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THE LIMITS OF STIPULATION: RECONSIDERING THE STANDARD METER

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SUMMARY: This paper criticizes Ruffino's illocutionary defense of Kripke's famous example of the contingent *a priori*: the standard meter. Ruffino uses Searle and Vanderveken's speech act theory to argue that measurement stipulations generate *a priori* knowledge of contingent facts. Against this, I argue that the institutional conditions underlying these stipulations cannot be separated from the grounds of justification. Unlike mathematical or logical knowledge, knowledge that these institutional conditions are satisfied is essential to knowledge of measurement stipulations, preventing genuine *a priori* status.

KEYWORDS: contingent, *a priori*, illocutionary, institutional, measurement

RESUMEN: Este artículo critica la defensa ilocucionaria que hace Ruffino del famoso ejemplo de Kripke de lo contingente *a priori*: el metro patrón. Ruffino utiliza la teoría de los actos de habla de Searle y Vanderveken para argumentar que las estipulaciones de medición generan conocimiento *a priori* de hechos contingentes. En contra de esto, sostengo que las condiciones institucionales que subyacen a estas estipulaciones no pueden separarse de los fundamentos de justificación. A diferencia del conocimiento matemático o lógico, el conocimiento de que estas condiciones institucionales se cumplen es esencial para el conocimiento de las estipulaciones de medición, lo que impide un auténtico estatus *a priori*.

PALABRAS CLAVE: contingente, *a priori*, ilocucionario, institucional, medición

1. *Introduction*

In *Naming and Necessity* (*N&N*), Kripke challenges then-common assumptions linking the notions of *necessity* with *apriority*, and *contingency* with *aposteriority*. Many mid-20th-century philosophers held that:

- any proposition that can only be known *a posteriori* is *ipso facto* contingent,
- any proposition that can be known *a priori* is *ipso facto* necessary.

Kripke convincingly shows how a proper distinction between the alethic modalities (necessity, possibility, contingency) and the epistemic ones (*a priori*, *a posteriori*), allows us to see clearly how there can be *necessary a posteriori* truths as well as *contingent a priori* truths.

Although the distinction between alethic and epistemic modalities is easy to grasp, finding clear examples of contingent *a priori* propositions has turned out to be much more difficult than anticipated. In fact, Kripke's own examples of contingent *a priori* truths have been the subject of numerous criticisms, even from well-known Kripkeans. In his book *Contingent A Priori Truths*, Marco Ruffino develops a sophisticated defense of Kripke's examples, focusing particularly on the standard meter case. Drawing on the work of Austin (1962), and Searle and Vanderveken (1985) in speech act theory, Ruffino constructs a novel account centered on the illocutionary structure of stipulative acts and their role in creating institutional facts.

While Ruffino's treatment offers valuable insights into the nature of stipulative acts and their epistemic implications, I argue that his defense ultimately fails to vindicate the *a priori* status of propositions established through measurement stipulation. The core problem, I contend, lies in his attempt to separate the empirical conditions required for successful stipulation from the grounds of justification for the resulting belief. This separation proves untenable once we recognize how institutional facts—unlike mathematical definitions—remain constitutively dependent on contingent social arrangements. As I will show, this persistent dependence on empirical institutional conditions renders knowledge of such propositions irreducibly *a posteriori*, despite their stipulative origins.

This diagnosis not only reveals why Kripke's standard meter example fails as an illustration of the contingent *a priori*, but also suggests broader lessons about the relationship between institutional facts and *a priori* knowledge. While Kripke's fundamental insight about the independence of alethic and epistemic modalities remains secure, the search for clear examples of contingent *a priori* truths may require looking beyond cases involving institutional reality.

2. *The Standard Meter*

In Lecture 1 of *N&N*, Kripke uses the example of the standard meter from Wittgenstein's *Philosophical Investigations* to illustrate the contingent *a priori*. He imagines a scenario in which an agent α fixes the metric system as a result of fixing the referent of "one

meter" with the description "the length of stick S at t_0". Kripke claims that, in that scenario, α can know the contingent proposition expressed by

(1) Stick S is one meter long at t_0,

(where "S" and "t_0" are individual constants designating, respectively, a particular stick and the time at which it is declared the International Prototype Meter) simply by virtue of α's reference-fixing stipulation, without further empirical investigation. For Kripke, this suggests that (1) expresses a contingent *a priori* truth. The proposition is contingent because stick S could have had a different length at t_0, and it is purportedly knowable *a priori* because α need not measure or empirically investigate S to know that it is one meter long at t_0—the stipulation itself allegedly suffices.

This seemingly straightforward example has generated significant philosophical controversy. Critics have advanced several distinct objections that target different aspects of Kripke's analysis. To mention a few:

- the stipulation enables α to know that (1) expresses a truth, but not to know the truth of what is expressed (the specific length of S) without empirical evidence (Donnellan 1977),
- sentences like (1) are only *superficially contingent*, as their truth depends on a stipulative reference-fixing act rather than the way the world is (Evans 1979),
- to fix the referent of "one meter" with the description "the length of stick S at t_0" requires from α to be acquainted or perceptually in contact with S, making α's knowledge *a posteriori*, not *a priori* (Salmon 1987, Soames 2003).

After critically evaluating these and similar objections, Ruffino lays out his defense of the legitimacy of the standard meter case as an illustration of the contingent *a priori*.

3. *Ruffino's Illocutionary Account*

Ruffino's main proposal is developed in chapter 10. It centers on a relatively neglected dimension of Kripke's example, namely the stipulative illocutionary act that, he claims, renders the contingent proposition expressed by (1) knowable *a priori*. Drawing on Austin's

seminal work on performatives and, in particular, on Searle and Vanderveken's work on illocutionary logic, Ruffino develops an account of the standard meter example that aims at vindicating it as a legitimate case of the contingent *a priori*.

In a nutshell, the account is this. The designated metrological authority (Ruffino calls him *the baptizer* or *stipulator*) performs two closely related declarative speech acts. First, he undertakes a *metasemantic act*:

> (**M***) I stipulate (define, declare, etc.) that ["One Meter" refers to the length of S at t_0].

Provided that this act is carried out correctly—i.e., satisfying all preparatory or success conditions regarding the stipulator's authority, the institutional legitimacy of the context, and so on—it creates a *metasemantic fact*, i.e., the fact that "one meter" refers to the length of S at t_0. This successful performance *weakly commits* the stipulator to a subsequent declarative act:

> (**M****) I stipulate (define, declare, etc.) that [One meter is the length of S at t_0],

which, if again successfully performed according to the required institutional rules, gives rise to the *institutional fact* that S is one meter long at t_0.

Ruffino appeals to this institutional fact to close what he takes to be two major gaps in Kripke's original treatment of this case:

> (i) the nature of the truth-makers of contingent *a priori* truths, and
>
> (ii) the transmission of *a priori* knowledge across times and speakers.

With regard to the first, Ruffino argues that the institutional fact created by the successful declaration of (1) *makes* its content *true*. Ruffino's idea is that once the stipulator confirms that the declarative speech act (**M****) has been successfully performed, *no further empirical evidence* is needed to *justify* his belief that S is one meter at t_0. Hence, his knowledge of that proposition is *a priori*.

As for the second gap, Ruffino claims that a successful performance of (**M****) requires the stipulator and those who accept his

authority to continue treating S as one meter long without further empirical justification at later times. Since failing to do so would undermine the act's success, knowledge that S is one meter at t_0 remains *a priori* both for the original speaker and for community members who recognize the declaration's authority. Once the community collectively recognizes the declaration, the proposition can be known without further measurement or observation, thereby transmitting the stipulator's *a priori* knowledge to other speakers.

Ruffino's sophisticated account of how declarative acts generate and transmit *a priori* knowledge of contingent propositions offers valuable insights into Kripke's puzzling example. However, his solution rests crucially on separating the empirical conditions for a declaration's success from the justification of the resulting belief. This distinction, I'll suggest, is more problematic than Ruffino seems to think.

4. *Preparatory Conditions and the Grounds of Justification*

A close examination of Ruffino's account reveals a crucial tension at its core. While he rightly emphasizes that declarative acts must satisfy certain empirical conditions to succeed, his claim that these conditions are separable from the justification of the resulting belief demands closer scrutiny.

The key to understanding this tension lies in Searle and Vanderveken's analysis of *preparatory conditions*—the states of affairs that must obtain for an illocutionary act to succeed. As they explain, "Such conditions which are necessary for the successful and nondefective performance of an illocutionary act we call *preparatory conditions*. In the performance of a speech act the speaker *presupposes* the satisfaction of all the preparatory conditions" (Searle and Vanderveken, 1985, p. 15). For declaratives specifically, they emphasize that

> All declarative illocutionary forces have the mode of achievement that the speaker invokes his power or authority to perform the declaration and the general preparatory condition that the speaker has that power or authority to change the world by the performance of the appropriate utterance act. (Searle and Vanderveken 1985, p. 57)

Consider the declarative act (**M****) establishing the standard meter. Its success depends on satisfying several essential conditions:

- The stipulator must possess legitimate institutional authority to fix the metric system.
- The declaration must occur through recognized procedures in an appropriate institutional context.
- The utterance must accurately convey the speaker's intended meaning without distortion.
- The relevant community must recognize the declaration as binding.

Each of these conditions requires empirical verification. If any fails—whether through lack of legitimate authority, institutional rejection, or misalignment between intention and expression—no institutional fact is created and, hence, no truth-maker for (1) is generated. This dependency raises a fundamental question: how can knowledge grounded in such thoroughly empirical conditions qualify as *a priori* in any meaningful sense?

Ruffino acknowledges the *a posteriori* nature of verifying preparatory conditions but maintains that this doesn't undermine the *a priori* status of the resulting knowledge. He writes:

> Something is crucial about (**M****): as said, it is not an assertion, but a declarative speech act, and in order to know whether any speech act is successful, we need to know whether its preparatory conditions are satisfied. This most of the time involves empirical (a posteriori) knowledge. But once we know that a declaration is successful, there is no need for further empirical justification of its propositional content: it must be taken as true, because the illocutionary point of a declaration is precisely to make a propositional content true by means of the very utterance. Hence, if we know that the preparatory conditions of (**M****) are in place, we can take its propositional content as true without any need of the relevant experience (in our case, measuring the standard stick to find out its length). In that sense, we have a priori knowledge of the propositional content of (**M****). (2022, p. 184)

On this view, while empirical verification is needed to establish success, it remains external to the justification of the stipulator's belief once that success is confirmed.

Ruffino's argument conflates two distinct epistemological issues: the no need for further empirical evidence and the apriority of justification. *A priori* justification allows for experiential dependence

only insofar as it enables concept acquisition and understanding—experience can't play an evidential role in justification itself. This distinction reveals three fundamental problems with Ruffino's account:

First, we must distinguish between conditions that are merely *enabling* (like learning French to understand the declaration) and those that are constitutive of the *grounds* for believing the proposition. When the success of (**M****) serves as a crucial premise in establishing the truth of (1), it can't be relegated to a mere enabling condition—it forms an essential part of the justification itself.

Second, verifying the declaration's success necessarily involves empirical confirmation of authority, institutional acceptance, and proper context. The justification of the stipulator's belief that the proposition holds true depends on knowing the declaration was not a misfire. That knowledge can only be obtained through observation or testimony about the relevant social/institutional conditions.

Third, while Ruffino correctly notes that no additional measurements of S are needed after the declaration, this doesn't remove its empirical dependence. The justification of the belief that S is one meter long at t_0 remains contingent on the empirically verified fact that the stipulator's act was successfully performed. Should evidence emerge that undermines the stipulator's authority—say, proof of fraudulent credentials—justification would also be undermined.

If this is right, the absence of further measurement requirements doesn't establish *a priori* status; it merely shifts the *locus* of empirical evidential dependence from the object's physical properties to the institutional conditions that ground the stipulator's authority. Knowledge remains fundamentally *a posteriori*, even if its empirical evidential basis lies in social rather than *brute facts*, as Searle calls them.

5. *The Mathematical Disanalogy*

Ruffino attempts to strengthen his defense of the *a priori* status of the content of (1) by drawing a parallel between the standard meter stipulation and stipulative mathematical definitions. His argument rests on the claim that both involve declarative acts that, once successfully performed, yield propositions whose justification requires no further empirical investigation. He writes:

> From the illocutionary point of view, both a mathematical definition and the stipulation of a standard of measurement have the same structure,

> i.e., are declarative illocutionary acts (and, therefore, both are performative utterances) performed by speakers (the mathematician and the stipulator); both have conditions of success, the knowledge of which most likely involves some empirical information. And both are successful if and only if they first make their propositional content true by means of the utterance itself. The ultimate justification for knowledge of the content of a mathematical definition is that there is such a definition in the system, and that it was successful as a declarative act. With mathematical definitions we have to separate two distinct aspects: one thing is knowledge that the preparatory conditions are satisfied (and this might almost always involve some empirical, a posteriori knowledge), and another thing is the justification of its content (which appeals to no further empirical evidence but simply to the fact that a successful definition was made). The presence of some unavoidable residual empirical knowledge concerning the satisfaction of the preparatory conditions is not normally seen (at least according to the BonJour-Kant epistemology that we are assuming) as destroying the credentials of mathematical definitions as generating a priori knowledge. (2022, pp. 186–187)

However, this alleged structural similarity breaks down under careful analysis, revealing crucial disanalogies that further undermine the purported *a priori* status of the content of (1).

Consider first the fundamentally different nature of the facts established in each case. The proposition expressed by (1) constitutes an *institutional fact*—one whose existence depends essentially on collective recognition and acceptance. Its truth conditions remain perpetually tied to contingent social arrangements that could, in principle, be revoked or invalidated. By contrast, a stipulative mathematical definition introduces a purely formal concept whose validity, once established, depends solely on its internal consistency within the relevant mathematical framework. While both acts may require certain empirical conditions for their initial success, the *ongoing* epistemic status of their respective contents differs crucially.

This ontological distinction has important consequences for justification. When a mathematician introduces a definition—say, *Let D be the set of all continuous functions on* $\mathbb{R}$—the subsequent justification for claims involving D relies purely on conceptual relations within mathematics. The empirical conditions required for the definition's introduction (e.g., proper notation, absence of typographical errors, etc.) function genuinely as *enabling* conditions that, once satisfied, play no further role in grounding mathematical truths about D. The mathematician's authority or institutional standing could be

entirely revoked without affecting the definition's standing within the formal system.

The standard meter case presents a markedly different epistemic structure. The truth of the proposition that S is one meter long at t_0 remains constitutively dependent on the continued institutional recognition of the stipulator's authority and the binding force of declaration (**M****). Should evidence emerge that undermines either condition—perhaps revealing that the stipulator lacked proper credentials or that the declaration failed to satisfy essential institutional requirements—the justification for believing the content of (1) would collapse. This vulnerability to empirical evidence about institutional facts is not merely enabling; it forms an integral part of what makes the proposition knowable at all.

Ruffino might object that once we know the declaration succeeded, no additional measurements of S are required to justify belief in the proposition expressed by (1). However, as I argued in the previous section, the absence of further measuring requirements doesn't entail that justification has become independent of empirical evidence about institutional reality. While mathematical definitions, once properly introduced, are effectively sealed off from further empirical vulnerabilities, the truth of (1) remains constitutively grounded in contingent social arrangements that could be invalidated by future discoveries about institutional facts.

This sustained dependence on empirical institutional conditions presents a deeper challenge to the alleged *a priori* status of the truth expressed by (1) than previously recognized. Even if we grant Ruffino's claim that no additional physical measurements are needed after a successful declaration, the justification for believing the content of (1) never achieves the kind of pure conceptual grounding characteristic of genuine *a priori* knowledge. The stipulator's knowledge—and that of the broader community—remains irreducibly tied to empirical evidence about institutional reality in a way that mathematical knowledge does not.

This analysis reinforces our earlier worries about the assumption that preparatory conditions can't be part of justification. The mathematical comparison, rather than supporting Ruffino's defense of contingent *a priori* truth, actually highlights how the standard meter case's persistent dependence on empirical evidence about institutional facts renders it fundamentally *a posteriori* in character. While both mathematical definitions and measurement stipulations may involve declarative acts, their resulting epistemic profiles differ in ways that prove fatal to Ruffino's attempted parallel.

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6. *Conclusion*

I have argued that Ruffino's defense of the standard meter example as a case of contingent *a priori* truth ultimately fails. While his illocutionary account offers valuable insights into stipulative acts and institutional facts, it founders on two critical points. First, knowing that the empirical conditions required for successful declaration of (1) have been satisfied can't be separated from its grounds of justification—they constitute an essential part of what makes the proposition knowable. Second, his attempted parallel with mathematical definitions collapses under scrutiny, as mathematical knowledge achieves a form of autonomy from empirical conditions that knowledge of institutional facts never attains.

These considerations reveal why the absence of further measurement requirements fails to establish the *a priori* status of the proposition expressed by (1). Rather than eliminating empirical evidence, it merely shifts it from being about physical properties to being about institutional facts. The resulting knowledge remains irreducibly grounded in contingent social arrangements in a way incompatible with genuine *a priori* justification.

Despite these criticisms, Ruffino's *Contingent A Priori Truths* represents an important contribution to our understanding of these issues. His sophisticated treatment of institutional facts and stipulative acts advances the debate considerably, illuminating crucial distinctions that any adequate account of the contingent *a priori* must address. While his defense of Kripke's example proves unsuccessful, his work deserves careful attention from those investigating these fundamental questions at the intersection of the philosophy of language, epistemology, and social ontology.

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