

Views Document: Reasonable Degree of Scientific Certainty

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A Theme



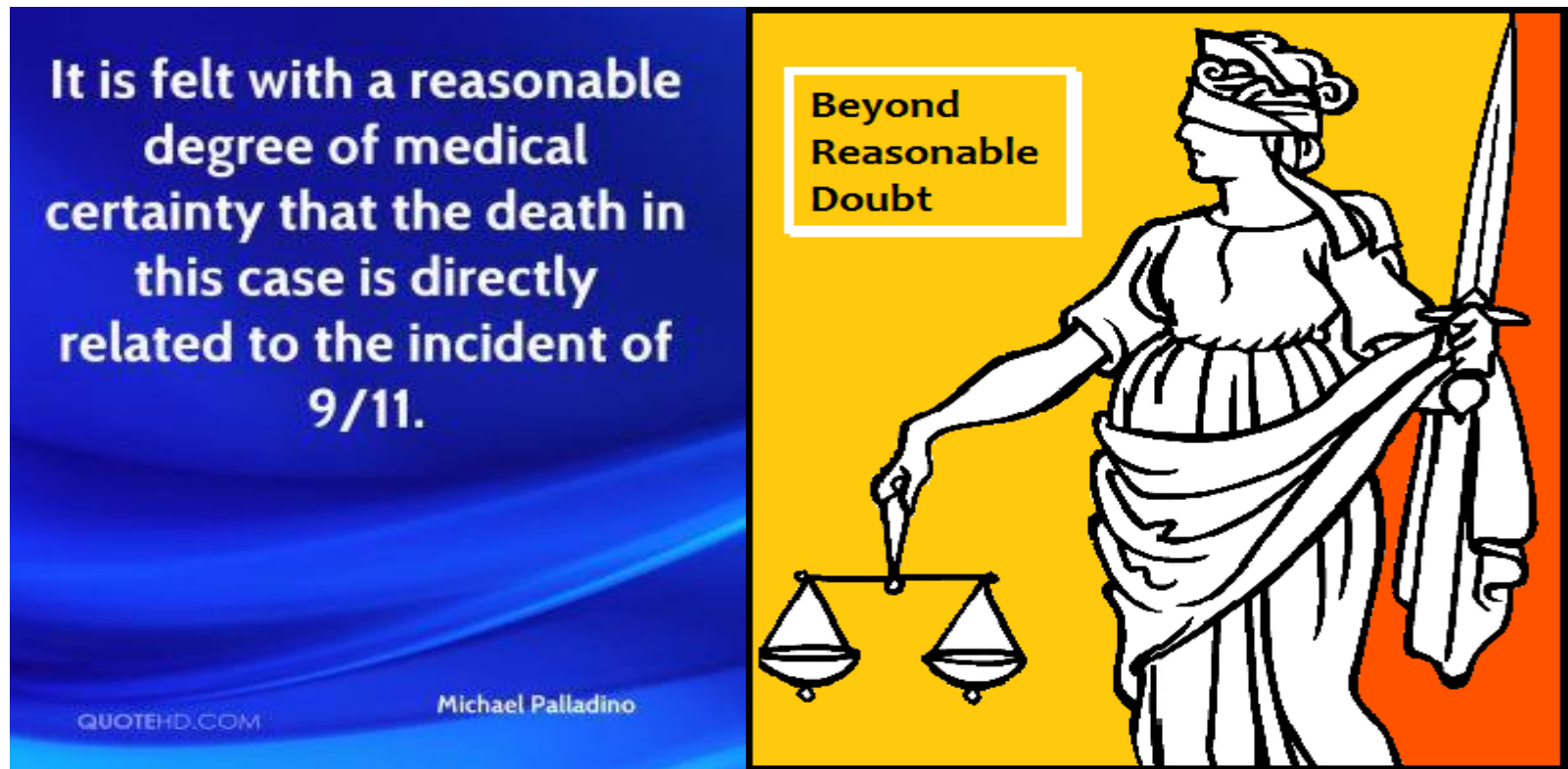
When I use a
word, it means
just what I
choose it to
mean, neither
more nor less.

Dissecting Words – 1

- ▶ Reasonable Degree –
 - 50%, 72.8%, 46%, 95% – No agreement within or across disciplines
- ▶ Scientific Certainty –
 - Does science have a definition of certainty?
- ▶ Is the issue how certain the expert is regarding her/his conclusion, or how certain it is that “X” will occur? **The Courts have confounded the two.**

Dissecting Words – 2

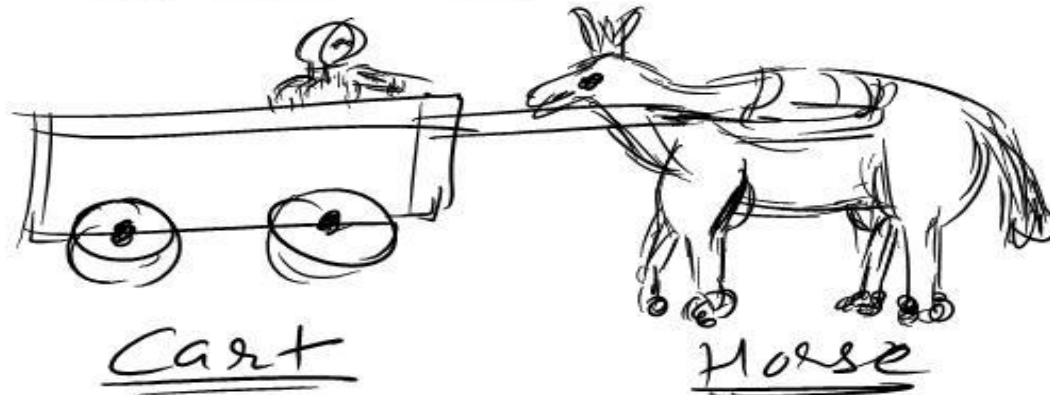
- ▶ Do we risk confusion?



Dissecting Words – 3

- ▶ Does the term beg the question of whether the discipline *is* a science?

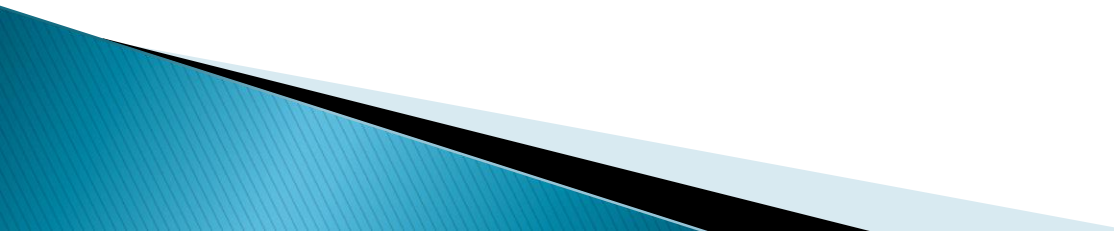
Wrong Sequence (cart before horse)



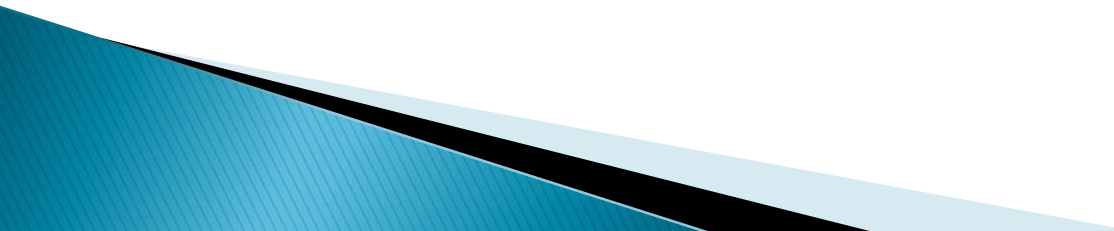
Our “Core” View – 1

- ▶ This phrasing is not routinely used in scientific disciplines.
- ▶ The terminology, in its varying forms, is not formally defined in standard medical or scientific reference materials.

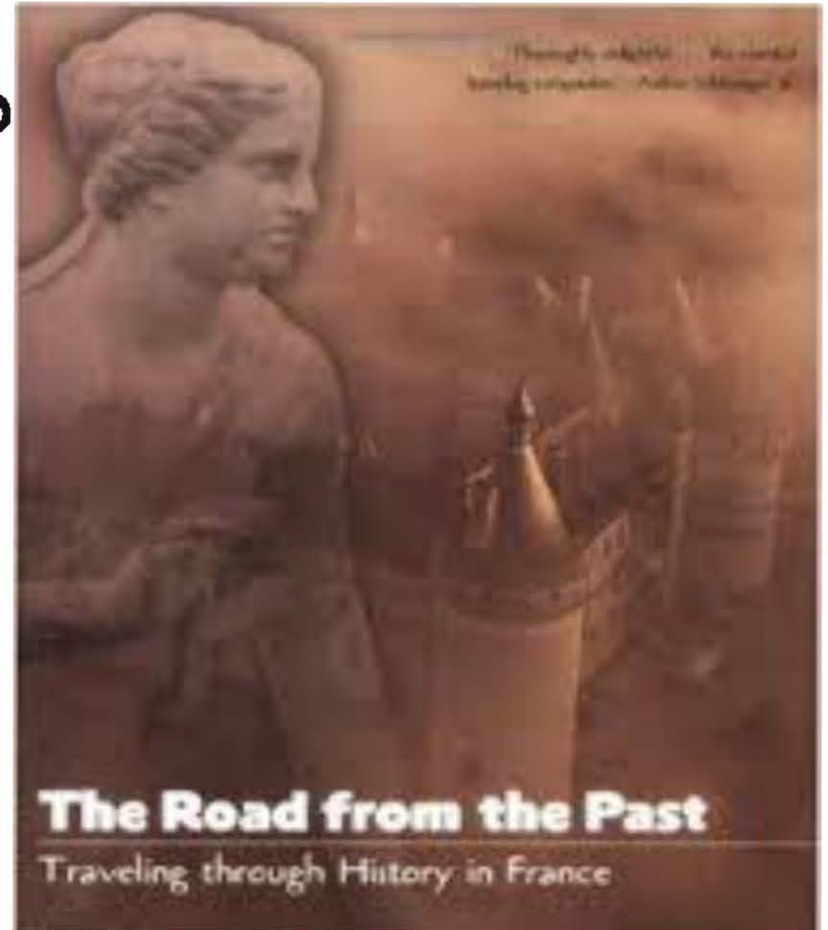
Our “Core” View – 2

- ▶ The scientific community should not promote or promulgate the use of this terminology.
 - ▶ The legal community should recognize that medical professionals and other scientists do not routinely use “to a reasonable scientific certainty” when expressing conclusions outside of the courts since there is no foundational scientific basis for its use.
- 

Our “Core” View – 3

- ▶ Legal professionals should not require that forensic discipline testimony be admitted conditioned upon these terms
 - ▶ Such terms have no scientific meaning and misleads factfinders
- 

Where Did This Terminology Originate?



Origins – Predicting the Future

- ▶ The phrase emerged from early precedent in regard to expert testimony *predicting future consequences* such as the need for medical care in years to come or the likely harm a plaintiff would suffer later in life.



Predicting The Future

- ▶ “[T]he alleged permanent disability, in order to be a ground for damages, must be one that is reasonably certain to result from the injury complained of.” *Lake Shore & M. S. R. Co. v. Conway*, 48 N.E. 483, 484 (Ill. 1897).

What About “Scientific” Certainty?


- ▶ In 1935, a witness was “asked whether he could determine with reasonable scientific certainty the cause of the capsizing of the boat.” *Herbst v. Levy*, 279 Ill. App. 353, 358 (Ill. App. Ct. 1935).
- ▶ Stylistic, not court required



An Admissibility Criterion?

- ▶ 1969
- ▶ If the witness...bases his answer upon what he believes to be reasonable scientific or engineering certainty, generally the evidence should be admitted...
- ▶ *Twin City Plaza, Inc. v. Central Surety & Ins. Corp.*, 409 F.2d 1195, 1203 (8th Cir. 1969).

What's The Law?

- ▶ Ohio the sole state to mandate use
 - ▶ Bizarrely, the original case focused not on how certain the expert was, but whether the certainty was as to a possible outcome rather than a probable outcome.
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The Modern View



The Modern View

- ▶ United States v. Mornan, 413 F.3d 372, 381 (3d Cir. 2005) (“this Court has been unable to find any authority...that questions regarding the expert's ‘degree of scientific certainty’ categorically renders expert testimony inadmissible”).

The Modern View – 2014

- ▶ “trial courts should not require a ‘reasonable degree of scientific certainty’ before admitting expert opinions but may exclude expert testimony based on speculation or possibility.” *State v. DeLeon*, 131 Haw. 463, 484 (Haw. 2014).



Hawaii

What About Scholars?



What About Scholars?



- ▶ The reasonable-degree-of-scientific-certainty language almost certainly was drafted by the lawyers.
- ▶ Scientists have no use for this phrase (outside the courtroom).
- ▶ It is legal mumbo jumbo
- ▶ David Kaye, THE DOUBLE HELIX

What About Scholars?



- ▶ Its legal meaning is at best ambiguous, at worst misleading...[and] is problematic for a different reason—misleading the jury, and should be excluded under Federal Rule 403 for that reason alone.
- ▶ Paul Gianelli, Reasonable Scientific Certainty": A Phrase in Search of a Meaning,

So Why Does It Persist?

**The most dangerous phrase
in the language is “we’ve
always done it this way.”**

Rear Admiral Grace Hopper (1906-1992)