Que sera sera

What will be will be

Robert Stone

1. Sentences assumed to have unambiguous meaning

2. Neutral between determinism and indeterminsim

p = any proposition
N = It is necessary that
T = It is true that
⊃ = implies (if . . . then . . .)

$$N(p \supset Tp)$$
$$N(Tp \supset p)$$

p = Trump will win a second term

$$N(Tp \supset p)$$

$$N(\text{not-}Tp \supset \text{not-}p)$$

Does this mean Trump is *bound* to win (or not win) a second term?

N(p *or* not-p) = Law of excluded middle

N[not(p and not-p)]
= Law of contradiction

Trump either will or won't win a second term.

Trump will not both win and not win a second term.

Does God know the truth of future statements, and, if so, does that mean the future is fixed?

1. Historical fixedness: what's done cannot be undone

2. Physical necessity (Aristotle)

3. Logical necessity v contingency

Not to be confused!

CS Peirce

"Trump will win a second term"

1. False now

2. True (or false) when we know the result of the election in 2020

Trivalent logic

3 truth-values:

TRUE (1)
FALSE (0)
INDETERMINATE (½)

If ‘p’ = ½
and ‘not-p’ = ½
then ‘p or not-p’ = ½

But it seems N(p or not-p) *must* be true

MacFarlane

"There will be a meeting in Trier in Nov 2018"

from a-context of 2015, **neither true nor false**

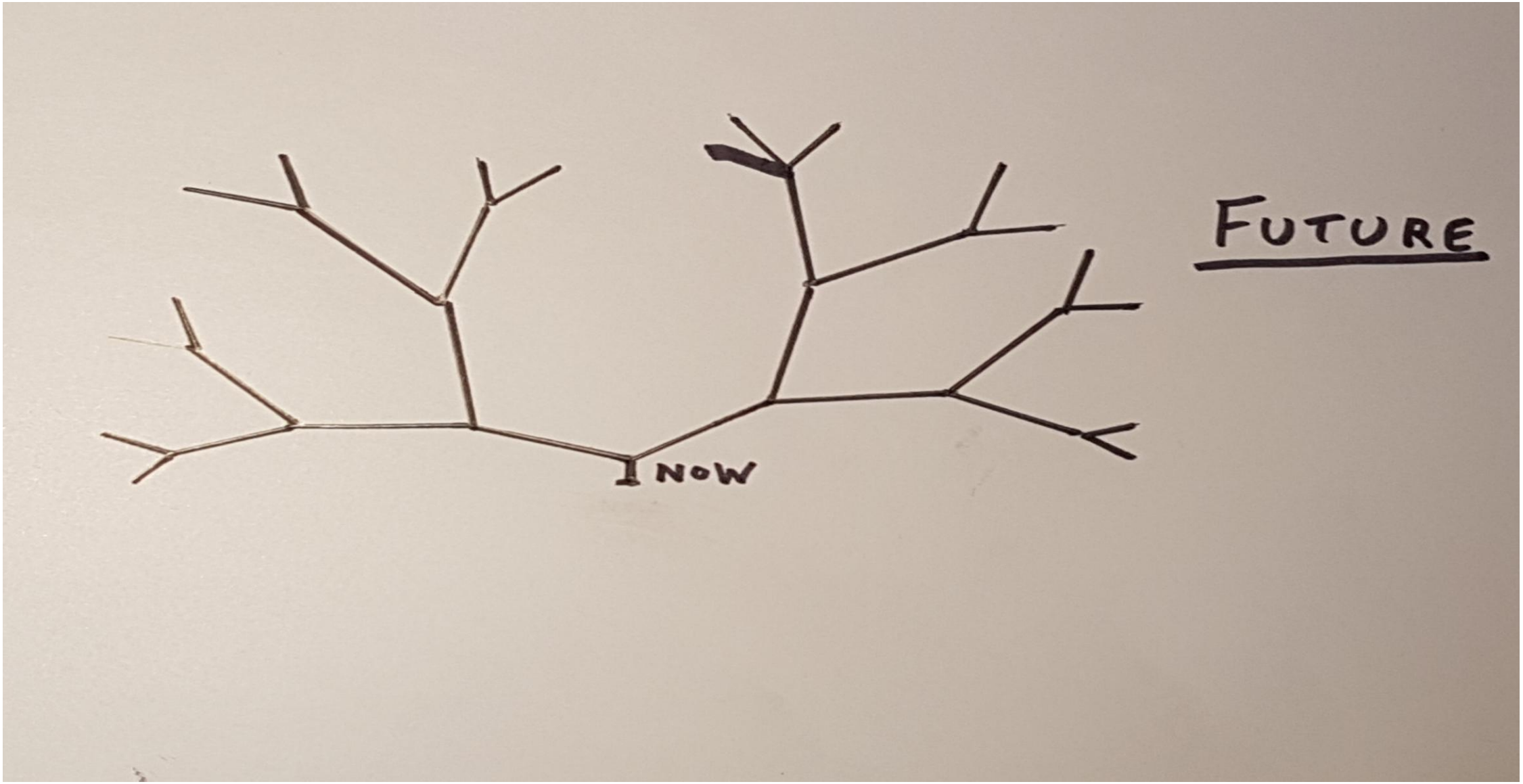
from a-context of 2018, **true**

Statements about past and present:

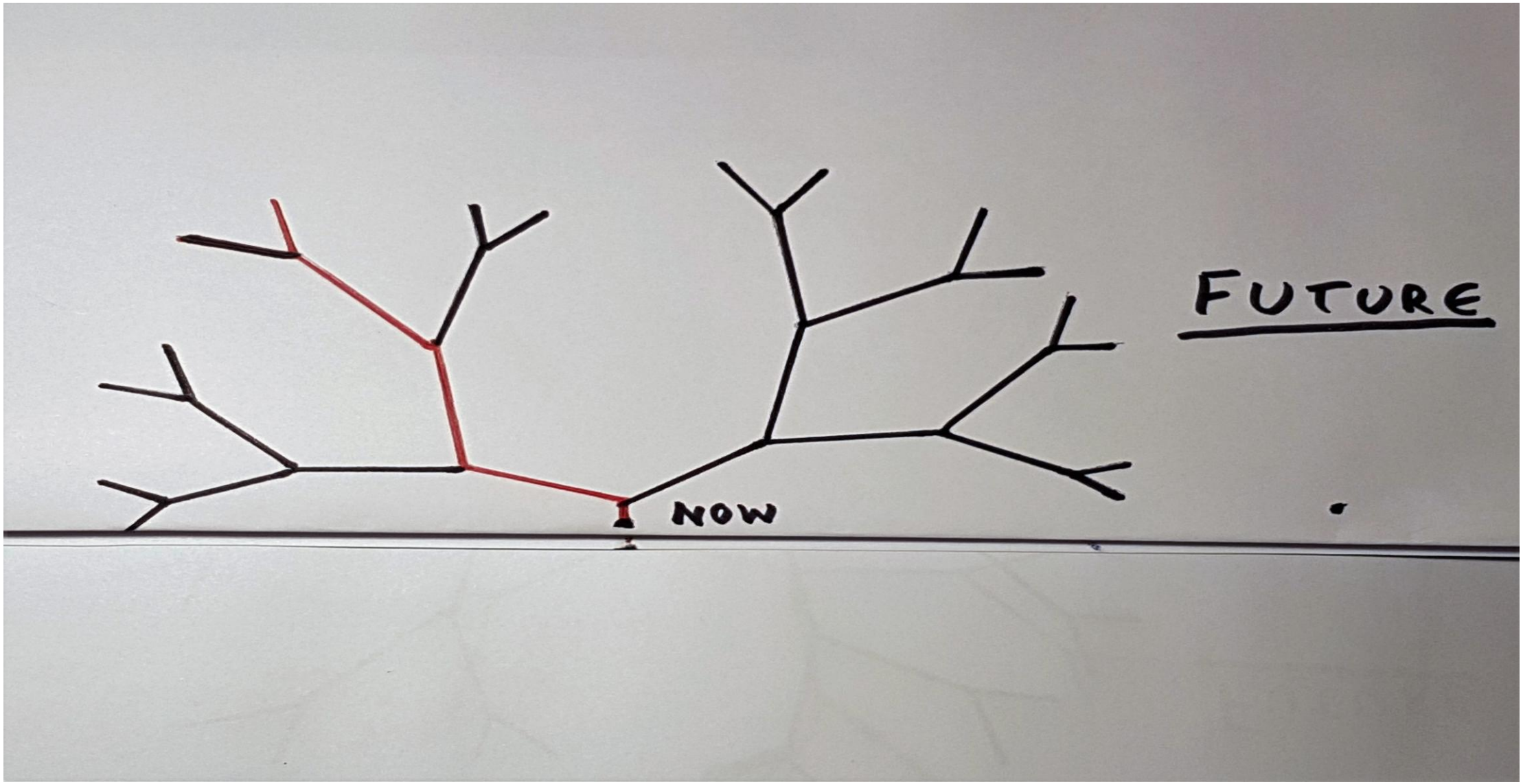
their truth-value is in no way dependent on

either (a) the *knowledge* of the speaker
or (b) the *justifiability* of the belief

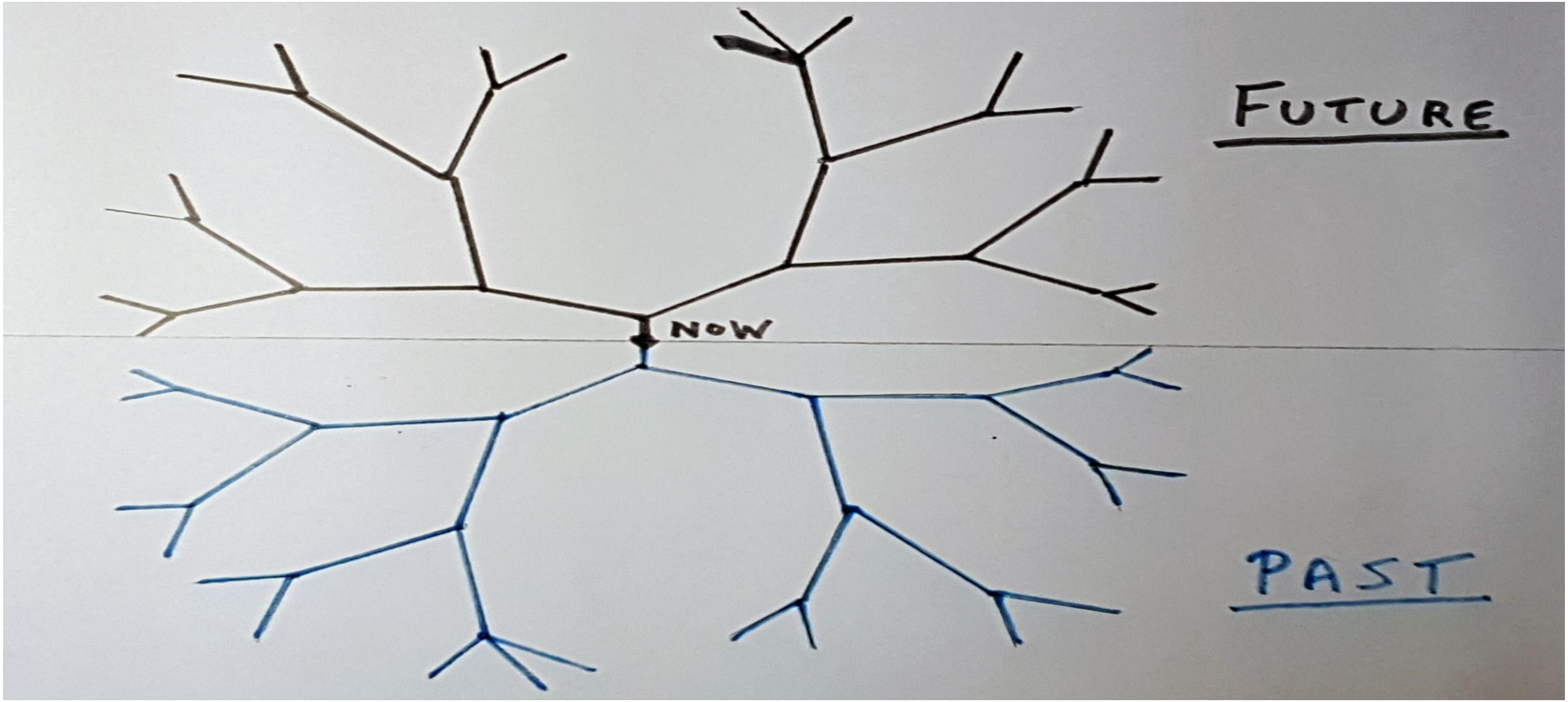
The branching future



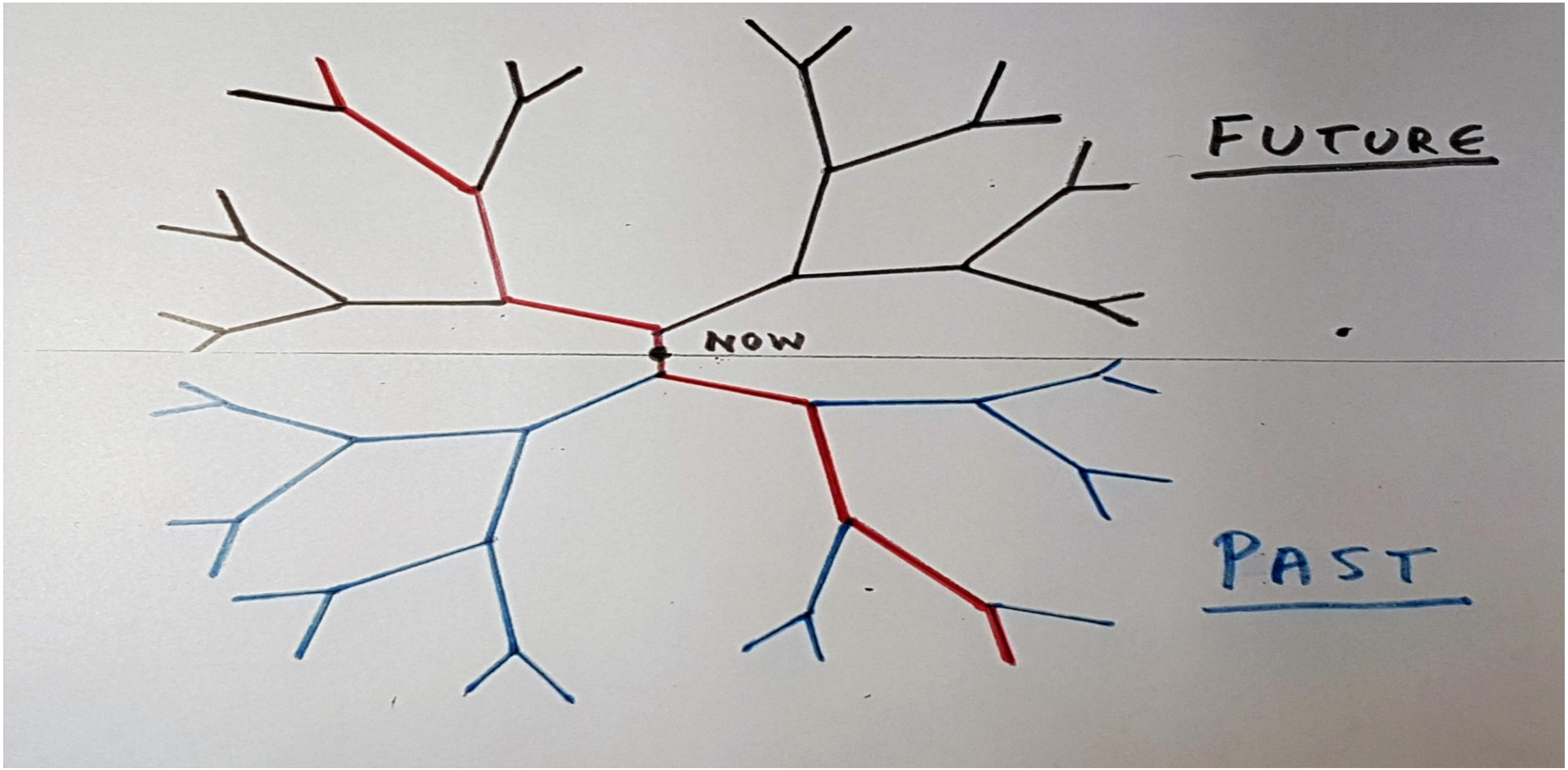
The thin red line



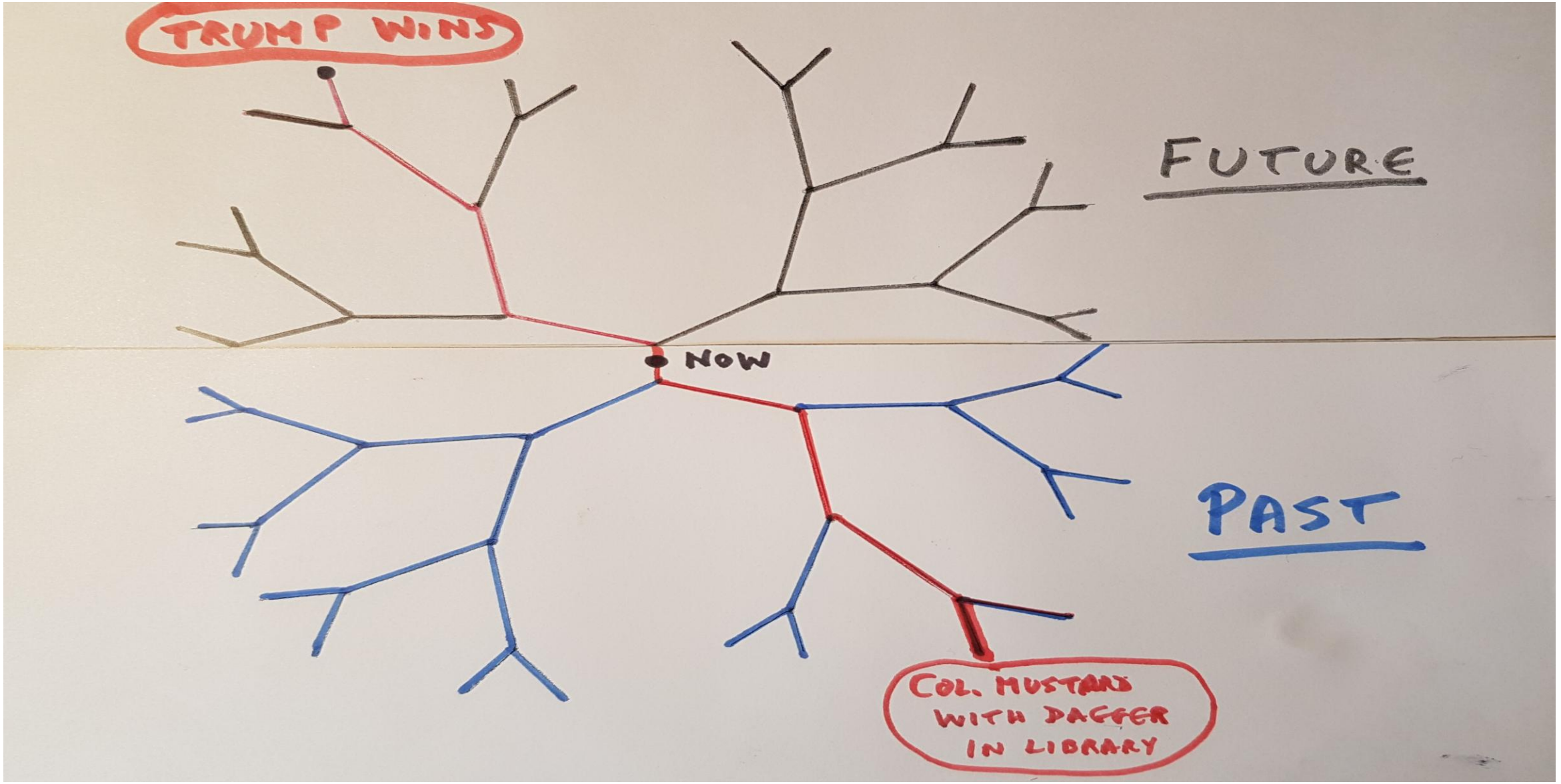
Branching past and future



Two thin red lines



Past-future symmetry



Past and future symmetry

1. Infinite possibilities branching in both directions
2. Statements about both are contingent on things in the world
3. Every statement *must* be either true or false
4. If p, then p
5. If it is true that p, then p
6. The truth of p may be known or unknown
7. The truth of p *entails* p, but does not *cause* it
8. You can’t change the past . . . or the future

3 fallacies

1. Logical entailment = cause

2. Truth-value is affected by knowledge

3. Truth-value is affected by the speaker's state of mind

N(p⊃p) is not the same as p⊃Np,

i.e. [N(p⊃p) ⊃ [p⊃Np] is wrong

N(Tp⊃p) is not the same as Tp⊃Np,

i.e. [N(Tp⊃p)] ⊃[Tp⊃Np] is wrong

‘*It is a necessary truth that, if p, then p*’ **does not mean**
‘*If p, then it is a necessary truth that p*’

Four features of any proposition, which are quite independent of each other:

true or false
necessary or contingent
known or unknown
past, present, or future


It wasn't my fault!