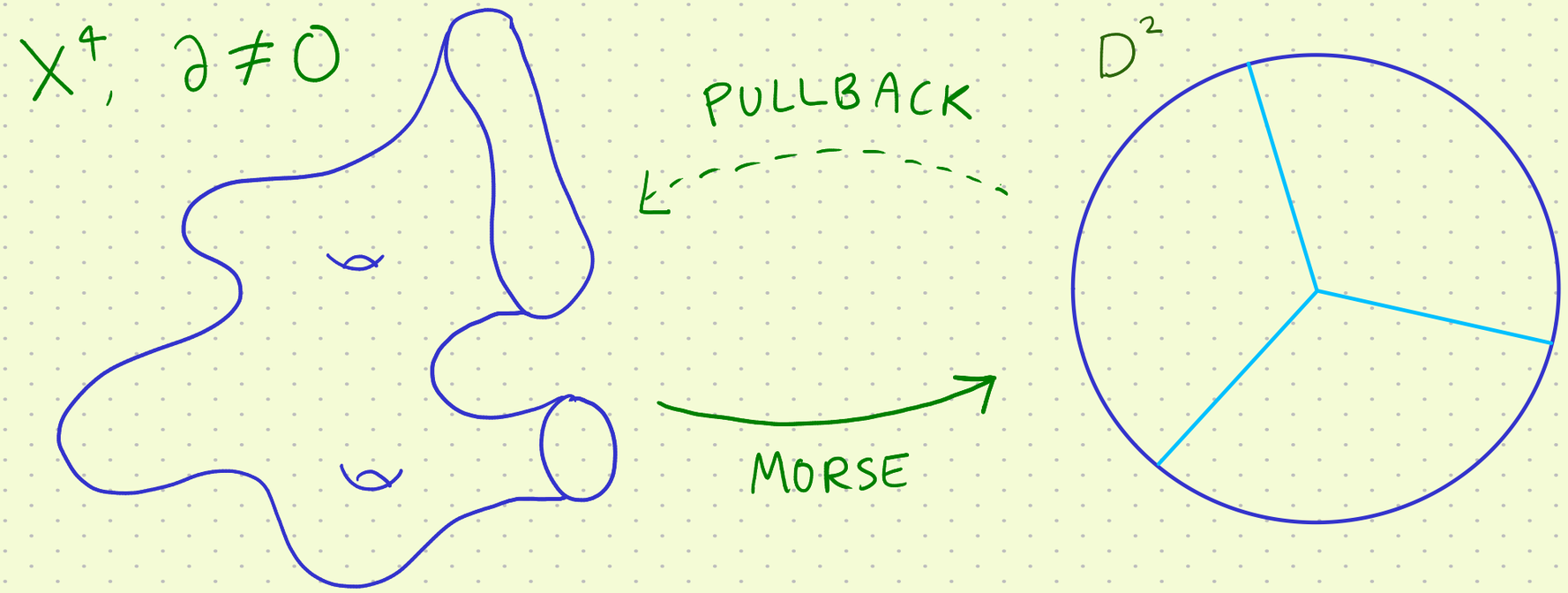
RELATIVE TRISECTIONS

GAY, KIRBY, CASTRO



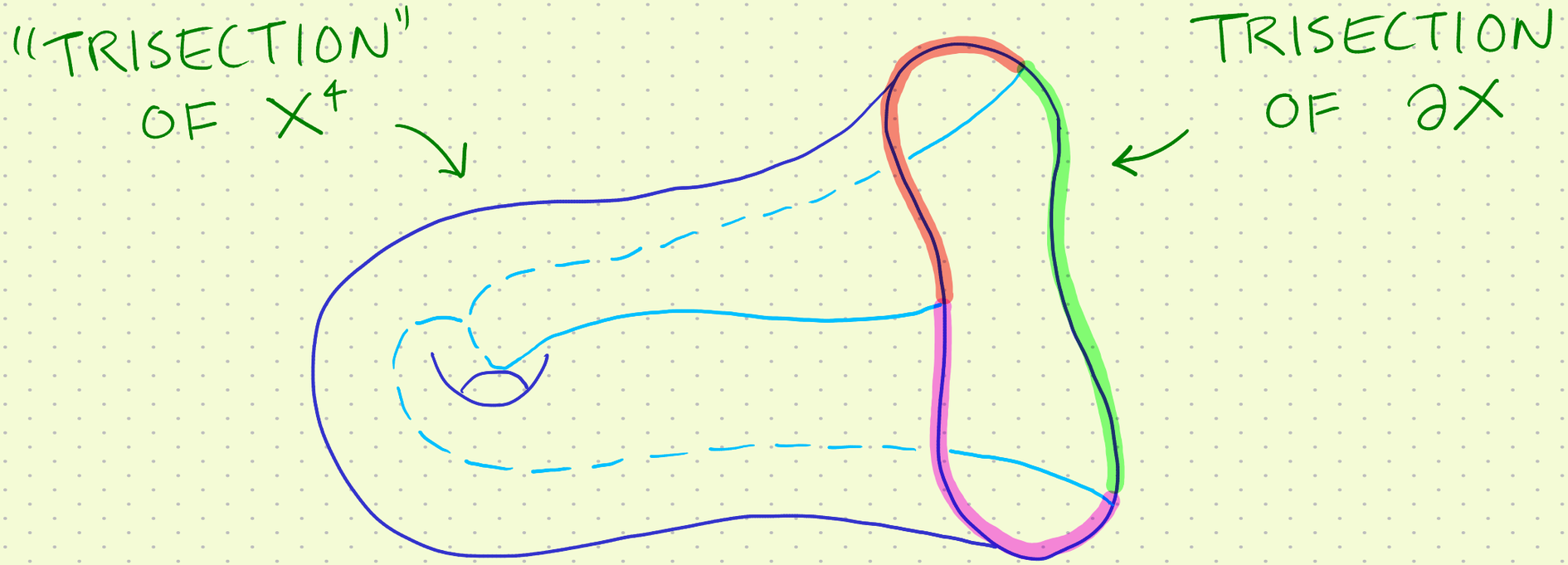
RELATIVE TRISECTIONS

GAY, KIRBY, CASTRO

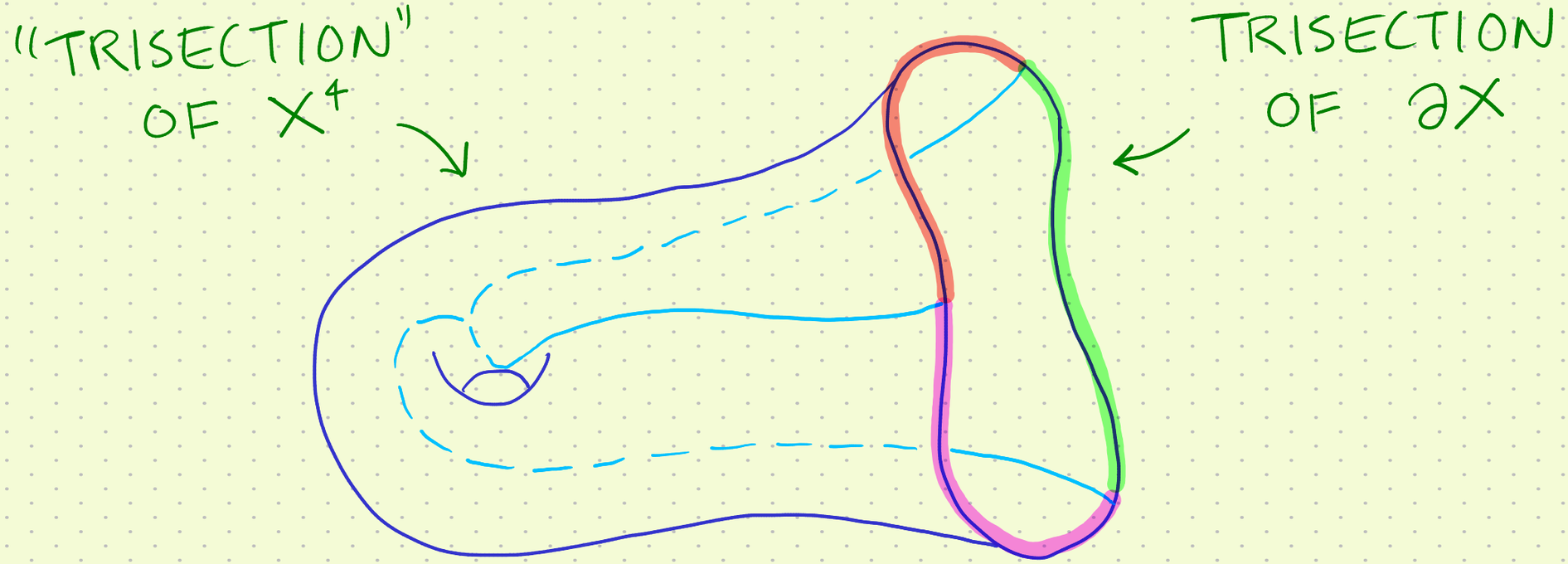


- WELL BEHAVED (GLUING ETC)
- ∂X INHERITS AN OPEN BOOK
- A BIT COMPLICATED (FOR ME)

WHAT IF IT WAS TRISECTIONS ALL THE WAY DOWN?



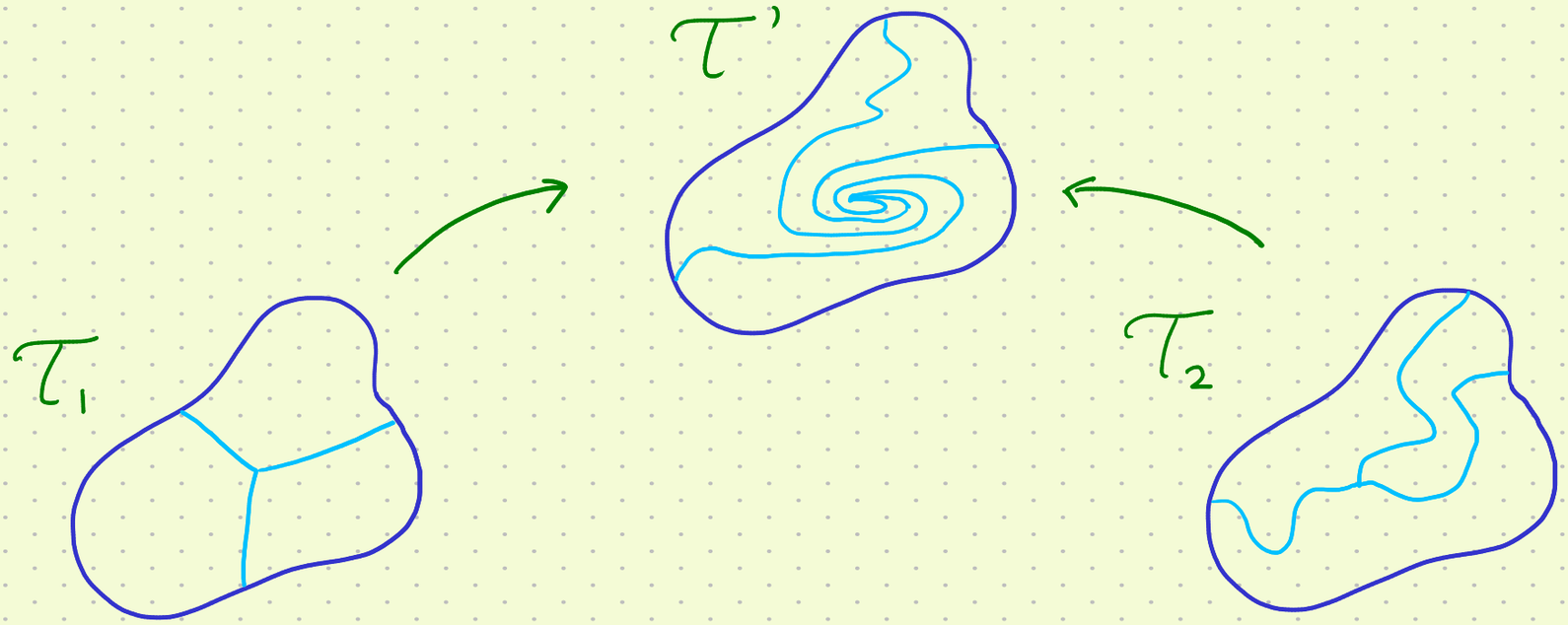
WHAT IF IT WAS TRISECTIONS ALL THE WAY DOWN?



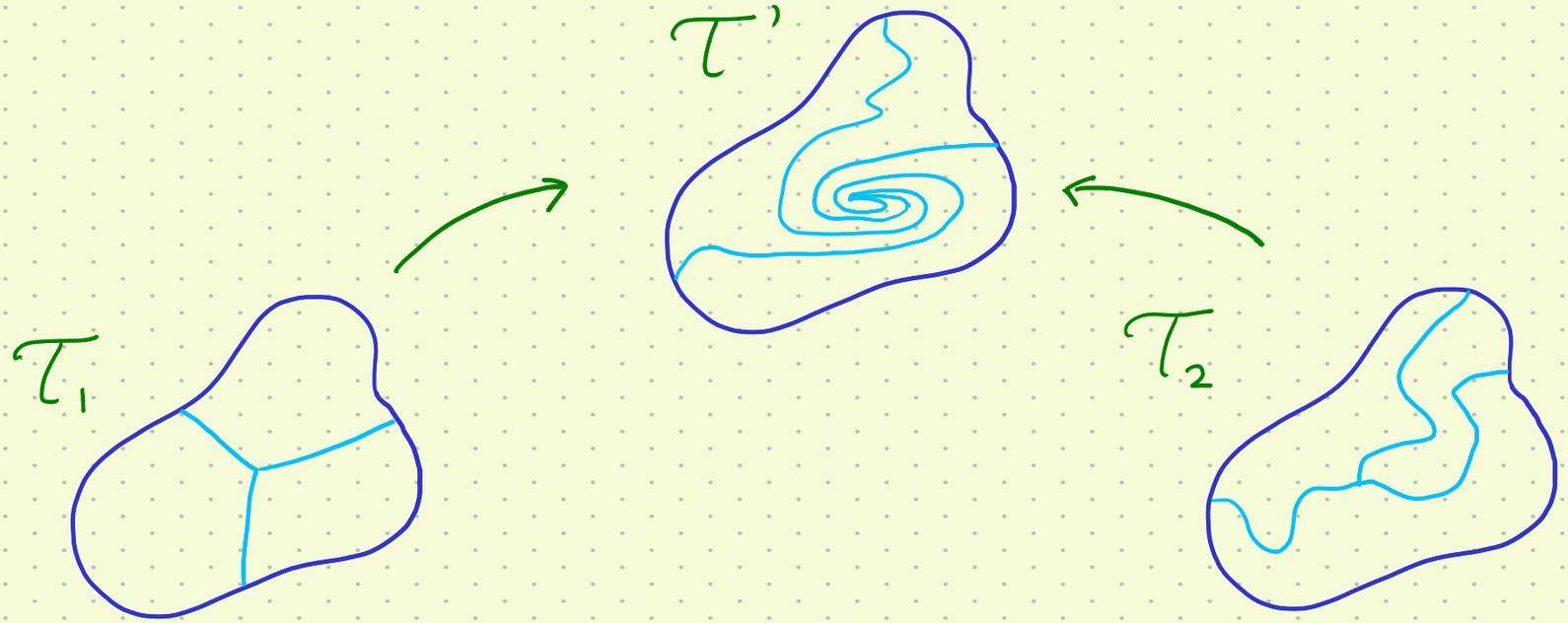
PSEUDO-TRISECTION (F.-H., 24)

- GENERALISATION OF RELATIVE TRISECTIONS
- MANY PROPERTIES PERSIST

STABLE EQUIVALENCE



STABLE EQUIVALENCE

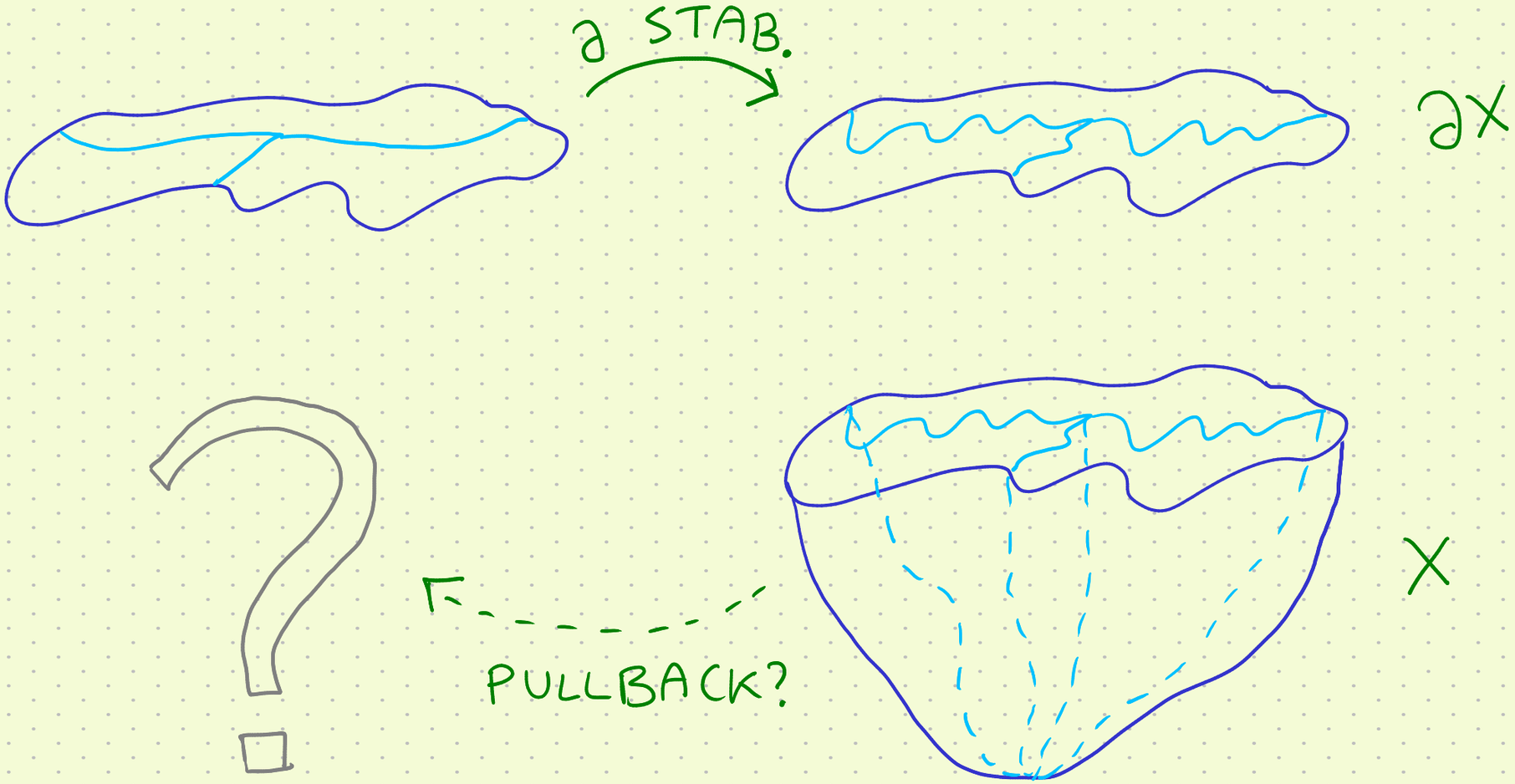


X CLOSED (TRISECTIONS) - - - - - STABILISATION

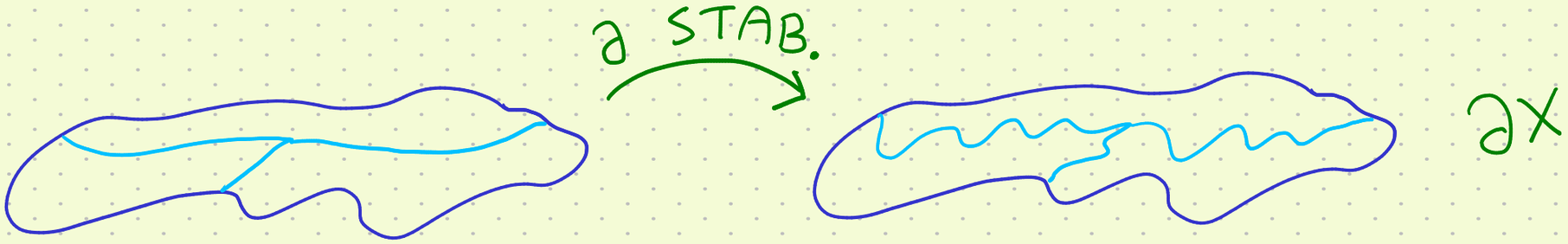
RELATIVE TRISECTIONS - - - { INTERNAL STABILISATION, RELATIVE STABILISATION, RELATIVE DOUBLE TWIST

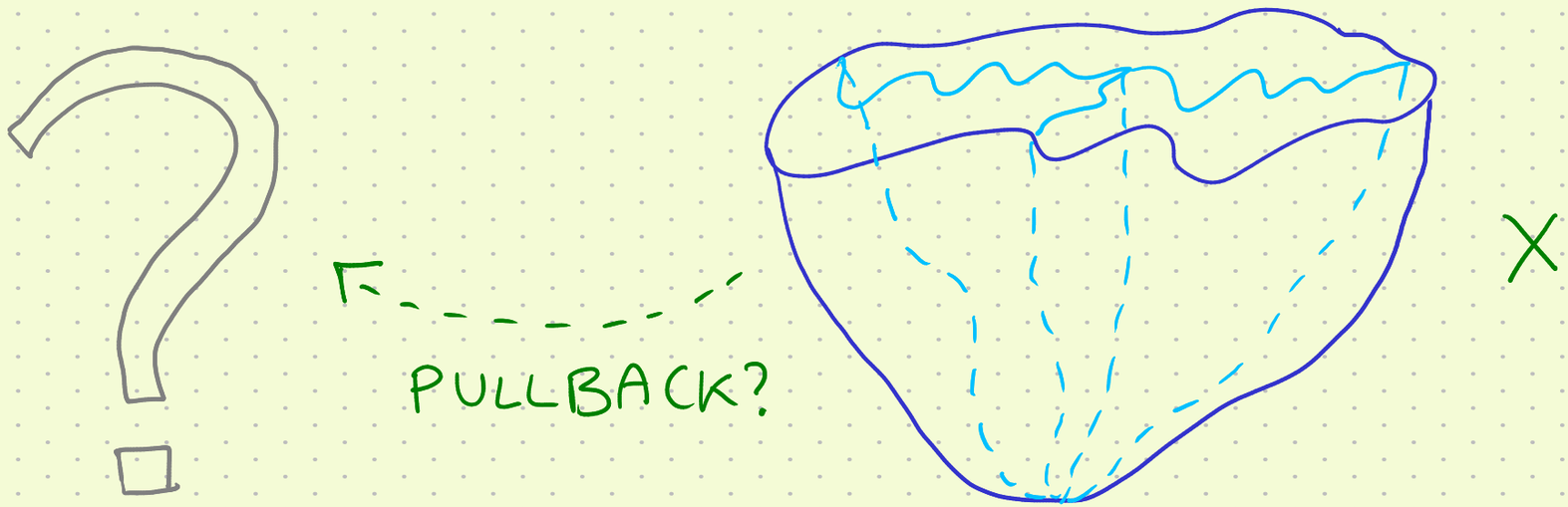
PSEUDO-TRISECTIONS - - - { INTERNAL STABILISATION, BOUNDARY STABILISATION, HEEGAARD STABILISATION

DESTABILISATION?



DESTABILISATION?





YES! (FOR PSEUDO-TRISECTIONS)

THANK YOU!