



code-driven law?

Workshop on AI and border control, Edinburgh Law School (virtual), 15 June 2021

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Hildebrandt's taxonomy

text-driven law

legal activity performed by humans by means of sources of norms such as statute and case law

data-driven law

automatic decision-making or predictions used in support derived from statistical/inductive methods

code-driven law

legal norms or policies that have been articulated in computer code

Hildebrandt's taxonomy

open-textured concepts
multi-interpretability
→ **it can be contested**

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statistical closure

logical closure

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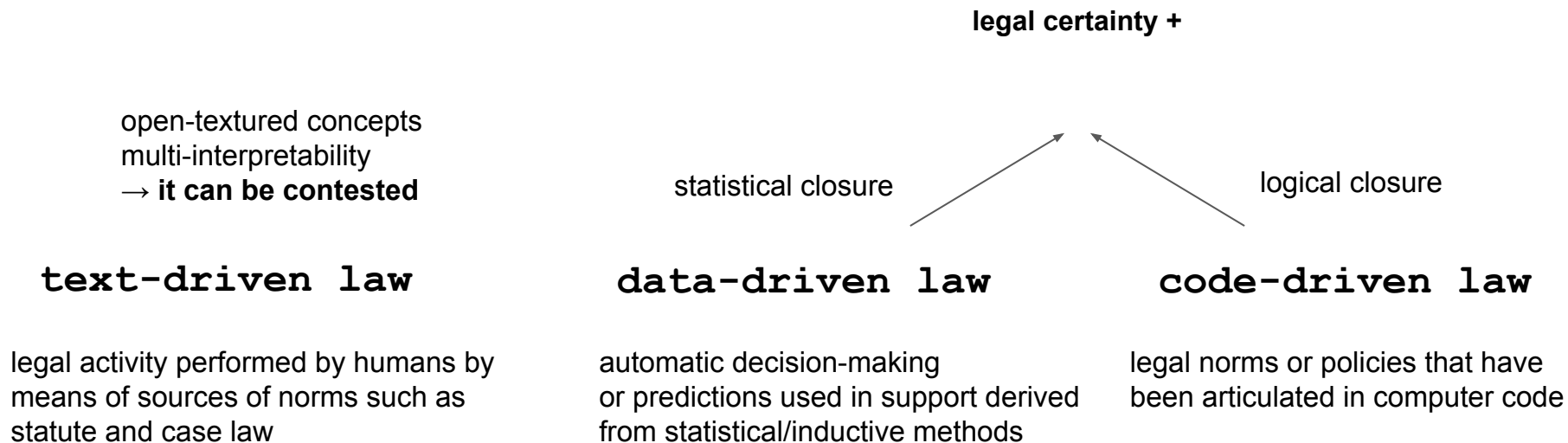
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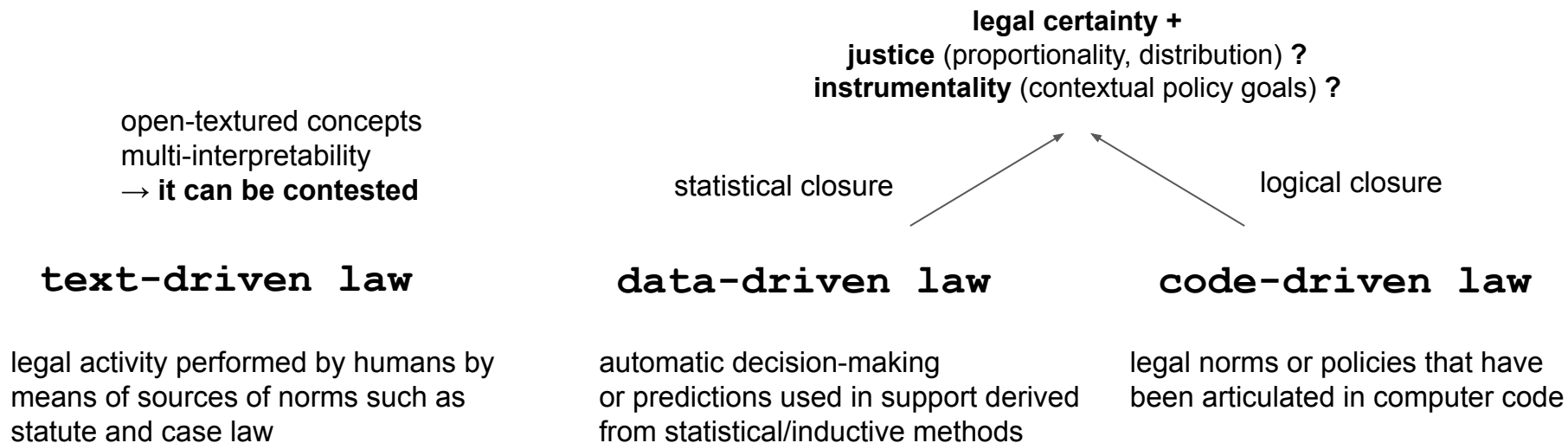
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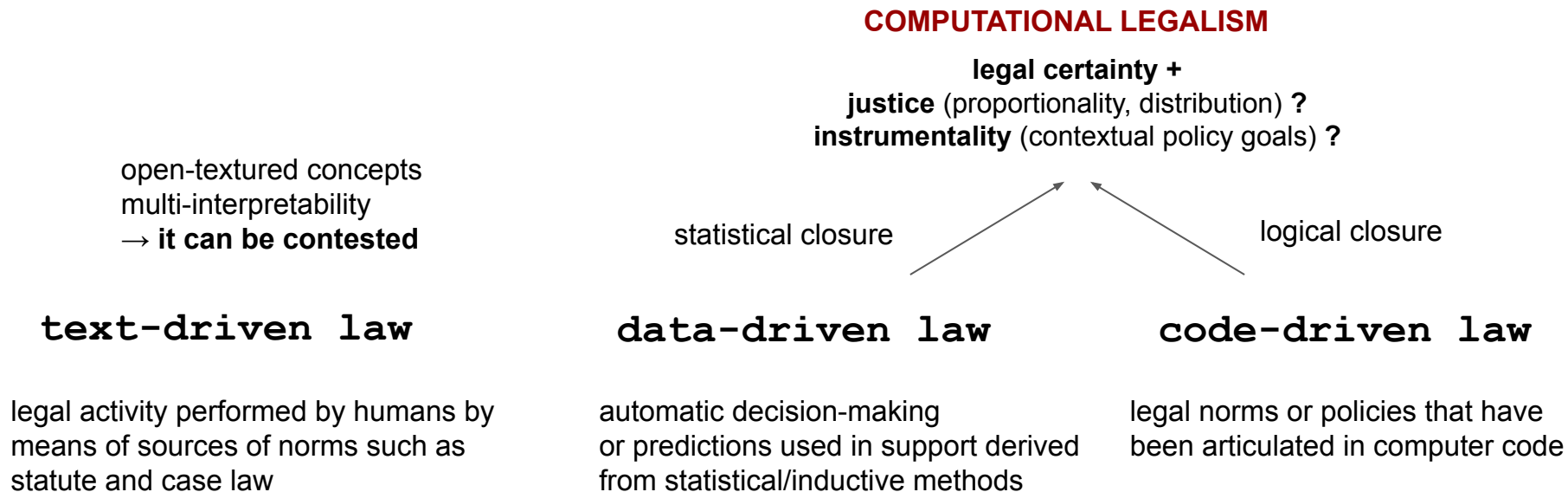
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instrumentality (contextual policy goals) ?

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in so far humans are involved

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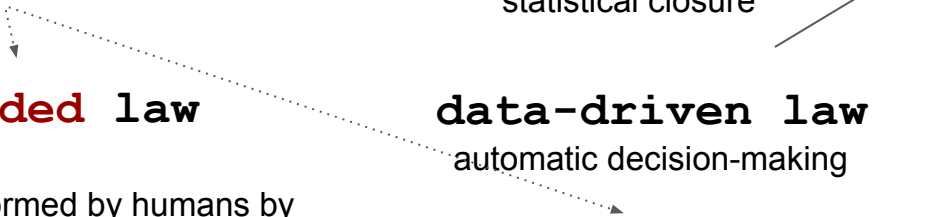
automatic decision-making

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TRAINING DATASET

instance + label
instance + label
instance + label
instance + label
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is the rationality behind labeling still the same?

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TRAINING METHOD

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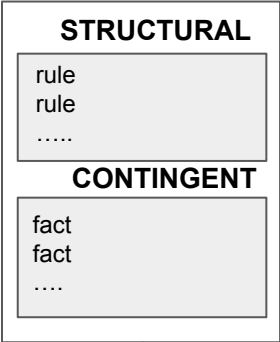
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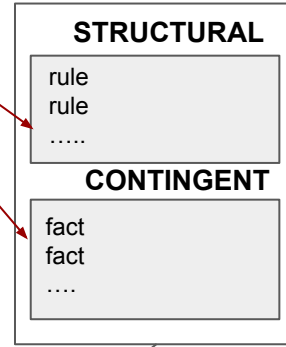
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were all the relevant rules considered?
were all the relevant facts given?
is the formalization correct?

[is the reasoning tool robust?]



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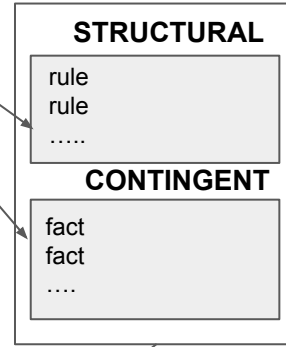
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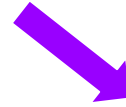
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the **COMPUTATIONAL LEGALISM** ideal works only in so far we forget all what may go wrong



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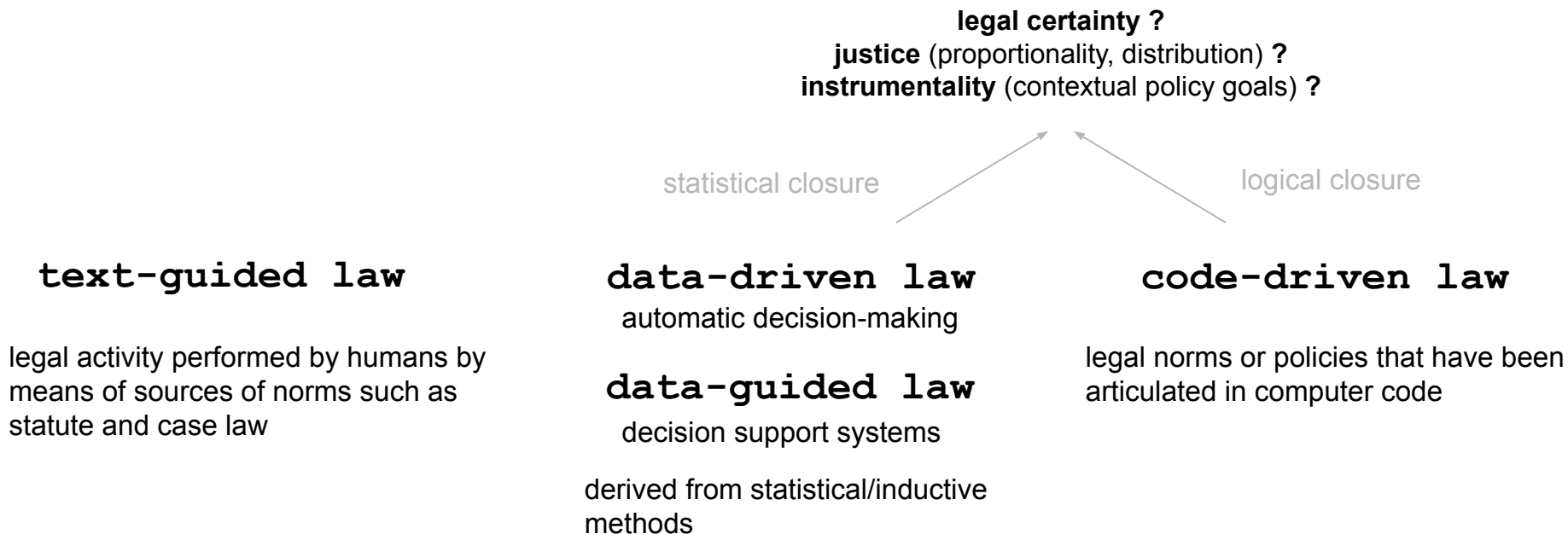
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is this all?



those principles
could be to some
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meta-rules

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can we be sure about a certain formalization?

those principles could be to some extent formalized as meta-rules

these goals could be made explicit

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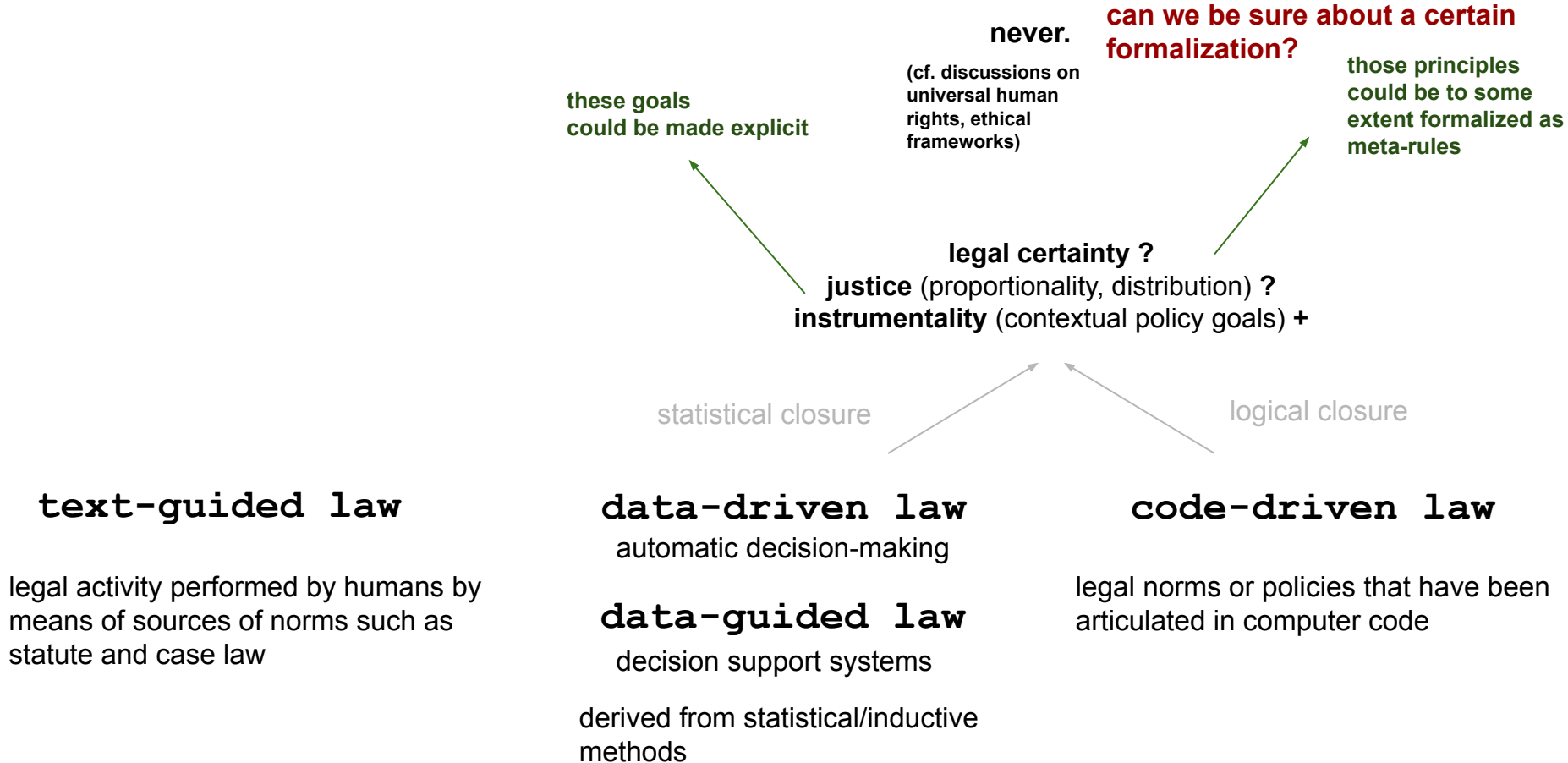
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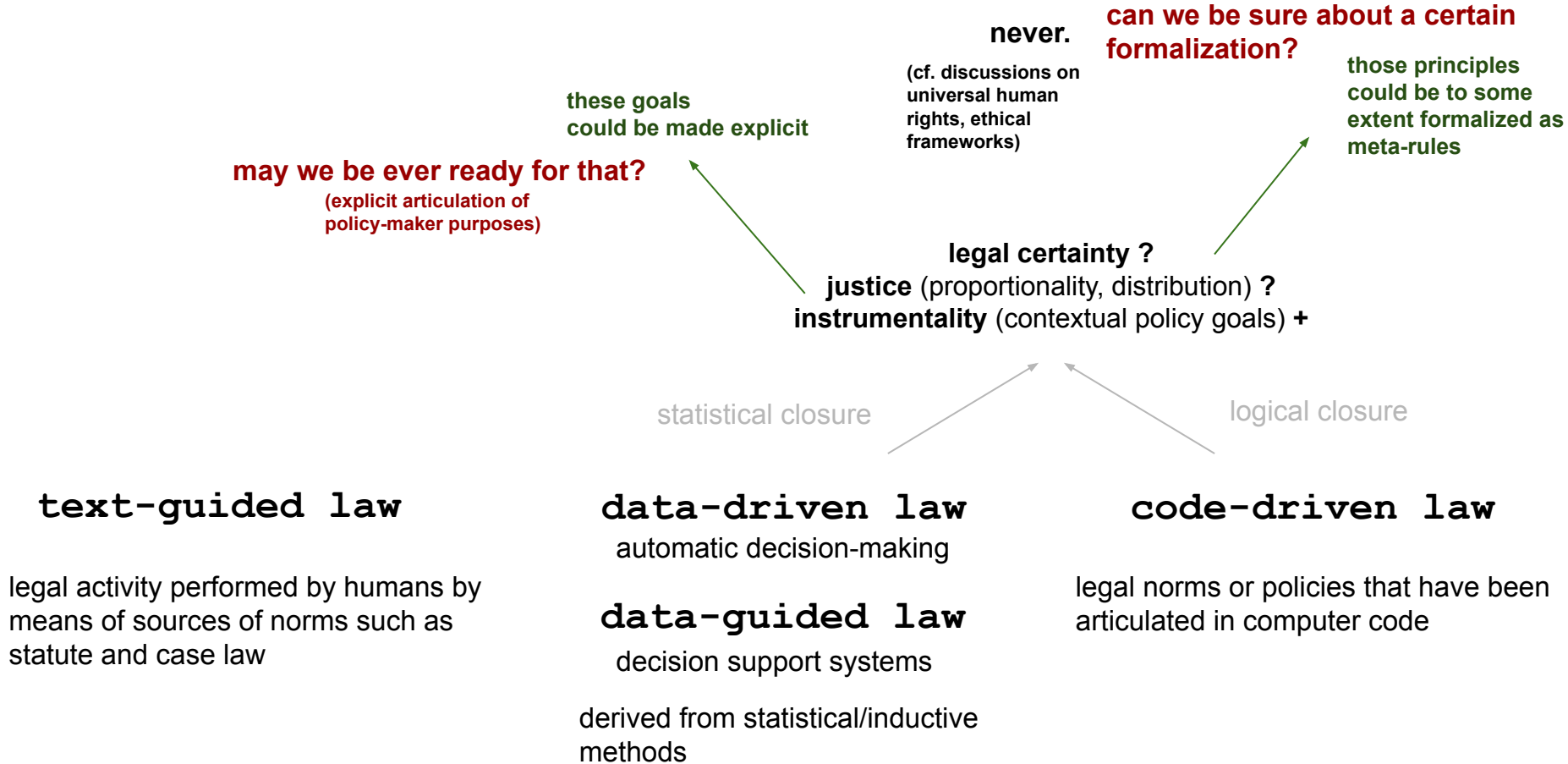
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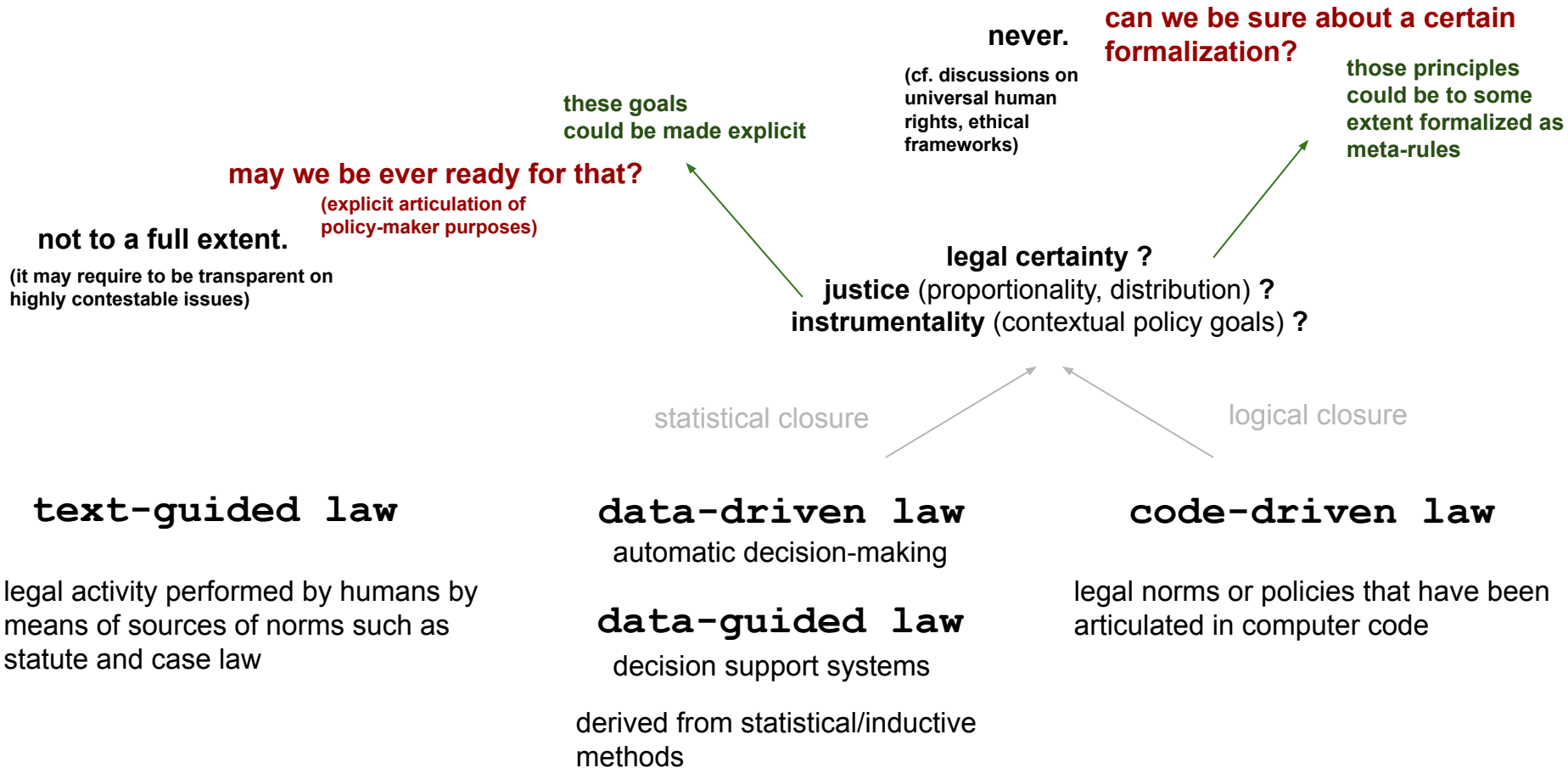
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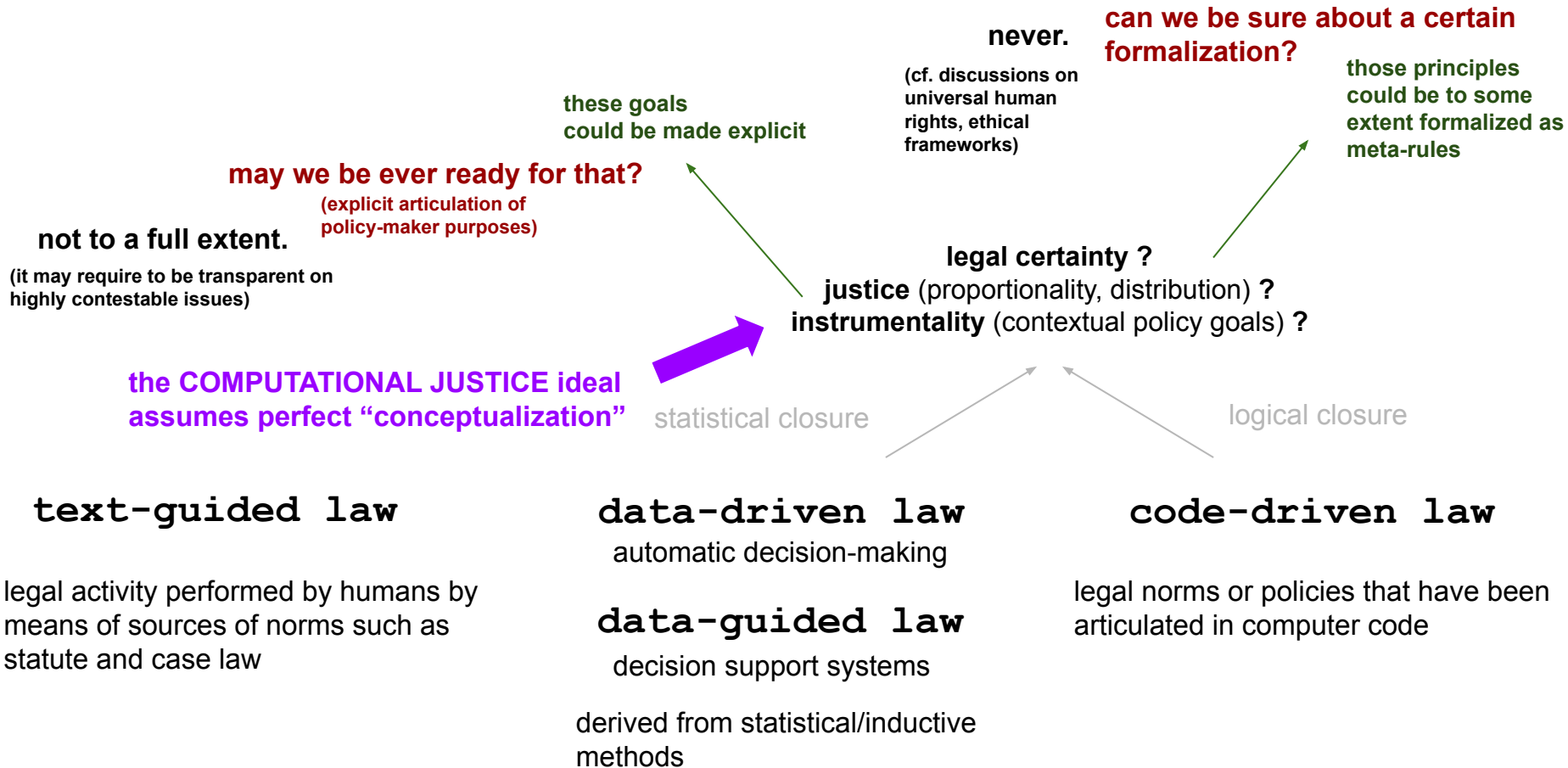
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the **COMPUTATIONAL LEGALISM** ideal
works only in so far we forget all what
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the **COMPUTATIONAL JUSTICE** ideal
assumes perfect “conceptualization”

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people or other actors should be able to **appeal**

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people or other actors should be able to *appeal*

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let's accept we need to integrate systematically feedbacks from higher-order courts, jurisprudence or other normative sources

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including computational actors
possibility of continuous, automated testing/verification

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derived from statistical/inductive methods

code-driven law

monolithical systems

code-guided law

ecological system including interfaces with humans

derived from legal norms or policies that have been articulated in computer code (or derived from other methods)
lower authority w.r.t. human authorities!!!

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ecological system including interfaces with humans

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lower authority w.r.t. human authorities!!!

a serious technological gap exists today...

Key points

- There is continuity between institutional and computational activities.
- We don't need institutions to become more mechanical, institutional constructs need to be brought into the computational realm.
- As we have a plurality of normative sources, we need a plurality of computational normative sources.

 **normware**

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- There is continuity between institutional and computational activities.
- We don't need institutions to become more mechanical, institutional constructs need to be brought into the computational realm.
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 **normware**

- Yet, this won't solve all issues. Legalist standpoints may still undermine justice. **State *with* right does not coincide with State *of* right.**
even in computational terms...

Further (related) reading

“Normware” is very much a concept in progress, parts of this story can be found in:

Sileno, G., [Of duels, trials, and simplifying systems](#), European Journal of Risk Regulation (2020).

Sileno, G., Boer, A., Gordon, G., Rieder, B., [Like Circles in the Water: Responsibility as a System-Level Function](#), Proceedings of 3rd XAILA workshop on Explainable AI and Law, in conjunction with JURIX (2020)

Sileno, G., Boer, A. and van Engers, T., [The Role of Normware in Trustworthy and Explainable AI](#), Proceedings of 1st XAILA workshop on Explainable AI and Law, in conjunction with JURIX (2018)

Boer A., Sileno, G., [Institutional Metaphors for Designing Large-Scale Distributed AI versus AI Techniques for Running Institutions](#), in: “Anchoring Institutions”, 2021 (forthcoming), Springer



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