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# A Private Language Argument to elucidate the relation between mind and language<sup>1</sup>

Um Argumento da Linguagem Privada para elucidar a relação mente e linguagem

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## ABSTRACT

I will defend the claim that we need to differentiate between thinking and reasoning in order to make progress in understanding the intricate relation between language and mind. The distinction between thinking and reasoning will allow us to apply a structural equivalent of Ludwig Wittgenstein's *Private Language Argument* to the domain of mind and language. This argumentative strategy enables us to show that and how a certain subcategory of cognitive processes, namely reasoning, is constitutively dependent on language. The final outcome and claim of this paper can be summarized as follows: *We can think without language, but we cannot reason without language*. While this still leaves several questions about the relation between mind and language unanswered, I hold that the insights defended in this paper provide the basis and proper framework for further investigation about the relationship between language and the mind.

**Keywords:** Private language argument, Wittgenstein, thought/mind and language, reasoning, linguistic relativity, non-linguistic cognition.

## RESUMO

Defenderei que precisamos diferenciar pensamento e raciocínio a fim de progredir na compreensão da intrincada relação entre mente e linguagem. A distinção entre pensamento e raciocínio nos permitirá aplicar um argumento estruturalmente equivalente ao *Argumento da Linguagem Privada* de Ludwig Wittgenstein ao domínio da mente e da linguagem. Essa estratégia argumentativa nos permite mostrar que, e como, determinada subcategoria de processos cognitivos, a saber, o raciocínio, é constitutivamente dependente da linguagem. O resultado final e a tese deste artigo podem ser resumidos da seguinte forma: *Podemos pensar sem linguagem, mas não podemos raciocinar sem linguagem*. Embora isso ainda deixe várias questões sobre a relação mente e linguagem não respondidas, sustento que as ideias defendidas neste artigo fornecem uma base e uma estrutura adequada para uma investigação posterior sobre a relação entre a linguagem e a mente.

**Palavras-chave:** Argumento da linguagem privada, Wittgenstein, pensamento/mente e linguagem, raciocínio, relatividade linguística, cognição não-linguística.

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## Introduction

When we ask about the relation between thought and language, or language and the mind, we can demarcate possible answers to this question along a spectrum. On the one end of this spectrum we find a position which has come to be known as the *conduit metaphor* (Reddy, 1993). I think, pace Carruthers (2002, p. 657), that it is fair to characterize this position as the “common sense” view about how thought and language are related (see Ahearn, 2017, p. 8). It roughly tells us that thought is independent of language, since language merely serves to communicate our language-independently premolded thoughts to others. In order to communicate, we need to “translate” our thoughts into a public language; but language has no impact whatsoever on thought, since thinking is prior to and independent of language.

On the other end of the spectrum we find various positions which fall under the umbrella term “*linguistic relativity*.” Proponents of linguistic relativity theories often appeal to the early 20<sup>th</sup> century linguists Edward Sapir and especially Benjamin Lee Whorf, and base their accounts on what has come to be known as the Sapir-Whorf hypothesis.<sup>3</sup> Different versions of the theory postulate various kinds and intensities of linguistic impact on thinking. But all varieties of linguistic relativity insist on a substantial effect of language on thought, including radical versions according to which the language we speak essentially determines how we perceive reality, and the thoughts of speakers of structurally very different languages become basically incommensurable.<sup>4</sup>

I am convinced that truth is not to be found at either extreme of this spectrum, but it is one thing to claim that we need to find a tenable middle ground, and a very different thing to carve out and argue for a convincing position. My aim in this paper is to make a case for the claim that language does indeed have a substantial impact on the mind – since a certain kind of conscious cognitive processes, namely reasoning, constitutively depends on language – but no form of linguistic relativity whatsoever follows from this.

The line of argument I wish to present is closely related to Ludwig Wittgenstein’s famous *Private Language Argument*. I will start with a short reminder of what Wittgenstein’s Private Language Argument is (section 1.1), before providing a reconstruction of Wittgenstein’s argument (section 1.2), which I call “*PLA*.”<sup>5</sup> In a next step, I will sketch a distinction between thinking and reasoning (section 2), which needs to be drawn among conscious cognitive processes. This distinction is necessary before Wittgenstein’s rationale can be

applied to the domain of mind and language. This is what I will do in section 3, where I present a *Private Reasoning Argument* – *PRA* for short – which is constructed in close analogy with *PLA*. If the Private Reasoning Argument is cogent, it gives a direct – although not exhaustive – answer to the question how mind and language are related. *PRA* rests on a controversial premise, which will be (incompletely) defended in section 4. Section 5 delineates my account from linguistic relativity, before addressing a prominent concern about Wittgenstein’s argument – namely verificationism – in section 6. Finally, section 7 spells out some consequences of *PRA*, before the big picture of my account is quickly summarized in the conclusion section.

## 1. The Private Language Argument

While Ludwig Wittgenstein’s Private Language Argument tells us that a private language cannot exist, it also points us towards the conclusion that private reasoning cannot exist, because reasoning is dependent on language. To understand why, we must first unpack the Private Language Argument before this consequence can be drawn and contextualized in the debate about mind and language. For the purpose at hand, no deep exegetical investigation into §§243-315 of Wittgenstein’s (2009) *Philosophical Investigations*, which are commonly held to comprise the Private Language Argument, is needed. The following short introduction to the Private Language Argument is just meant to provide a rough outline of the argument in order to get a clear enough grasp on its functioning, so the subsequent reconstruction (*PLA*) and the later application to the relation between mind and language (*PRA*) can be more readily understood.

In order to roughly position my reading of the relevant paragraphs in Wittgenstein (2009) I would nonetheless be willing to state that I loosely follow Norman Malcolm’s (1954) take on Wittgenstein’s reasoning, which I even dare to call the standard or traditional interpretation of the Private Language Argument. Be that as it may, since the reconstruction I present below (i.e. *PLA*) is meant to be a deductively valid argument with the conclusion that a private language is impossible, my take on Wittgenstein’s Private Language Argument certainly qualifies as a representative of what is usually called “the orthodox approach to private language” (Stern, 2011, p. 334). I will sketch the basic rationale of the Private Language Argument in the following

<sup>3</sup> The literature about linguistic relativity and the Sapir-Whorf hypothesis is extremely vast, but for a good and rather recent overview see Reines and Prinz (2009).

<sup>4</sup> For more on linguistic relativity, see section 5.

<sup>5</sup> My reconstruction of Wittgenstein’s argument will be referred to as “*PLA*” throughout this text, whereas my usage of the expression “Private Language Argument” indicates that I do not talk about my particular interpretation and reconstruction of the argument, but about the argument more generally, usually disregarding differences in exegesis and interpretation.

section 1.1, and subsequently attach a reconstruction thereof in explicitly canonical form in section 1.2.<sup>6</sup>

## 1.1 General Depiction

A language is private, in Wittgenstein's sense, just in case it principally cannot be learned or understood by anyone but a single speaker. This is because the expressions of a private language would refer to a speaker's private experiences, which are essentially not accessible to anyone but the speaker.<sup>7</sup> Since no one but the speaker could possibly know the reference/meaning of these expressions, no one but the speaker could consequently understand the language.

Language is here conceived of as (*inter alia*) a system of rules, and therefore mastering a language is mastering its rules. This presupposes intersubjectivity, since without publicly available standards for determining when a rule is followed or not, the entire institution of rule-following breaks down. In other words, without publicly available standards everything that seems right for a speaker will be right. Without a distinction between what merely seems right and what actually is right, any distinction between right and not right gets abandoned as well.

A private language would not allow for the distinction between actually following a rule and the mere impression of following a rule, because there is in principle no way for a speaker to double-check whether she indeed followed a rule correctly, or whether it just seems to her that she did. But if this distinction between actually and allegedly following a rule is not available for a speaker, we are not even dealing with a language at all. Mastering a language comes down to mastering a set of rules. But without any possibility to discriminate between successful and unsuccessful applications of a rule, there is no mastering of rules. Therefore, every possible language must be a public language.

## 1.2 Reconstruction PLA

In an attempt to explicitly state the Private Language Argument in canonical form, I propose the following reconstruction:

**PLA:** The *Private Language Argument* reconstructed<sup>8</sup>

L1\* A (natural) language is (*inter alia*) a system of rules that can be mastered.

L2\* A (natural) language can only be mastered if its rules can be mastered.

L3\* Rules can only be mastered if it is possible to draw a distinction between correct and incorrect applications of a rule.

L4 A (natural) language can only be mastered if it is possible to draw a distinction between correct and incorrect applications of its rules. [via hypothetical syllogism from L2 and L3].

L5\* A private language would not allow drawing the distinction between correctly and incorrectly applied rules.

L6 A private language cannot be mastered. [via *modus tollens* from L4 and L5].

L7 Therefore, a private language is not a possible (natural) language. [via *modus tollens* from L1 and L6].

L8 Therefore, every possible language is a public (i.e. non-private) language. [via *contraposition* from L7].

Premises L1 and L2 should be rather unproblematic. The gist of Wittgenstein's reasoning is contained in premises L3 and L5, which are the critical assumptions needed to get PLA working. The rationale behind those crucial premises is the claim that we cannot follow a rule in private, i.e. the *rule-following constraint* (Wittgenstein, 2009, § 202).

## 2. Thinking vs. Reasoning

A variation of this argument yields the conclusion that private reasoning is just as impossible as a private language, granted, of course, that PLA is successful. As a first step to apply PLA's rationale to the relation between language and the mind, we need to make a distinction between two proper subsets of *thought* in a rather broad understanding:<sup>9</sup> The distinction is between *reasoning* on the one hand, and all kinds of *thinking* which are not reasoning on the other hand. So, reasoning and thinking are mutually exclusive, while they are both kinds of (and together exhaust) conscious thought.

It might be tempting, at first glance, to equate the distinction between thinking and reasoning with Daniel Kahneman's (2013) distinction between System 1 and System 2. In some respects, Kahneman's widely used distinction comes close to the differentiation I aim at: System 1 works automatically

<sup>6</sup> Since explicit reconstructions of the Private Language Argument seem to be surprisingly rare in the literature, what I provide below is my own reconstruction which clearly marks assumptions and inferential relations among individual propositions (i.e. what I call "canonical form"). The only other reconstruction of the Private Language Argument I know, which also provides these features, is Wrisley's (2011, p. 353 f), which unfortunately sticks too closely to the original text and is therefore too convoluted to carve out the underlying rationale in a helpful way.

<sup>7</sup> This is, at least, what Wittgenstein's famous example of the diary case (Wittgenstein, 2009, §258) and other passages (e.g. §§243, 256 f, 268, 275, and 293) suggest. But note that in the subsequent reconstruction of the Private Language Argument in section 1.2 no use whatsoever is made of the alleged privacy of what is designated by a linguistic expression. This is an advantage because PLA is therefore open for and applicable to other conceivable forms of language which are also private, albeit for different reasons than speaking about private sensations (Bertolet, 1999, p. 741). It might be possible to read Wittgenstein (2009, §§259 and 269) as encouraging such a wider notion of a private language.

<sup>8</sup> The asterisk (\*) marks assumptions.

<sup>9</sup> We may call this a *Cartesian notion of thought* (comprising whatever one can be consciously aware of), which covers "any sort of conscious state or activity whatsoever" (Williams, 2005, p. 62).

and without conscious effort for the cognizer, just as the kind of cognitive processes I wish to call “thinking” here. System 2 is slow and effortful, often even arduous from a first-person perspective, just as reasoning is supposed to be. Furthermore, thought and System 1 are both intuitive, while reasoning and System 2 demand training and concentration. But Kahneman’s distinction and my differentiation between thinking and reasoning come apart in at least one central respect.

The crucial difference between thinking and reasoning is that the latter, in contrast to the former, is subject to *correctness conditions* (and presupposes rule-following). These correctness conditions can be thought of in analogy with the conditions an argument needs to fulfill in order to be valid.<sup>10</sup> The applicability of correctness conditions is orthogonal to Kahneman’s distinction, because e.g. causal reasoning – which is done by System 1 – has correctness conditions just as do mathematical, statistical, or logical reasoning, which fall under the domain of System 2. The notion of reasoning which is of interest here may be called “System  $\geq 1.5$  reasoning” (McHugh; Way, 2018, p. 193) or “reasoning that is System 1.5 and up” (Boghossian, 2014, p. 2), i.e. reasoning that is person-level (Hurley; Nudds, 2006, p. 14), conscious, voluntary and active (Boghossian, 2014, p. 2 f; McHugh; Way, 2018, p. 168), domain-general and content-neutral (Hurley; Nudds, 2006, p. 11), and – pace Boghossian (2014, p. 3) – often even “effortful and demanding.”

Another point worth emphasizing is that any train of thought, however loosely connected or wildly associative it might be, may count as thinking, whereas reasoning crucially turns on the (type of) *transition* between mental contents. Only if those transitions are rule-guided, we may speak of reasoning. This restriction, of course, does not preclude flawed or incorrect reasoning. We need to make room for the possibility of (correctly) following the wrong rules as well as following (appropriate) rules incorrectly in reasoning. It just needs to be possible to reflect on any given transition in reasoning to double-check whether a given rule was followed correctly and whether the applied rule is appropriate for the respective situation and purpose at hand.

To put it in terms of Wittgenstein’s important distinction: We can only speak of reasoning if a cognizer is *following a rule*, while thinking may proceed either merely *according to a rule* or even be chaotic in a way that does not reveal any consistent pattern of mental transition at all.

### 3. The Private Reasoning Argument (PRA)

In a next step, after the distinction between thinking and reasoning and the argumentative structure of PLA are sufficiently clear, we can now apply what we have so far to the domain of language and the mind – or, more precisely, to reasoning – by presenting what I call the *Private Reasoning Argument*:

**PRA: The Private Reasoning Argument**<sup>11</sup>

R1\* Reasoning is a rule-guided mental activity which consists (inter alia) in following inference rules.<sup>12</sup>

R2\* Reasoning is only possible for someone who can access and apply inference rules.

R3\* Inference rules can only be accessed and applied by someone who can draw a distinction between correct and incorrect applications of a rule.<sup>13</sup>

R4\* A distinction between correct and incorrect applications of a rule can only be drawn by someone who has access to publicly available correctness conditions.

R5\* Only language (viz. public language) is fit to provide access to publicly available correctness conditions.<sup>14</sup>

R6 Only language allows drawing the distinction between correct and incorrect applications of a rule. [via hypothetical syllogism from R4 and R5].

R7 Only language provides access to inference rules. [via hypothetical syllogism from R3 and R6].

R8 Reasoning is only possible for someone who has a language. [via hypothetical syllogism from R2 and R7].

R9 Therefore, reasoning is not available without language. [logically equivalent with R8].

R5 claims that nothing but language could provide access to publicly accessible correctness conditions (for inference rules). This crucial assumption calls for independent backup, which will be provided in the following section 4. Before we come to this, note one striking dissimilarity between PLA and PRA: While PLA leads to the conclusion that a private language cannot exist, PRA does not conclude in saying that there cannot be private reasoning. This conclusion, however, can be easily derived from the characterization of reasoning in R1 together with the basic Wittgensteinian insight that we cannot follow a rule in private (i.e. the *rule-following constraint*), which fuels PLA as well as PRA. With this presumption, a derivation of the impossibility of private reasoning is

<sup>10</sup> The analogy between the kind of correctness conditions of interest at this point and validity is crucial. Truth conditions are, of course, also a kind of correctness conditions. But thinking of correctness conditions for reasoning in terms of truth conditions instead of validity conditions would be a mistake.

<sup>11</sup> The asterisk (\*) marks assumptions.

<sup>12</sup> As McHugh; Way (2018, p. 184) would specify “[i]n a slogan, reasoning is rule-following that aims at fittingness.” For the purpose at hand, however, it is only important that rule-following is *necessary* for reasoning. Whatever characteristics besides rule-following may be needed to be sufficient for reasoning is irrelevant in this context.

<sup>13</sup> The ability to apply inference rules and distinguish correct from incorrect applications of a rule need not be flawless, but at least a general awareness of the fact that rules can be applied correctly or incorrectly is required for someone to count as a reasoner.

<sup>14</sup> Or, equivalently: Publicly available correctness conditions (for inference) can only be accessed linguistically.

trivial: If we cannot follow a rule in private, we also cannot reason in private, since reasoning is following inference rules.

## 4. Why only language?

The argument for the claim that *only* language possession enables reasoning (by providing access to publicly available correctness conditions, as R5 has it) is, in a nutshell, that no other plausible candidate is available to do the job. In order to provide access to correctness conditions/inference rules, a medium must be fine-grained enough to allow for a precise formulation of the rules/conditions in question. In order to do so, sensitivity to intensional contexts *and* the availability of intersubjectively accessible communication are necessary.<sup>15</sup>

### 4.1 The External World

Being sensitive to intensional contexts is required because lines of reasoning (which may be expressed in arguments) are sensitive to intensional contexts as well. Therefore, no medium which does not exhibit this sensitivity could possibly be fit to take the role we reserved for language, i.e. providing access to correctness conditions. This especially excludes reality itself as providing us with access to correctness conditions for reasoning. Reality is not sensitive to e.g. different descriptions of one and the same thing or state of affair. Reality is indifferent to my depicting one and the same person as either ‘the 45<sup>th</sup> president of the United States’ or ‘the worst president of the United States ever.’ But in reasoning this difference can be crucial, since ‘He will not be reelected, because he is the 45<sup>th</sup> president of the US’ is not an inference of the same quality and plausibility as ‘He will not be reelected, because he is the worst president of the US ever.’

These kinds of differences must be captured by a medium which can provide access to correctness conditions for reasoning. The external world, *viz.* reality, however, is not sensitive to intensionality in the relevant respect. It probably does not even make sense to call reality “intensional” or “extensional,” since these predicates seem to be applicable to representational systems only. Saying that reality or the external world is (sensitive to) intensional (contexts) most likely amounts to a category mistake. However, since nothing could possibly provide access to correctness conditions for reason-

ing without being (sensitive to) intensional (contexts), reality is ruled out, regardless of the question whether the statement “reality is intensional” is false or nonsensical.

One way to make sense of the idea that reality might be (sensitive to) intensional (contexts) is to make use of a *Lagadonian language* (Lewis, 1986, p. 145 f). In a Lagadonian language (with a Lagadonian interpretation) everything simply serves as a sign of itself. This way we can regard reality as a representational system, and it seems entirely legitimate to ask whether a Lagadonian language (*qua* representational system) is sensitive to intensionality. A Lagadonian language (with a Lagadonian interpretation) is purely extensional, so this move does not help with getting access to correctness conditions. But we can give the question whether reality is (sensitive to) intensional (contexts) a sensible reading.<sup>16</sup>

This also proves that communicative attempts such as pointing to e.g. things or events in order to fix an inference relation between certain occurrences pointed to is too coarse-grained for reasoning because different descriptions of what was pointed to can affect the quality of the reasoning involved. We need a more sophisticated medium which allows us to have access to correctness conditions for reasoning. The most plausible candidate to accomplish this, apart from language and reality, surely is some kind of mental representation.

### 4.2 Mental Representations

Mental representations are undoubtedly sensitive to intensionality, but the trouble with mental representations (even if this does not hold for their contents; see note 21) is that they do not seem to be publicly available – *viz.* they are private – and therefore cannot accommodate the rule-following constraint.<sup>17</sup> Although it is clear that mental representation is necessary for reasoning, no combination of mental representations or transition from one representation to another, as long as they are unaided by language, could constitute reasoning. This is because, besides intensionality, the availability of intersubjectively accessible communication is needed as well. Mental representations as private entities are therefore unable to provide access to correctness conditions, which is required for reasoning.

This holds true even if we assume that mental representation, and thereby our vehicle for thought, already is language-like from the outset. Let us consider *Mentalese*, the

<sup>15</sup> Davidson (2001) follows a similar argumentative strategy in some respects, but I am far from agreeing with his conclusions. One reason for our disagreement is probably that I am significantly more optimistic regarding the prospects of *de re* belief ascription. For more differences between Donald Davidson’s and my account, see section 6. The list of options to be considered in this section is not exhaustive. Possible candidates such as mental maps (Camp, 2007) or unstructured propositions – e.g. propositions as functions from possible worlds to truth values, or as sets of possible worlds (King, 2017); in contrast to Fregean and Russellian propositions as exponents of structured propositions – are not discussed due to restricted length of this article. However, considerations similar to those mentioned in sections 4.2 and 4.3 also apply to these omitted alternatives.

<sup>16</sup> I wish to thank Frank Hofmann for pointing me to David Lewis’ discussion of the Lagadonian language.

<sup>17</sup> Mind premises R3 and R4, or just substitute “private representations” for “a private language” in L5 to see that mental representations are ruled out by the rule-following constraint.

alleged “language” thought:<sup>18</sup> If Mentalese is not a public language – as Jerry Fodor (2008, p. 80) himself suggests – it does not even count as a possible language, following the conclusion of *PLA*. If Mentalese (assuming that it actually exists) should turn out to be a public language, on the other hand, it can provide the required access to correctness conditions and inference rules, and the conclusion of *PRA* holds true because the so-called “language” of thought is a real, i.e. public, language.<sup>19</sup>

### 4.3 Fregean Senses

The last candidate for providing access to correctness conditions for reasoning, apart from language, to be considered here are Fregean propositions. Since Fregean propositions, i.e. senses or thoughts<sub>F</sub>,<sup>20</sup> are “capable of being the common property of several thinkers” (Frege, 1960, p. 62 n), they may avoid the problems we encountered with mental representations due to their privacy.<sup>21</sup> But even Fregean propositions need to be grasped “in an individual psychological act” (Putnam, 1975, p. 134) before they can be of any use for us in reasoning, which again leaves us only with (private) mental representations to operate with for a reasoner.

Even if we ignore this aspect and suppose that a reasoner can directly operate on Fregean senses without the need for a mediating mental representation thereof, Fregean propositions are still not fit to provide access to correctness conditions for reasoning. This is because Fregean senses fall prey to the rule-following constraint. Unaided by language for identifying and communicating individual steps in a line of reasoning, Fregean propositions by themselves do not allow for publicly accessible re-identification or double-checking on the legitimacy of inferential transitions between them. To achieve these features, we are cast back to language again, which is, as claimed before, the only medium fit to warrant publicly available access to correctness conditions, which in turn is necessary for reasoning.

## 5. Linguistic Relativity

*PRA*’s conclusion (i.e. propositions *R8* or *R9*) may be reformulated by saying that language is constitutive for reasoning. But language is not constitutive in the sense that it fixes the correctness conditions needed for reasoning. This would open the gates for the worst kind of linguistic relativity, since it might be the case that each language fixes different correctness

conditions for reasoning. The correctness conditions for reasoning are, however, not dependent on any individual language and are therefore not language-relative. What language does provide is not the correctness conditions themselves, but access to correctness conditions which are fixed independently of any individual language. So, every language provides access to the very same correctness conditions, although different languages may provide this access in slightly different ways.

Although there is no difference among languages regarding which correctness conditions they provide access to, there may be differences regarding how this access is provided. Some correctness conditions might be provided more transparently in one language than in another. To illustrate such a possibility, we can take a look at the following, very bad argument:

1. Only man is rational.
2. No woman is a man.
- ∴ 3. No woman is rational.

This fallacy obviously turns on an equivocation of the term “man,” which occurs with the same meaning as “human being” in the first premise and with the same meaning as “male (adult) human being” in the second premise. This equivocation cannot be reproduced e.g. in German, since there is no German expression for the middle term with a corresponding ambiguity. So, the flaw in this reasoning is even more striking if we were to formulate the argument in German rather than in English.

The message to take from this example is of course not that German is generally superior in how it provides access to correctness conditions. The previous example was arbitrarily chosen, and a different example might have come out just the other way round by illuminating a flaw that is more readily detected or avoided in English than in German. The lesson to learn is that a line of reasoning is correct or incorrect in any language because the correctness or incorrectness of a line of reasoning is not dependent on the language which is used to express the reasoning in question. But different expressions of the same line of reasoning in different languages can sometimes highlight or obscure flaws in their respective formulations of an argument/line of reasoning.

In this sense, Whorf’s (1956, p. 214) tentative suggestion to make oneself “familiar with very many widely different linguistic systems” is reasonable, but not because a monolingual individual is “constrained to certain modes of [reasoning]”<sup>22</sup> (Whorf, 1956, p. 214). The plausibility of Whorf’s suggestion rather comes from the fact that some flaws in reasoning might in some languages be more readily detected than

<sup>18</sup> Some people might object at this point that presupposing a language of thought would beg the question in an investigation of the relation between thought and language, but bear with me for the moment.

<sup>19</sup> For considerations regarding the possibility that a person’s language of thought is just the same as a person’s public language, e.g. English, see Devitt (2006, p. 148 ff).

<sup>20</sup> Not in the Cartesian sense introduced in section 2, but thoughts in the Fregean sense.

<sup>21</sup> Fregean or Russellian propositions may be considered as the contents of mental representations, i.e. what mental representations represent. The crucial point is that mental representations are private although their content might be publicly available.

<sup>22</sup> Whorf originally talks about interpretation, not reasoning.

in others – as in the example above where German does not allow for the fatal equivocation because there is no German term available with a corresponding ambiguity. A monolingual English speaker is of course nonetheless able to detect the equivocation on her own without the need to ask a speaker of German for help or take recourse to German language patterns. Consequentially, this example is far from suggesting any noteworthy restrictions in reasoning or conceptual systems due to one language in comparison to another. The outcome that reasoning (constitutively) depends on language therefore cannot be used to support claims of linguistic relativity.

Theories of linguistic relativity deserve a far more detailed discussion than can be provided here. I therefore do not claim that linguistic relativity can be refuted on the basis of these few remarks, although I am convinced that most accounts of linguistic relativity are deeply flawed and often radically overemphasize the allegedly all-pervading effect of different languages on our mental life. To mention only one problem, many – although not all (Gumperz; Levinson, 1996, p. 1) – accounts of linguistic relativity suffer from: Linguistic relativity theorists are frequently tempted to amalgamate language and culture in their notion of language.<sup>23</sup> As a consequence, the linguistic relativist's claim that "the particular language we speak influences the way we think about reality" (Lucy, 1997, p. 291) often amounts to the truism that our thinking is affected by our *linguistic-cum-cultural* situation. This should hardly come out as a surprise, given that our cultural situation comprises all aspects of our education and upbringing. Theoreticians who tend to use such an amalgamated notion of language therefore owe us an argument that their theories have anything to do with an actually *linguistic* impact on thought, independent of cultural effects in a broader sense.<sup>24</sup>

However, ignoring the intricacies of linguistic relativity here can be justified by pointing out that theories of linguistic relativity crucially differ in focus from the present investigation. I am concerned with the question how thinking/reasoning is dependent on (having a) language *per se*, i.e. what Lucy (1997, p. 292) calls the "semiotic level." Linguistic relativity, on the other hand, primarily makes claims about cognitive effects of speaking one language rather than another – Lucy's "structural level" (Lucy, 1997, p. 292) – while it usually has little to say about differences in thought resulting from speaking any language in contrast to none at all (Enfield et al., 2014, p. 8). These questions are sometimes not even clearly distinguished and consequently get confused in pertinent inquiries, which makes the theoretical underpinning of alleged achievements

in studies of linguistic relativity appear rather dim in many cases. Regarding this investigation, however, the question how *different* languages affect thought is of secondary interest. The preconditions for reasoning and the cognitive differences between linguistic and non-linguistic individuals are the central focus of the inquiry at hand.

## 6. Verificationist Concerns

The discussion above, and probably especially the repeated emphasis of the rule-following constraint, might raise (anti-) verificationist concerns in some readers. This is especially reasonable because Wittgenstein's Private Language Argument was repeatedly accused of building on verificationist principles early on in the literature (e.g. Thomson, 1964). Since "verificationism" is a quite elastic term, it is hard to counter every accusation which might come under this label in one sweep. But the argumentation presented here is at least not guilty of a version of verificationism which clearly needs to be rejected. If the claims defended here turn on verificationist principles at all, then it is a very mild form of verificationism which can be accepted, or so I wish to argue in this section.

Without giving a precise definition of what makes a verificationist position untenable or acceptable, the difference can be depicted for our purposes by considering so-called *Robinson cases*.<sup>25</sup> A version of the Private Language Argument with the consequence that a lonely islander like Robinson Crusoe (who never meets Friday) could not learn, speak, or understand a language because he lacks contact with a linguistic community would clearly turn on an untenable verificationist principle. The same holds *mutatis mutandis* for the Private Reasoning Argument. If it follows from PRA that Robinson cannot reason because no one is present to talk about his inferences with Robinson, then PRA would need to be rejected for unacceptable verificationist commitments. However, nothing like this follows from the arguments presented here.

To show this, we can consider Donald Davidson's suggestion to extend Wittgenstein's Private Language Argument in a way similar to my approach. Davidson writes:

*I believe that Wittgenstein put us on the track of the only possible answer to this question [regarding the source of the concept of truth]. The source of the concept of objective truth is interpersonal communica-*

<sup>23</sup> Sometimes this happens implicitly; sometimes the mingling is explicitly endorsed as unavoidable (Ahearn, 2017, p. xiii, xiv, 8, 20 f, 32, 56, 73, 92 f, 112, 116). I take this to be misguided, and wholeheartedly subscribe to the statement that "[o]bviously, to even pose the question as to whether language and culture are related, there must be a sense in which the two can be distinguished" (Enfield et al., 2014, p. 13).

<sup>24</sup> This point is also repeatedly emphasized by McWhorter (2014, p. 139), who insists that the allegedly demonstrated effects of language-and-culture on thought come from culture (McWhorter, 2014, p. 12, 81 f, 103) or environment (McWhorter, 2014, p. 18 f), but not from language.

<sup>25</sup> An early account of discussing Robinson cases in connection with the Private Language Argument can be found in Ayer and Rhees (1954), where many of the mistakes pointed out below are committed.

tion. Thought depends on communication. This follows at once if we suppose that language is essential to thought, and we agree with Wittgenstein that there cannot be a private language. [Footnote omitted] The central argument against private language is that unless a language is shared there is no way to distinguish between using the language correctly and using it incorrectly; only communication with another can supply an objective check. If only communication can provide a check on the correct use of words, only communication can supply a standard of objectivity in other domains, as we shall see. We have no grounds for crediting a creature with the distinction between what is thought to be the case and what is the case unless the creature has the standard provided by a shared language; and without this distinction there is nothing that can clearly be called thought (Davidson, 1991, p. 157).

This passage might, at first glance, appear very similar to what I argue for. But there are subtle, albeit absolutely crucial, differences between Davidson's and my account. A rather superficial difference is that Davidson talks about truth and thought (notably belief) while I talk about (inferential) correctness and reasoning. Although important, this is not the most crucial difference to be considered here. What is more important is that Davidson's formulation suggests that *actual* interpersonal communication is required for truth and thought and that only an *actually* shared language is a public, and therefore possible, language. If the quoted paragraph above does not merely suffer from consistently careless wording, what Davidson expresses in this passage is verificationism par excellence. This conception seems to make it impossible for (our version of) Robinson Crusoe to use language or even think, since there is no one he could actually communicate or share a language with. I take this result to be intuitively as well as theoretically unacceptable, just as unacceptable as the apparently underlying variety of verificationism.

This kind of verificationism, however, is easily avoided. What needs to be done is to change the requirement that *actual* communication happens and that a language is *actually* shared, to the requirement that communication is *possible* and that a language *can* be shared. The correct modality for those requirements is possibility, not actuality. Davidson seems to wrongly assume "(...) that unless a language is shared there is no way to distinguish between using the language correctly and using it incorrectly" (Davidson, 1991, p. 157; emphasis added). What Davidson should have said is that unless a language *can* be shared, there is no way to distinguish between using the language correctly and using it incorrectly. A private language is not a language that is not shared, but a language

that cannot be shared.

Davidson also incorrectly extends the rationale behind the Private Language Argument to the entire domain of thought, including beliefs. The consequence of this move is that, according to Davidson, a pre- or non-linguistic creature cannot have beliefs, because

(...) to have a belief it is not enough to discriminate among aspects of the world, to behave in different ways in different circumstances [...]. Having a belief demands in addition appreciating the contrast between true belief and false, between appearance and reality, mere seeming and being. [...] Someone who has a belief about the world—or anything else—must grasp the concept of objective truth (Davidson, 1991, p. 156 f),

which in turn is only possible with language, because "communication is the source of objectivity" (Davidson, 1991, p. 157 n) and "without communication propositional thought is impossible" (Davidson, 1991, p. 160). This seems much too demanding, for it is implausible that merely having beliefs requires conceptual sophistication of such a high degree. Believing something does not require language, nor does it depend on rule-following. Although we can legitimately talk about correctness conditions of beliefs, I do not need to be able (even in principle) to check for the correctness (i.e. truth) of a belief in order to have that belief. An extension of the rule-following requirement to (having) beliefs and other kinds of thinking which are not reasoning is therefore illegitimate. This means that I can have a belief – and what I believe might be either true or false – despite my inability to individuate the belief, discriminate it from other (maybe similar) beliefs, or re-identify said belief on later occasions.

Since I do not share any of the verificationist motives arguably present in Davidson's account, and since nothing like this follows from the arguments presented and defended here, I think that verificationist concerns regarding my position are unfounded. I am, however, committed to a stance towards reasoning which might be called "restricted and mildly verificationist". Reasoning, in contrast to having beliefs and other kinds of thinking, does require the *possibility* of an objective check of the mental transitions made. This plausibly also requires the capacity to individuate and re-identify mental contents, an ability not needed for thinking. If this amounts to a verificationist commitment, then there are (mild) versions of verificationism which can, indeed even need to, be accepted for restricted domains. Reasoning is a much more demanding capacity than mere thinking, and reasoning consequentially presupposes a more sophisticated cognitive apparatus. The ability to have thoughts about thoughts, or – as Bermúdez (2003) calls it – *intentional ascent*,<sup>26</sup> certainly is a precondition

<sup>26</sup> According to Bermúdez (2003), intentional ascent requires semantic ascent, and thereby language. Bermúdez' conclusions are therefore to a considerable extent quite similar to mine, although our argumentative routes differ significantly.



tion for being able to reason. Yet it needs to be clearly emphasized that by far not all mental phenomena, notably having beliefs and other kinds of thinking which are not reasoning, are so demanding.

## 7. No Non-Linguistic Reasoners?

Since reasoning constitutively depends on language, no non- or pre-linguistic being is able to reason. But obviously not every kind of thought depends on language in this way. Where and how exactly the line between language-dependent cognitive processes and language-independent cognitive processes needs to be drawn exceeds the scope of this contribution. Nonetheless, it seems pretty clear that not every kind of thought is dependent on language, since non-linguistic animals and pre-linguistic infants clearly have thoughts in the broad sense sketched in section 2. Also many experiences are language-independent and can therefore be had by all sorts of conscious beings even if they clearly lack language.

It may also be worth pointing out that a lack of language does not imply a complete lack of communicative abilities. It should go without saying that a plethora of species communicate without possessing anything that comes even close to language. Also human communication is not entirely linguistic, as can be seen from e.g. so-called body “language”.<sup>27</sup> It is important to keep these truisms in mind when we try to evaluate how plausible or convincing the position presented here might be. However, a clear consequence of PRA is that non-linguistic individuals – although they can think, believe, feel, and have experiences – cannot possibly be said to reason, since they lack a constitutive element of reasoning. In other words, there are no pre- or non-linguistic reasoners.

Still, it needs to be emphasized that this does not necessarily mean that there is no non-linguistic reasoning. This caveat is neatly brought to light by Martine Nida-Rümelin (2010), who clearly distinguishes two questions: “(Q1) Is it possible for a creature without a language to [reason]? (Can non-linguistic creatures [reason]?) [...] (Q2) Is it possible to [reason] without thereby using a language?” (Nida-Rümelin, 2010, p. 55 f).<sup>28</sup>

While it clearly follows from PRA that (Q1) needs to be answered in the negative, the same answer is not necessarily implied for (Q2). (Q2) should be read as asking whether linguistic creatures can reason without employing language. This possibility is not ruled out by PRA, given the interpretation argued for in section 6. The mildly verificationist principle adopted there merely demands that it be *possible*

to communicate a line of thought, for it to qualify as reasoning. This is compatible with a non-linguistically framed line of reasoning, as long as it can be put in language in order to be communicated and (re-)evaluated. In this way we have a clear sense in which non-linguistic creatures cannot reason, while there still might be non-linguistic reasoning. But even if there might be non-linguistic reasoning, it is not available to non-linguistic creatures.

If it is true that non-linguistic creatures are unable to reason, how are we to account for the sometimes impressive cognitive achievements and problem-solving abilities in the (non-human) animal world? Some clarifications are in order before this question can be seriously considered. First of all, the claim that there are no pre- or non-linguistic reasoners is not equivalent with the claim that there are no non-human reasoners. At least conceptually, the domains of humans and reasoners do not coincide, insofar as neither notion – i.e. *being human* and *being able to reason* – is implied by the other. To be a human being is not sufficient for being a reasoner since pre-linguistic infants are not among the reasoners, although they clearly belong to the human species. Moreover, speaking non-human creatures could perfectly well be capable of reasoning, so being human is also not necessary for reasoning.

The most prominent case of animal reasoning in the history of philosophy is probably the story about *Chrysippus’ dog*: A dog, hunting its prey, comes to a tripartite crossroad. The prey must have taken one of the three pathways. The dog sniffs at the first path but does not pick up the prey’s scent. So the dog sniffs at the second road and, again, does not smell the quarry. The hunting dog therefore rushes down the third path without even sniffing for the prey in this direction. This scenario is supposed to suggest that the dog reasoned as follows: the prey must have taken one of the three roads; it did not take the first; and it did not take the second; thus it took the third. Reasoning along these lines constitutes full-blown reasoning indeed, since it is an instance of *following* a disjunctive syllogism. But according to the position defended here, a dog (given that it does not have language) could not engage in reasoning at all; so it could not possibly reason through a disjunctive syllogism.

The story of Chrysippus’ dog is an ancient philosophical problem case and provoked various reactions. Some philosophers were happy to ascribe reasoning to animals, while others tried to defuse the story of Chrysippus’ dog in several ways without conceding deductive capacities to animals. I will neither discuss traditional reactions to Chrysippus’ dog, nor will I develop a new account. I just wish to cite Rescorla (2009), who presents a solution to Chrysippus’ dog which allows an explanation of the dog’s behavior (and cognitive

<sup>27</sup> I add scare quotes here because I am not prepared to accept body language as a language in the literal sense. Body language is without any doubt a means of communication, but what is communicated in this regard cannot be considered as linguistically coded information – except for cases where a message is conveyed on the basis of an established code. But then we do not speak about body language, but *sign languages* which are proper, full-blown languages (Ahearn, 2017, p. 45 f).

<sup>28</sup> The expression “think” was changed to “reason” in this quote.

achievement) without attributing deductive reasoning to the animal. This is done, in short, by constructing a Bayesian probabilistic decision model, operating on mental maps. Leaving the intricate technical details aside, we can conclude with Rescorla (2009, p. 67) that “a satisfying treatment of Chrysippus’ dog need not cite logical reasoning over logically structured mental states” because “[t]he relevant processes, grounded in Bayesian decision theory, differ markedly from deduction” (Rescorla, 2009, p. 71). This means that we can provide a model that predicts the dog’s behavior without attributing cognitive capacities to the dog it cannot have, according to my account, without possessing language. Since language and reasoning are not necessary to explain the dog’s behavior, Chrysippus’ dog is defused as a counterargument against PRA. Having the cognitive abilities to act according to (without *following*) a Bayesian model is sufficient to explain Chrysippus’ dog, but does not require that Chrysippus’ dog is able to reason, e.g. by drawing a disjunctive syllogism. Rescorla’s (2009, p. 58) “Bayesian-com-cartographic model of Chrysippus’ dog” can explain what happens in the story and “countenances non-linguistic cognition while sharply distinguishing it from linguistic cognition” (Rescorla, 2009, p. 53). In other words, Rescorla (2009) satisfactorily explains Chrysippus’ dog without positing that the animal is able to draw deductive inferences, which is a kind of reasoning and would therefore require language possession. Although the cognitive model to explain Chrysippus’ dog might be quite complex, it merely calls for cognitive processes which are *in agreement* with (e.g. Bayesian probabilistic) rules, in contrast to cognitive processes which constitute rule-following. Complex cognitive models are needed anyway to explain most mental processes which are language-independent, e.g. visual processing. What is crucial here is that rule-following is not needed to exemplify these models. Therefore, the non-linguistic cognitive processes displayed by Chrysippus’ dog can be executed unconsciously (i.e. on the sub-personal level) and do not contradict the claim that reasoning, which is conscious, is language-dependent.<sup>29</sup>

## Conclusion

With these results at hand, we can steer for a more convincing middle course to navigate between the Scylla of the *conduit metaphor*<sup>30</sup> and the Charybdis of *linguistic relativity*, thereby approximating a more adequate understanding of the relation between mind and language. A naïve conduit metaphor can be ruled out on the basis of PRA, since if reasoning constitutively depends on language, it is not the case that language *merely* serves to communicate preformed mental

content. Regarding linguistic relativity, the current state of scientific investigation, based on several elaborately designed empirical experiments, strongly indicates that the difference in cognitive effect between different (human) languages is at best marginal (McWhorter, 2014, p. xiv, 84, 106).

In conclusion, we have at least a partial answer to the question how the mind relates to language: Language is not necessary in order to think, but the difference between having and not having a language amounts (at least) to the difference between being a possible reasoner and not being a reasoner at all. That said, it is a live option that not all reasoning necessarily needs to be carried out in language.

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<sup>29</sup> The topic of animal cognition is a vast and intriguing field which cannot be further treated at this point. Many pressing questions therefore need to remain open in this context.

<sup>30</sup> The picture that language use is merely “translating” our (language-independently) pre-molded thoughts into a public language for communicative purposes, viz. that every kind of thinking is primary to and independent of language.

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