Kant, Piaget and Halliday:
Towards a linguistic impure synthetic a priori
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Capítulo 15.

Kant, Piaget and Halliday: Towards a linguistic impure synthetic a priori[1]

Tristan Guillermo TORRIANI

> "Das methodische Geschwätz der hohen Schulen ist oftmals nur ein Einverständniß, durch veränderliche Wortbedeutungen einer schwer zu lösenden Frage auszuweichen..."[2]
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> Kant, *Dreams of a Spirit-Seer*, I,1 (1766).

Recent research has thrown significant light on Kant's views of language as well as on the quality of his own writing. It is not possible to reference it all here, so I apologize in advance for having to limit myself to a few contributions that have come to my attention as being the most necessary to mention.

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[1] I dedicate this paper to the memory of my friend, South American Kant scholar Juan Adolfo Bonaccini (1964-2016). He will be sorely missed.

[2] "The methodical talk of learned institutions is often just an agreement to avoid a difficult question by its changeable word-meanings [...]" (my translation).

Forster (2012) argues that Kant's understanding of the relation between language and thought cannot be simply reduced to the dichotomous Enlightenment view usually associated to Descartes and Locke, no matter how much the "purely psychological terms" (FORSTER, 2012, p. 488) of the *Critiques* may suggest it. He notes that, both before and after the *Critiques*, Kant was more engaged with the linguistic dimension of thought. Therefore, he differentiates three moments.

In the first moment, Kant was influenced by a more linguistically inclined view promoted by Leibniz and Wolff. My favourite passage from this pre-critical period is the following, in which Kant anticipates 20th century attempts to clarify conceptual confusions by examining the different uses given to terms such as "spirit".

> Ich weiß also nicht, ob es Geister gebe, ja was noch mehr ist, ich weiß nicht einmal, was das Wort Geist bedeute. Da ich es indessen oft selbst gebraucht oder andere habe brauchen hören, so muß doch etwas darunter verstanden werden, es mag nun dieses Etwas ein Hirngespinst oder was Wirkliches sein. Um diese versteckte Bedeutung auszuwickeln, so halte ich meinen schlecht verstandenen Begriff an allerlei Fälle der Anwendung, und dadurch, daß ich bemerke, auf welchen er trifft und welchem er zuwider ist, verhoffe ich dessen verborgenen Sinn zu entfalten.[3] (KANT, 1766, p. 320).

When discussing entities whose existence is uncertain, Kant emphasized the need to clarify word meanings, and the empirical examination of usage was an approach that he considered helpful. In his view, if spiritualist issues were to be amenable to discursive reason, the mental faculty of understanding must be articulated with language use. Let us please consider the possibility of seeing this as our path to a linguistic impure a priori.

The footnote to this passage is also relevant, as it deals with the conditions for semantic clarification of verbal categorizing skills (concepts).

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[3] "I do not know if there are spirits, and, what is more, I do not even know what the word "spirit" means. But, as I have often used it myself, and have heard others using it, something must be understood by it, whether this something be an illusion or reality. To tease out this hidden meaning, I will compare my badly understood concept of it with several other cases of its use, and, by observing with which it conforms to, and to which it is opposed, I hope to reveal its hidden meaning." (my translation).

Wenn der Begriff eines Geistes von unsern eignen Erfahrungsbegriffen abgesondert wäre, so würde das Verfahren ihn deutlich zu machen leicht sein, indem man nur diejenigen Merkmale anzuzeigen hätte, welche uns die Sinne an dieser Art Wesen offenbaren, und wodurch wir sie von materiellen Dingen unterscheiden. Nun aber wird von Geistern geredet, selbst alsdann, wenn man zweifelt, ob es gar dergleichen Wesen gebe. Also kann der Begriff von der geistigen Natur nicht als ein von der Erfahrung abstrahirter behandelt werden. Fragt ihr aber: Wie ist man denn zu diesem Begriff überhaupt gekommen, wenn es nicht durch Abstraction geschehen ist? Ich antworte: Viele Begriffe entspringen durch geheime und dunkele Schlüsse bei Gelegenheit der Erfahrungen und pflanzen sich nachher auf andere fort ohne Bewußtsein der Erfahrung selbst oder des Schlusses, welcher den Begriff über dieselbe errichtet hat. Solche Begriffe kann man erschlichene nennen. Dergleichen sind viele, die zum Theil nichts als ein Wahn der Einbildung, zum Theil auch wahr sind, indem auch dunkle Schlüsse nicht immer irren. Der Redegebrauch und die Verbindung eines Ausdrucks mit verschiedenen Erzählungen, in denen jederzeit einerlei Hauptmerkmal anzutreffen ist, geben ihm eine bestimmte Bedeutung, welche folglich nur dadurch kann entfaltet werden, daß man diesen versteckten Sinn durch eine Vergleichung mit allerlei Fällen der Anwendung, die mit ihm einstimmig sind, oder ihm widerstreiten, aus seiner Dunkelheit hervorzieht.[4] (KANT, 1766, p. 320).

The footnote deals with the genetic issue, concerning logical-conceptual origin. If spiritual entities were concrete and could be identified empirically, we would have an operational empirical concept of "spirit". We would just need to know what to look for in observable phenomena to be able to identify their spiritual character. Spiritual properties would be supervenient in relation to material properties. However, Kant noted that

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[4] "If the concept of a spirit were something drawn from our own empirical concepts, the procedure to make it clear would be easy. It would suffice if we indicated the sensory and immaterial characteristics of that kind of being. And yet people talk about spirits even as their existence remains doubtful. Therefore, the concept of spiritual nature cannot be regarded as an abstraction drawn from experience. If you asked me, however, how this concept could originate at all other than by abstraction, I would reply that secret and obscure inferences produce many concepts during experience, which are then reproduced unconsciously without the original experience itself or its conceptual interpretation. One may may call them surreptitious concepts. Most of them are just imaginary delusions, but they may be also partly true, for unclear reasonings are not always invalid. An expression acquires a definite meaning in the context of conversation and story telling, and it can only be unraveled by comparing it to several cases of usage that agree with it or not." (my translation).

talk about spirits is possible without making an ontological commitment. If even a skeptic, materialist or pantheist can talk meaningfully about spirits, then the concept of "spirit"'s origin is not empirical and it cannot be obtained by removing some of its properties (abstraction). Kant explained the genesis of such surreptitious concepts as an unconscious process involving imagination, reasoning, and narrativity. The confusion created by such spurious concepts could be undone by what we could today call careful comparative pragmatic-semantic analysis. In these passages Kant displays a thorough understanding of the impure a priori character of philosophically oriented linguistic clarification.[5]

In the second moment, which coincides with the Critical period, Kant was at pains to avoid being associated to the radicalized linguistic view put forth by Herder and Hamann. Forster agrees with W. Waxman that, for this reason, Kant used (what at least look like) mentalistic terms and he minimized the role of language in thought. From the *Geisterseher* passages quoted above we can perfectly understand why: how could linguistic conceptual analysis, impure as it is, play a central role in determining the limits of pure reason? The transcendental path seemed much more promising to uphold a classical notion of universal, supra-historical, and impersonal reason.

If we chose to be loyal to the critical Kant, this would lead us away from my goal, the linguistic impure synthetic a priori. However, we should not forget what he says about the impure a priori in the Preface to the Second Edition of the *Critique of Pure Reason* (KANT, 1976, B3). He stresses first of all that the modal character of a statement, namely, its necessity, is a criterion for the apriority of a judgement. It is likely that the late-Wittgensteinian and Perspectivist notion that logical necessity could be established by an agreement between two speakers would have been unacceptable to him (ROS, 1990). As the Pragmatist C. I. Lewis

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[5] Had Kant been able to extend this linguistic approach to other theological concepts beyond that of spirit, he could perhaps have ended up in a position closer to Pantheism, which, unfortunately, was not publicly defensible during Kant's lifetime, notwithstanding its affirmation of the existence of a superior being (in response to atheism) and the concept of a mortal soul (in response to reductive materialism), without committing to the dubious notion of "life after death".

(1923, p. 169)[6] puts it, "The a priori represents an attitude in some sense freely taken, a stipulation of the mind itself, and a stipulation which might be made in some other way if it suited our bent or need. Such truth is necessary as opposed to contingent, not as opposed to voluntary."

The psychogenetic (but not Piagetian!) version of this linguistic view is that the notion of logical necessity can be established and negotiated only after language has been acquired. If this is so, the construction of all verbal categorizing skills (concepts) of discursive reason requires linguistic intelligence and happens *within* experience. It is important to note that Wittgensteinian grammatical rules are not drawn *from* experience as a source of knowledge, but are normatively instated *in* experience. Such rules just tell us how we ought to use terms within the language-game. The issue is deontic, not modal (possibility or necessity). Moreover, it is a priori, not a posteriori (as Quinean naturalizers seem mistakenly to believe), for it pertains to the construction (synthesis) of verbal categorizing skills (concepts) that have yet to interpret experience. But, most importantly, it is impure a priori, not pure.

The reason why the Critical period is so important, in spite of its justifiable tactical avoidance of verbal language, is that the notion of the impure a priori avoids the confusion and circularity of sloppy empiricist naturalization we often see in sociology of knowledge or cognitive science. In such subjects, the foundational issue becomes hopelessly muddled because the distinction between the synthetic a posteriori and the synthetic a priori is lost. Kant's unbreakable grip on subsequent Philosophy is due to the fact that sooner or later we need to be able to examine our assumptions or axioms in themselves as reasons, regardless of what caused them. Concrete causal forces (synthetic a posteriori) are empirical relations in which not even a regular succession of events can be considered reliable enough to grant them the honorific "necessary". Reasons and categories of the understanding (synthetic a priori) are normative. They require verbal categorizing skills to interpret the world in a certain perspective and to construct necessary relations. In so far as Philosophy is, in this sense, an Axiomatology, a Categoriology or a Criteriology, it can be suppressed in

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[6] Reprinted in MOSER, P. K. *A priori knowledge*. Oxford u.a.: Oxford Univ. Pr, 1987.

scientific consciousness, but not for ever. And when it re-emerges, so does Kant's a priori.

In his general presentation of Kant's thought, Otfried Höffe (1996) mentions the linguistic issue in the metaphysical deduction of categories, which he breaks down into four steps. In step 1, the understanding operates in acts of judgement expressed linguistically in subject-predicate sentences (e.g., "All bodies are divisible" (B93)). In step 2, empty forms of judgement are at once independent and a precondition for experience, so they provide the categories. In step 3, the table of judgements is obtained from Formal Logic (and Indo-European languages). And in step 4, forms of judgements are correlated with the categories. Höffe takes stock of the criticism related to linguistic problem writing the following:

> Seit den Anfängen der Kant-Diskussion wird die Urteiltafel als Prinzip der metaphysischen Deduktion kritisiert. Die Kategorientafel gilt als nicht wirklich begründet (…), oder als abhängig vom geschichtlichen Stand der Logik oder gar von der Struktur der Sprache, in der Kant spricht, zumindest vom Sprachtyp, dem Indogermanischen, dem das Deutsche angehört. In der Tat legt Kant eine fertige Urteilstafel vor, die er erläutert, aber nicht weiter begründet und im wesentlichen der formalen Logik seiner Zeit entnimmt. Der Vorwurf des Zufälligen ist daher berechtigt. Allerdings disqualifiziert er nicht die gesamte Deduktion, sondern nur ihren dritten Schritt, obwohl schon mit dem zweiten ein wesentliches Beweisziel erreicht ist. Ferner könnte man der Behauptung, die Urteilstafel sei von geschichtlich bedingten Sprachstrukturen abhängig, entgegenhalten, dass zwar nicht alle gewachsenen Sprachen über das vollständige System der logischen Formen verfügen, dass sie aber nicht verschiedene sich widersprechende Logiken enthalten können; doch ist dieses Argument umstritten.[7] (HÖFFE, 1996, p. 91).

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[7] "The table of judgements as the principle for the metaphysical deduction has been criticised since the beginning of the Kant debate. The table of judgements is claimed to be not really grounded (...), or to be dependent on the historical state of logic or even on the structure, if not of Kant's language, at least of the Indo-Germanic type to which German belongs. Indeed, Kant has a table of judgements ready at hand, which he explicates, but does not ground further and which he essentially draws from the formal logic of his time. The reproach of arbitrariness is hence justified. However, that does not disqualify the whole deduction, but only its third step, while with the second step a significant logical aim is achieved. Moreover, one could counter the objection that the table of judgements is dependent upon historically conditioned linguistic structures by admitting that indeed, not all developed languages possess the complete system of logical forms, but that such languages could not contain self-contradictory logics; and yet this argument is controversial." (My translation).

One would be at pains to uphold Kant's table of judgements if one insisted on maintaining its original form today. However, as I have tried to argue above, the abandonment of the concept of the impure a priori is disastrous from the epistemological point of view. If maintained, the concept of the impure a priori can accommodate the need to acknowledge the central role of verbal language in the development of discursive reason (understanding). A lot can and should be salvaged from the *Critiques*. But we need tolerance for quasi-Kantian stances that lead towards Pragmatism, Perspectivism, Constructivism, and weak or indirect Realism. For example, C. I. Lewis (1923, p. 177) suggests that "Conceptions, such as those of logic, which are least likely to be affected by the opening of new ranges of experience, represent the most stable of our categories; but none of them is beyond the possibility of alteration." Even if categories and empirical concepts come to be anchored in verbal language, Kant's hierarchical subordination of the latter to the former remains perfectly reasonable and defensible.

When we trace our intellectual genealogy back to Kant, it is indeed important not to misconstrue him anachronistically. But sometimes as scholars we need to make hard choices as to what to keep and what to drop. As Ros (1990) notes, Kant endorsed a notion of universal reason shared by all individuals, but that transcended them. Access to this universal reason did not require language, and could be obtained by formal and representational reasoning. This venerated Aristotelian notion of the *nous* had not yet been completely discarded at Kant's time, for it was thought to guarantee a possibility of intersubjective foundation for predicative statements. We are talking about non-psychological thought that alone can be the pathway to universal, necessary and objective (in a direct Realist sense) knowledge. Frege's so-called thoughts (*Gedanken*) are such Platonic entities. I will label this metaphysical, direct Realist, view "the noetic pathway", for it will be important in what follows to keep it clearly distinct from what we usually understand as the psychological pathway.

Patricia Kitcher's (1990) struggle against anti-psychologism is particularly relevant and instructive in this regard. She acknowledges

the unavoidable subjectivity and is-ought fallacy involved in strong psychologistic interpretations (Reinhold, Fries) of the *Critique of Pure Reason*. To remediate this she proposes a "weak psychologism" instead.

> "Weak psychologism" is the view that psychological facts may be important to philosophical or normative claims, even though they cannot establish such claims. In logic, even weak psychologism seems inappropriate. Given Frege's influence, however, weak psychologism was also banished from the rest of Philosophy. This move now appears extreme. For how can we hope to understand the nature of thought or the limits of knowledge – or to prescribe methods for improving our reasoning practices – without having some understanding of the capacities that make cognition possible? / Kant's epistemology is clearly weakly psychologistic. It does not, for that reason, rest on a fallacy of confusing the normative with the factual (KITCHER, 1990, p. 9).

Kitcher's complaint against Fregean extremism is, I submit, wholly justified, but incomplete. What I have above called the "noetic pathway" view tries to construct epistemological intersubjectivity on formal grounds and happens to be popular among mathematical thinkers. This is understandable because mathematical operations can be pursued without apparently depending so much on our minds or language and their results do obtain remarkable intersubjective consensus. In other words, mathematics appears to be at least in part autonomous. This may explain why since Pythagoras it has become such a dominant ideal for knowledge. Unfortunately, even if mathematical reasoning does indeed enjoy a certain autonomy, it cannot provide a sufficiently rich basis for knowledge in general. Mind and language are unavoidable. Without the notion of a mind we cannot provide a convincing account of cognition, as Kitcher points out. Without language, communication would be limited. But Kitcher hardly discusses the role of verbal language in cognition at all. This is a problematic omission, even in the absence of any explicit "anti-linguisticism" on her part. To a degree, though, it is excusable because of what Forster said about Kant's calculated avoidance in the *Critiques* of any association with Herder's and Hamann's linguistic radicalism.

To counter the "noetic pathway" view, the linguistic kind of conceptual analysis Kant mentions in *Geisterseher* would have been a

better starting point than the *Critiques*. However, one needs to not only reject anti-psychologism, but also anti-linguisticism. By choosing a weak psychologism without facing the linguistic issue, Kitcher remains locked within the *Critiques'* mentalism, which ultimately cannot answer objections against solipsism. Without language, one misses the path to a credible account of intersubjectivity.

The philosophical imperative of avoiding mentalistic solipsism by following the linguistic path should override any qualms, as we see in Höffe and Kitcher, about preserving the plausibility this or that argument of Kant's Critical period. Scholarship places the tough demand on us to be historically accurate, but we also need to be sufficiently free to select what we understand to be the author's currently most tenable positions and distinctions. For it is upon them that we can then go on to construct an interpretation that is also promising continuation.

In general terms, the impure a priori can and ought to be preserved. The distinction between empirical concepts and categories is also justifiable, although their "deduction" would require considerable reconstruction in normative-linguistic terms (Wittgenstein's grammar). The linguistification of synthesis requires what Ros (2005) develops within a Perspectivism that acknowledges an independent reality (being in this sense ontologically realistic). Our verbal categorizing skills (concepts) for inanimate matter, mechanism, organism, agent and person may overlap. For example, a human being can be categorized as a person, a conscious agent, an organism, a mechanism and also made up of matter. However, we tend to deal with this conceptual superimposition in an unfortunate, reductionist, way. This creates the philosophical mind-body problem, for we struggle to reduce several levels of description to one, and this is bound to fail. If we try to reduce the concept of the human being to the personal level, we miss the physical and biological levels. If we give preference to the physical level, we miss the phenomenology of (self)-consciousness. Ros's solution is to accept the superimposition of several levels of description and explanation, but then provide transitions between them. We may start from the physical level, which describes entities that are subject to external causal pressures. Machines initiate a new level of complexity because they

can execute programmed functions, but being closed systems, are subject to entropy. Organisms are open to the environment and can initiate movements on their own. Agents are animals with conscious abilities to interact with others and their environment. Persons can be discerned by the added capacity to establish, follow and revise rules.

In Ros' proposal, each step in the added description of complexity is synthetic a priori. It is a priori because it is logically prior to the interpretation of sensory experience. It is synthetic (or metagrammatical)[8] because it enriches our conceptual scheme. The universality, necessity and objectivity of the Kantian pure a priori has been significantly altered, but not lost (ROS, 1990). Universality is a future potential and depends on the acceptance by free speakers of grammatical rules. In other words, if all speakers agree to change the meaning of the term "marriage" so as to include same sex couples, then the concept of gay marriage becomes universal. Necessity obtains only within a conceptual scheme or grammar. If we argue modally for the necessity of a conceptual scheme as a whole, we are being dogmatic. If we point to its possibility, that is interesting but insufficient for it to be considered. That is, the proponent of a conceptual scheme will need to suggest it as a future perspective (or way of speaking) that *ought* (deontic operator) to be adopted by others. Objectivity depends upon previous intersubjective agreement as to what is real.

These changes are so extensive that one might wonder whether this quasi-Kantianism I am defending ought not to renounce to its claim of descent from Kant. However, post-Kantian thought has yet to find a convincing way to distinguish between conceptual and empirical issues. Moreover, at least as far as I am concerned, a return to a "noetic pathway" à la Frege and Husserl is hopelessly aporetic. Just like the concept of "spirit" in the *Geisterseher* (as opposed to that of an embodied, mortal soul), the concept of "non-psychological thought" makes little sense and generates unhelpful confusion.

In the third moment, Forster argues that Kant returned to the linguistic approach because it did not threaten the a priori character of

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[8] Ros distinguishes between argumentation within a grammar or set of rules (intragrammatical), which allows for necessary relations, and argumentation about a grammar (metagrammatical), which is optional or facultative.

Transcendental Philosophy anymore. Thus, in his *Anthropology*, Kant makes numerous interesting empirical remarks about verbal language in its relation to the constitution of the self in children, for instance. In particular, he shows no qualms about recognising the need of verbal language for thought.

> Alle Sprache ist Bezeichnung der Gedanken, und umgekehrt die vorzüglichste Art der Gedankenbezeichnung ist die durch Sprache, dieses größte Mittel, sich selbst und andere zu verstehen. Denken ist Reden mit sich selbst (die Indianer auf Otaheite nennen das Denken: die Sprache im Bauch), folglich sich auch innerlich (durch reproductive Einbildungskraft) Hören.[9] (KANT, 1798, p. 192).

One could even protest that Kant is too generous, apparently granting a cognitive status to any linguistic manifestation whatsoever ("All language is a signification of thought"). His anthropological reference to Tahiti is particularly fortunate for my purpose, as it anticipates the later contributions of not only of Humboldt (1998), but of Malinowski, Whorf, Firth, and Halliday, which I find important to relate to Kant.

Late short texts such as "On a Newly Arisen Superior Tone in Philosophy" (KANT, 1985b) make powerful philosophical statements and relate them to language and society. In an age of propaganda, fake news, (dis)information wars, media indoctrination and brainwashing, it is hard to outclass the punch of Kant's defence of truthfulness, regardless of any consequentialist considerations.

> Wahrhaftigkeit in Aussagen, die man nicht umgehen kann, ist formale Pflicht des Menschen gegen jeden, es mag ihm oder einem andern daraus auch noch so großer Nachtheil erwachsen; und ob ich zwar dem, welcher mich ungerechterweise zur Aussage nöthigt, nicht Unrecht thue, wenn ich sie verfälsche, so thue ich doch durch eine solche Verfälschung, die darum auch (obzwar nicht im Sinn des Juristen) Lüge genannt werden kann, im wesentlichsten Stücke der Pflicht überhaupt Unrecht: d. i. ich mache, so viel an mir ist, daß Aussagen (Declarationen) überhaupt keinen Glauben finden, mithin

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[9] "All language is a signification of thought and, on the other hand, the best way of signifying thought is through language, the greatest instrument for understanding ourselves and others. Thinking is speaking with oneself (the Indians of Tahiti call thinking "speech in the belly"); consequently it is also listening to oneself inwardly (by means of the reproductive power of imagination)." (KANT, 2006, p. 84, Louden translation).

auch alle Rechte, die auf Verträgen gegründet werden, wegfallen und ihre Kraft einbüßen; welches ein Unrecht ist, das der Menschheit überhaupt zugefügt wird.

Die Lüge also, bloß als vorsetzlich unwahre Declaration gegen einen andern Menschen definirt, bedarf nicht des Zusatzes, daß sie einem anderen schaden müsse; .... Denn sie schadet jederzeit einem anderen, wenn gleich nicht einem andern Menschen, doch der Menschheit überhaupt, indem sie die Rechtsquelle unbrauchbar macht. [...] Es ist also ein heiliges, unbedingt gebietendes, durch keine Convenienzen einzuschränkendes Vernunftgebot: in allen Erklärungen wahrhaft (ehrlich) zu sein.[10] (KANT, 1985a, p. 124-125).

In spite of all this, Forster's final assessment is that Kant lacked an original philosophy of language, notwithstanding his awareness of current developments, given his acquaintance with Hamann and Herder.

Concerning Kant's language and, in particular, his writing, Goetschel (1994), Bezzola (1993), Naumann (1999), Zammito (2002) provide context and analysis that undermine the conventional view that he simply wrote poorly and lacked style. There is ample room for further discourse analysis of Kant's texts and it seems to me a promising line of research.

In light of this research, we can positively state that: (1) Kant was an exceedingly able author who created a new genre of academic writing in the *Critiques*, possibly the greatest record of the human struggle for self-knowledge in modern history, and who definitely put German on the map as a major language of European Philosophy; (2) Kant did understand that language was important for thought, but deliberately avoided exploring

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[10] "Truthfulness in statements that cannot be avoided is the formal duty of man to everyone, however great the disadvantage that may arise therefrom for him or for any other. And even though by telling an untruth I do no wrong to him who unjustly compels me to make a statement, yet by this falsification, which as such can be called a lie (though not in a juridical sense), I do wrong to duty in general in a most essential point. That is, as far as in me lies I bring it about that statements (declarations) in general find no credence, and hence also that all rights based on contracts become void and lose their force, and this is a wrong done to mankind in general. / Hence a lie defined merely as an intentionally untruthful declaration to another man does not require the additional condition that it must do harm to another; [...]. For a lie always harms another; if not some other human being, then it nevertheless does harm to humanity in general, inasmuch as it vitiates the very source of right. [...] To be truthful (honest) in all declarations is, therefore, a sacred and unconditionally commanding law of reason that admits of no expediency whatsoever."

this possibility in his *Critiques* because he wanted to uphold a supra-historical ideal of a priori reason.

Concerning (1), the impact of Kant's achievement can be appreciated over the course of the last two hundred years. The recent development of digital humanities and corpus linguistics coupled with discourse analysis allows for more detailed analyses that not only examine Kant's wording, but also clarify his thought and stance on philosophical issues. The Bonner Kant-Korpus has been online (https://korpora.zim.uni-duisburg-essen.de/kant/) since 2008 and enables researchers to access and search his work very effectively. Philosophers and historians of Philosophy are usually well trained in reading and interpreting classical texts. However, information technology has led to the development of new linguistic techniques that may be relevant for philosophical interpretation of texts. For example, Kant's complete works in the Berlin Academy edition (vols. 1-23), when searched for certain terms, provide the following results.

German Term	English Translation	Number of Hits	Number of Pages
Sprache	Language	365	291
Grammatik	Grammar	13	12
Satz	Sentence	1670	1125
Wort	Word	502	451
Semantik	Semantics	1	0
Bedeutung	Reference	577	468
Sinn	Meaning	834	640

Concerning (2), the situation is much more delicate and potentially controversial. It is important to distinguish between three categories: mind, language and non-psychological (or formal, abstract, impersonal) thought. Later developments have indeed confirmed not only the truism that language is indispensable for discursive reason (understanding), but also that access to mental representations *of our interlocutors* must be unavoidably mediated by some kind of communication (verbal or not). The point of departure for argumentation must be intersubjective *and* linguistic in a general sense. An impersonal formal reason, much as God's mind once was for medieval thinkers, which guarantees objectivity, necessity

and universality a priori seems today unavailable in an intersubjectively consensual way. In other words, claims to invoke the authority of a pre-existing universal reason are inherently problematical and hence cannot serve as a standard or foundation to solve conflicts of opinion.

As Kant himself indicated, one way out would be for humanity to construct a future metaphysics. But a future reason that would educate humanity (Lessing, Herder) by enshrining global scientific, moral and cultural standards requires negotiation in a shared language (a *lingua franca* such as English). Kant hoped that invoking universal reason could prevent the historical, cultural and linguistic relativity that has since plagued philosophical argumentation, above all in post-modernity. He identified the danger in his 1796 essay "On a Newly Arisen Superior Tone in Philosophy", where he (not Nietzsche!) surprisingly accused Plato of being a mystagogue. Philosophers have for ages tried to contain chaos proliferating in discourse by appealing to linguistically transcendent foundations, be they mathematical, metaphysical, or theological. One may remind oneself of Pythagoras' numbers, Plato's utopian Ideas and Aristotle's essences grounded in metaphysical Nature. This does not seem tenable anymore. However, having admitted the importance of linguistic mediation for philosophical argumentation, one should not go overboard as Herder and Hamann apparently did in proposing a general dependence of all mental life on language.

Twentieth-century analytic philosophers sought to solve the fundamental problems of Philosophy by paying special attention to language and, in particular, to the use of conceptual terms that guide philosophical inquiry ("justice", "knowledge", "meaning", "truth", "existence", etc.). Philosophical problems were understood as conceptual confusions or category mistakes that arose from the sloppy use of poorly defined nouns that named the traditional big questions. The development of formal logic at the hands of Frege, Russell and Wittgenstein seemed to promise cutting edge advances in philosophical analysis as well. From a methodological point of view, hope was placed in the "divide and conquer" tactic. In addition to being generated by linguistic confusion, philosophical problems were seen as being too general and should, hence, be cut up

into more manageable pieces. This fragmentation would be consistent with the division of intellectual labor in the sciences, thus providing philosophers with a proper niche in the highly competitive university system. Furthermore, special importance was conferred to analytic sentences because their truth could be determined by just examining the meaning of their terms, something available in principle to any language user, while synthetic a posteriori sentences would require empirical means of verification or falsification.

As the analytic philosophy movement advanced, some philosophers preferred an approach based on formal or mathematical logic, while others felt compelled to give more attention to the complexity of natural (or ordinary) language. What we have become accustomed to call the "linguistic turn" relates more properly to the followers of the later Wittgenstein, G. Ryle, J. L. Austin, P. F. Strawson, P. Grice and J. Searle than to the former group. We owe these authors very valuable distinctions and a heightened sense of how the complexity of human communication is philosophically relevant.

However, disagreement persists in the philosophical community as to whether the linguistic approach properly addresses the deepest concerns of Philosophy, as it seems to reduce problem-solving in the field to terminological clarification. For it is clear that philosophical disagreement arises not only from linguistic misunderstanding, but also from divergent interests that guide the frameworks we choose to interpret the world. From the perspective of this more traditional, metaphysically-oriented group of philosophers, a concern with words is incompatible with a deeper inquiry into what is real. There is supposedly something beyond the words we use, which defies our comprehension. The challenge of Philosophy would be to cut through the veil of language and to reveal reality as it is in itself. This philosophy of language explains the distaste and contempt metaphysically-oriented philosophers may from time to time privately express regarding the linguistic turn.

Another part of the philosophical community, which can be described as science-oriented, has followed W. Sellars, W. V. O. Quine, D. Dennett towards what is somewhat awkwardly called "cognitive science",

the multidisciplinary study cognition, language, mind, brain, and artificial intelligence. A central claim of this movement is that Philosophy and Science are on a continuum and that it would be worthwhile to attack philosophical problems using empirical or mathematical approaches common to science (naturalized epistemology). From the perspective of cognitive science, linguistic analysis is useful but limited, for it can lead to "armchair theorizing" that contributes no new data and just reinterprets what is already known from a different theoretical perspective. The move towards empirical and mathematical methods is unavoidable if one wants to go beyond work on analytic sentences and into synthetic knowledge. From an institutional and even social point of view, participation in cognitive science research groups allows philosophers to present themselves as being aligned with mainstream science, as opposed to being just critical outsiders. As twenty-first century universities place greater emphasis on applied sciences, Philosophy along with basic science suffers cuts in funding and moral support. Social science, although it deals with other subjects, offers a comparable outlet away from pure linguistic analysis to synthetic a posteriori knowledge and towards an engagement with applied issues that get a lot of public attention.

Jean Piaget (1896-1980) is a remarkable example of the philosopher-scientist type whose work was as relevant to twentieth-century Philosophy as that of Heidegger, Russell or Wittgenstein. His lack of popularity among philosophers may be due to the mistaken perception that he was mainly a child psychologist, while he actually understood himself as an epistemologist pursuing philosophical interests by approaching them empirically and developmentally. In addition, he wrote a book, *Insights and Illusions of Philosophy*, that politely demolished phenomenological approaches to Psychology. Piaget regarded Philosophy as a self-reflection that coordinates values, so it could not purport to be anything more than wisdom, although it could contribute to particular sciences if it functioned as an internal epistemology.

Concerning language, Piaget et al. (1973)[11] was convinced by research conducted by himself and others that it was a somewhat secondary phenomenon that more followed than led cognitive development. For this reason, his whole thought can be related to Kant's stance in the Critical period, in spite of his psychological approach, which many may consider un-Kantian. He noted that sensorimotor intelligence went through a fundamental and self-contained cycle of development in the baby's two first years without needing language (understood as complex articulated verbal communication). Cognitive development depended on the baby physically interacting with objects and people, discovering intrinsically pleasing activities (J.M. Baldwin's circular reactions), adapting (by assimilating and accommodating) to the external world, and learning to differentiate between self and other (overcoming egocentrism). Action that consolidated what he called *schèmes*, established behavioural patterns, seemed to him much more important than anything else. If we draw an analogy with muscle tissue, the mind could be seen as being composed as multiple fibres (*schèmes*) that require exercise to grow and acquire strength. During development, they could split (differentiate) or combine (integrate), incorporate external properties (assimilation) or modify themselves to adjust to outer conditions (accommodation). Piaget adopted Saussure's distinction between the signifier and the signified while locating it in the context of children's language acquisition. While the signifier is a somewhat arbitrary acoustic shell that is of interest to the phonologist, the signified are meanings constructed progressively during the child's cognitive development and are relevant to the psychologist. This emphasis on mental content and representation is a hallmark of the so-called cognitive revolution, which contributed to a renewed interest in Piaget after the 1950s.

As Inhelder and Karmiloff-Smith (1978, p. 5) put it: "Piaget did not neglect language. What he did reject, however, was a long-established view that knowledge of the human mind would necessarily stem from knowledge of the human language. He also questioned that it was language that structured thought." Piaget rejected the linguistic view for

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[11] Original: Ajuriaguerra, J. D.; Piaget, J. *Problèmes de psycho-linguistique*: Symposium de l'Association de psychologie scientifique de langue française, Neuchâtel, 1962. Paris: Presses univ. de France (1963).

two reasons. The first is that he had a narrow notion of language as verbal communication, which led his followers, such as Hans Furth and Hermine Sinclair, to interpret the acquisition of verbal ability as being dependent on general cognitive development as a necessary precondition for the proper use of words. Sinclair's work indicated that it was useless to teach a child to use conceptual terms if they did not already possess the cognitive ability to understand what those words were supposed to mean or accomplish. Furth's work on congenitally deaf children tried to demonstrate that intellectual development did not depend on language understood as verbal or sign communication. The second reason is that Piaget took the baby's two-year sensorimotor development as the deeper structural foundation of mathematical knowledge. C. I. Lewis (1923) discusses the a priori in a way compatible with Piaget's view of sensorimotor intelligence because of the centrality of action.

> Mind contributes to experience the element of order, of classification, categories, and definition. Without such, experience would be unintelligible. Our knowledge of the validity of these is simply consciousness of our own fundamental ways of acting and our own intellectual intent. Without this element, knowledge is impossible, and it is here that whatever truths are necessary and independent of experience must be found. But the commerce between our categorical ways of acting, our pragmatic interests, and the particular character of experience, is closer than we have realized. No explanation of any one of these can be complete without consideration of the other two. (LEWIS, 1923, p. 177).

However, Piaget's view had to face opposition on two major fronts. One came from followers of Chomsky and Fodor, who insisted upon the innate character of human abilities and propose the notion of specific modules. To these, Piaget replied that he had always admitted the innateness of certain abilities, but close observation of development showed that they underwent transformations that required the role of an active constructing subject progressing in stages. Margalit (1976), siding with Piaget against Fodor and Chomsky, recognized the difficulty with eliminating bad interpretation and translation in experiments, but maintained that the possibility of child-adult communication required

the postulation that the difference between ages is qualitative, and not only quantitative. Karmiloff-Smith's (1981, 1992) significant updates and revisions of Piaget's theory have allowed her to concede what is needed to nativist defenders of modularity while retaining the notion of domain-general cognitive development.

The other source of opposition comes from followers of Vygotsky and J. Bruner, who saw a lack of the social dimension in Piaget's account. Piaget's general answer to the former was that if we want to understand ontogeny as the development of the individual, one must recognise the centrality of the individual's own self in doing the constructing. Moreover, he never denied the importance of social and affective factors. Unfortunately, this has not been enough to counter the dissatisfaction summed up Alison J. Elliot when she writes that "On the whole, unfortunately, Piaget's contribution to theories of language development is negative" (ELLIOT, 1989, p. 50). However, major contemporary linguist Michael Alexander Kirkwood Halliday (1925-) studied his son Nigel's linguistic development, just as Piaget had done with his own children Jacqueline, Lucienne and Laurent, and cited Piaget in (HALLIDAY, 1975). Halliday (PARRET, 1974, p. 114)[12] admitted that he was rather more oriented towards anthropology (Malinowsky) and sociology (Basil Bernstein) than towards philosophy (Descartes) or psychology as N. Chomsky was. He considered child language to be two-stratal and identified its several functions: instrumental, regulatory, interactional, personal, heuristic, imaginative, informative, mathetic. Adult language would be tri-stratal, and would have three functions: ideational, inter-personal, and textual. Piaget's work is particularly relevant for the ideational function. Thus, one can see how Halliday and Piaget can complement each other. It is a pity that Carol Painter (2005), an important Hallidayan, reproduces the conventionally negative view of Piaget to side with Vygotsky and J. Bruner on the social issue. However, not only does Piaget actually acknowledge the role of social interaction, but Halliday accepts the concept of an active constructive self. As Peter Doughty (HALLIDAY, 1975, p. viii) puts it:

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[12] Halliday's interview with Parret was republished in Martin (2013).

> [...] to talk of learning language is to put the emphasis upon the process itself and to see the child as an active participant in the process. [...] If we adopt this perspective on the child learning its language, however, we are seeing the child as an active agent in creating meaning for itself out of its encounter with the people and events of its experience.

To conclude, I would like to suggest the linguistic impure synthetic a priori as a foundational connection between apparently unrelated authors such as Kant, Piaget and Halliday. Alvin Leong Ping (2004) is one of the few researchers I could find who explicitly links these authors while discussing cognitive schemata underlying the theme-rheme distinction, and I hope others will follow.

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