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Prior's early reflections on sense and sentences

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Abstract

We present here an introduction and a discussion of A.N. Prior's 'Sense and Sentences' in light of the context of publication in the journal *National Education*, written upon his return from Europe and while he was undergoing a crisis of faith. We argue that 'Sense and Sentences' is the article referred to by Kenny in his Obituary on Prior as an article written "on the relations between logic and grammar (with reference to Popper, Wisdom and Carnap)". Furthermore, we argue that Prior was working his way into philosophy, by demonstrating his familiarity with the work of key persons within analytic philosophy such as Rudolf Carnap, John Wisdom and Karl Popper. We also argue that Findlay's – and, thus, indirectly: Wittgenstein's – influence is also visible in this period where Prior was transitioning from being a religious journalist to the future philosopher he would turn out to become. In particular, we argue that, while Findlay's influence on the relationship between grammar and metaphysics would win the day with A.N. Prior, when he discovered tense-logic, it was not an evident feature of Prior's work on the relationship between logic and grammar in sense and sentences. We argue that *Sense and Sentences* is interesting because it seems to have expressed a stage in Prior's thinking on logic that he later came to modify, thereby distancing himself more from the anti-metaphysical tenets of analytic philosophy.

Keywords: A. N. Prior, Rudolf Carnap, Logic as Grammar, Analytic Philosophy, John Wisdom, Karl Popper, J.N. Findlay.

1 National education

Arthur Norman Prior (1914-1969) is known for his discovery of how to formalize tenses in modern logic, thereby earning himself a name as one of the most important logicians and philosophers of the middle of the

20th century. However, Prior's turn to formal logic, only occurred towards the beginning of the 1950s. When he finished his studies under J.N. Findlay in 1937 at Otago University it did not appear to be his greatest interest, as he took to touring Europe with his wife Clare, as a religious journalist from 1937 to 1940. From soon after they returned to New Zealand in September 1940, Arthur was teaching French¹, English and History at Rongotai College, a state boys' school². Rongotai College was established in 1928 as a 'spill-over school' to provide relief in the Eastern suburbs of Wellington for those boys who would usually have attended Wellington College. At the time Prior was teaching there, it was both a secondary (years 9-13) and intermediate (post-primary - years 7 & 8) school³ and, just a few years after Prior taught here, we know that in 1943 there were 542 pupils enrolled (years 7-13) and there were 21 staff. (Hornblow 1977, 9, [17]) It is not clear what levels of school Prior taught but it is indicative of war-time shortages, in a school still quite recently established, that he was teaching these particular subjects⁴, Prior having majored in Philosophy and studied theology. By July 1941 the Priors were about to relocate to live in Dunedin (Grimshaw 2018, 217, [14]) and it was here that a marriage already under strain was to come apart. Prior was teaching because he was still at this time a pacifist, though wavering. However, when called up in January 1942 Prior enlisted in the Royal New Zealand Airforce. Copeland (1996/2020, [3]) notes that in his enlistment papers Prior had, under religion stated 'atheist'; yet by May 1942 (as his marriage finally dissolved) he had begun a slow return to Presbyterianism and was willing and able to argue, aligned with his great influence Karl Barth, for a biblically based case for war (Prior 1942, [25]). Prior's atheism was motivated by his reading of Freud and lasted until July 1943 when he returned to his Christian beliefs (Jakobsen 2016, [18] & 2020, [20]). By November 1942 he was enrolled in the Air Force, serving as a wireless mechanic in the Pacific war in the New Hebrides until October 1945. This

¹ This quite likely influenced Prior's comment in *Sense and Sentences* that "Knowledge of a foreign language can also help us understand the idea of saying the same thing with different sentences, but it is important to be quite clear as to where this can be really helpful and where it can only mislead." (p.47, [25]).

² Prior was employed at Rongotai College from 15 October 1940 to 31 March 1941. We thank Debra Honeyman of Rongotai College for tracking down the dates of Prior's employment.

³ <https://www.rongotai.school.nz/about-rongotai/>

⁴ Prior did win first prize for English and French (and Science) in his final year at Wairarapa College in 1931(see Grimshaw 2021, [16]).

short article by Prior therefore arises from a time of multiple transitions in his life and thought. He is, in short, reconsidering everything and so it is of note that he is also returning to philosophical discussion in a public forum.

In his important obituary of Prior, Kenny (1970, 325, [22]) mentions, but not by name, an article Prior wrote “on the relations between logic and grammar (with reference to Popper, Wisdom and Carnap)”. This article is entitled ‘Sense and Sentences. The General Nature of Grammar’ and it appears in the journal *National Education* (March 8, 1941, 47-49 [24]), the monthly-published official journal of the New Zealand Educational Institute⁵ (Simmonds 1983, ix-x, [36]). It had run from 1919, having replaced the earlier *The New Zealand Journal of Education* (Simmonds 1983, ix, [36]). The New Zealand Educational Institute (NZEI) was established in 1883 out of the Teachers’ Associations in Auckland, Wellington, Nelson, Canterbury and Otago “to promote the interests of education within the colony of New Zealand” (Simmonds 1983, 15, [36]) and was a response to the 1877 Education Act that standardised state education in New Zealand. The official history of the NZEI states that, by the 1930s, “*National Education* had become firmly established as the Institute’s official publication, and was considered very valuable as a publicity vehicle in all senses of the term. It was regularly quoted by the press – not only for the ‘political’ comments, but also the articles on progressive educational developments which helped increase public understanding of the needs of the children and the schools as seen by enlightened teachers” (Simmonds 1983, 127, [36]). *National Education* was, by 1940, the publication of an NZEI that had 4,968 full members and 627 junior members (students and probationary assistants), and its reach expanded beyond NZEI members to all teachers. In 1938 it was calculated that 77% of all teachers were NZEI members (71% of all female teachers & 91 % of all male teachers) (Simmonds 126, [36]) and the journal was a shared resource in all schools, staff rooms and in educational training institutes.

⁵ There are only a few holdings of *National Education* from this time still available in New Zealand libraries. Because no digital archive of *National Education* exists, Prior’s article was accessed by Mike Grimshaw on a visit to the Alexander Turnbull Library, Wellington, on December 8, 2020 and a digital copy made on his phone. As to the structure of the text, which runs both in double columns (pp47-49) and a single column (p49) following an introduction, Prior’s discussion occurs under three sub-headings: The Nature of Abstraction (pp47-48); The Technique of Controversy (pp48-49); and, Limitations of This Treatment (p49).

In writing his article, Prior was writing not only for these teachers but also for the press and those in universities and elsewhere (including Government departments) who may have read (and/or, written for) *National Education*. This helps us understand the intention of the article and the mixed tone throughout. Prior, it is clear, is trying to pitch his argument at multiple levels and to a diverse audience. *National Education* was a very eclectic journal, and a brief overview of the March 1941 issue that Prior wrote for gives an idea of how, in many ways, his article was very much 'out of place'. Following an editorial on nutrition in a rural community, there were articles on: superannuation for teachers; teachers and the Home Guard; 'In Praise of Rebels' celebrating how new education ideas should result in the questioning of authority; discussing advertising; soil in New Zealand; books and art for children; new entrants (first year of school); war and schools in the English school journals; progress and the mechanical arts; New Zealand glassmaking; academic freedom and free speech; NZEI branch news; and a classroom supplement on Arithmetic and English for pupils up to Form 2 (year 8). The most noted contributor to this issue was W. B Sutch⁶, economist, public servant and later diplomat (and possible spy⁷) who had also been a teacher in New Zealand before and after his PhD at Columbia University, New York. Sutch wrote on the need to properly 'see' New Zealand; that is, understanding New Zealand society⁸. Sutch at this time was private

⁶ see: <https://nzhistory.govt.nz/people/dr-w-b-sutch> and <https://teara.govt.nz/en/biographies/5s54/sutch-william-ball>

Sutch and Prior moved in similar left-wing intellectual circles, Sutch writing for the 1930s journal *Tomorrow* as did Prior did (both using pseudonyms) [see Grimshaw 2022] 'Prior as Richard Bramley'. Also, in a letter from 1941, Prior notes his wife Clare was speaking at a "Modern Books" discussion hosted by the Wellington Co-operative Book Society (Grimshaw 2018 p27, [14]); and Sutch was an active member of this too.

⁷ see: <https://www.nzsis.govt.nz/assets/media/1974-05-30-Sutch-TA.pdf> and <http://www.stuff.co.nz/national/10369007/Fresh-twist-in-40-year-old-Cold-War-spy-mystery>

⁸ Sutch's article caused a minor controversy when the headmaster of Waitaki Boys' High School, in a public meeting in Oamaru, expressed his outrage at Sutch's article quoting of J.N Findlay that New Zealand's continued idealism in referring to Great Britain as 'Home' displayed a 'national feeble-mindedness'. Sutch was in fact referencing a passage (that quoted Findlay) by the historian J.C. Beaglehole in a book *Contemporary New Zealand* published in 1938 and compiled for the 1938 Conference on British Commonwealth Relations. Findlay had in fact written his article in 1937. In it he made the following statement that caused all the controversy, that was then quoted in an article in the ODT(13 March 1941, 6)

" The fundamental disease of New Zealanders is a form of idealism. They have made fairy vows and are the victims of ghostly loyalties. Their higher energies are expended in vivifying- a system of phantasies,

secretary to the Minister of Finance Walter Nash – and also about to publish, as a Penguin special, his history of New Zealand national development *Poverty and Progress in New Zealand*. We can be sure that Sutch's article (and he wrote a number of articles for *National Education*) would have ensured a wider readership of *National Education* across government and public service levels in New Zealand. We can therefore see *National Education* was a journal both widely read- and written for a wide audience. It was a way to not only discuss educational ideas, but it was also, at times, a way to get ideas widely circulated⁹, not only amongst teachers.

2. Sense and Sentences

Prior's article is addressed to fellow teachers, underlining the general importance, and relationship, between grammar, analysis of sentence construction and the modern movement in philosophy, now known as analytic philosophy. Prior was thereby also signalling his return to New Zealand to a wider audience than that of his existing Presbyterian and Student Christian Movement (SCM) circles. He is, from the outset, signaling that he is also a philosopher, drawing attention to what is happening, philosophically, elsewhere. What makes this work of note is that this is the only article Prior wrote in 1940 or 1941 that was not a theological or religious piece; in fact, it would seem to be Prior's earliest

and are unavailable for the uses of ordinary life. The object of this idealism is a visionary and idealised England, which keeps New Zealand permanently in a state of feeble-mindedness."

see:

https://paperspast.natlib.govt.nz/newspapers?items_per_page=10&snippet=true&title=ODT&query=findlay+new+zealand++milner&start_date=01-01-1861&end_date=31-12-1950

The controversy ran for a week in the newspapers and included correspondence that questioned the South African Findlay's loyalty to New Zealand and to the British Empire in a time of war.

Findlay's original article was: J.N. Findlay, "The Imperial Factor in New Zealand", *Tomorrow* December 22, 1937. It was quoted in J.C. Beaglehole's chapter "New Zealand in the Commonwealth", pp3-4 in *Contemporary New Zealand. A survey of Domestic and Foreign Policy*, New Zealand Institute of International Affairs (Auckland: Whitcombe & Tombs /Oxford University Press, 1938). Sutch also contributed chapters to this volume (and was a member of the editorial committee) so it is not at all surprising that he drew upon it for his *National Education* article.

⁹New Zealand did not, at this time, have any other national journals that could have published any similar type of article. The one previous possibility, the left-wing magazine *Tomorrow*, had been closed down by the government in 1940 and that left only the *NZ Railways Magazine* or the *New Zealand Listener* (the weekly magazine of the New Zealand Broadcasting Service). This was a distinct reduction and limitation from the journals and magazines Prior had been used to contributing to in Great Britain.

piece entirely devoted to his thought on logic to be published, after his M.A. thesis on 'The Nature of Logic' (Jakobsen 2019, [19]). It can also be placed in the wider self-positioning of Prior as a public intellectual, a role he continued throughout his years in New Zealand (see Grimshaw, 2020, [15]), where Prior sought to write for a variety of publications on religious, philosophical, and wider societal topics. On top of these general reasons, we must add Prior's interaction with Findlay upon his return from his trip to Europe. We know that Prior, by the time of writing 'Sense and Sentences', had read Findlay's "Some reactions to recent Cambridge Philosophy (1)" (Findlay 1940, [8])¹⁰ and it is also very possible he had read a draft or pre-print copy of its second part, "Some reactions to recent Cambridge Philosophy (2)" (Findlay 1941b, [10]) – and at the very least, discussed this with Findlay. As Findlay emphasizes in the first 'Cambridge philosophy' article,

"The most important fact about recent Cambridge philosophy is that it is a philosophy of language: it is an attempt to throw light on the linguistic framework by which we measure everything, and through which we deal with everything. Its attitude to that linguistic framework is twofold: on the one hand it draws us apart from our language and makes us look on it more simply and more externally than we are accustomed to do, on the other hand it makes us return to our ordinary ways of saying things with a deepened consciousness of their import and value." (Findlay 1940, p.194, [8])

An encounter and talk with Findlay about 'Cambridge philosophy' goes a long way to account for Prior's 're-turning' to writing on logic and philosophy of language, whereas for the past 3 years he had concentrated exclusively on issues of theology and religion. Something had to have stimulated this change of focus and Findlay's first 'Cambridge philosophy' article seems ideally suited to have done so. Reading further

¹⁰ See Grimshaw (2018) p. 218. Prior is writing to Bethell from Wellington, July 1941 and he mentions both articles. The (December) 1940 article he would have read by time of writing *Sense and Sentences*, the second article (April 1941) came out a month after he had written *Sense and Sentences*.

into Findlay's article, we are struck by a statement that must have resonated with Prior and his experience as a teacher:

"The primary emphasis of modern Cambridge philosophy is on the use of words. This means that, if we wish to understand words, signs, sentences and other forms of symbolism, we must consider how people operate with them, in what ways they think it obligatory or legitimate or improper to combine them, what moves in discourse they think themselves entitled to make with them, in what situations they would think it proper to apply them, or what they are looking forward to when they utter them. We must also consider the all-important question as to how people *teach* the use of a given word to others, and how they were themselves taught the use of such words in the first instance." (Findlay 1940, p196, [8])
[italics in original]

Note the italicized emphasis on '*teach*' in this statement. In 'Sense and Sentences' Prior is doing nothing less than seeking to not only make sense of – and think via – Findlay and recent Cambridge philosophy, but also to communicate this to his fellow teachers.

Three philosophers are explicitly mentioned in 'Sense and Sentences' by Prior: Karl Popper, John Wisdom and Rudolf Carnap. Prior has been reading Popper, Carnap and Wisdom, and he has also been talking of them - and of Wittgenstein, with Findlay¹¹. Wittgenstein is present behind all of this discussion, just not named, but his focus of the logic of grammar and logic of clear expression is evident throughout. It is also pretty much possible that Prior was alerted again to Wisdom and Carnap having been in contact with Findlay upon the Priors' return to New Zealand. (Grimshaw, 2018, p.218 [14]) While in America (November 1938-May 1939) Findlay "sees a great deal" of Carnap in Chicago and later recalled "I attended a valuable

¹¹ Writing to Ursula Bethell in July 1941 Prior, noting he had met Findlay again, comments that Findlay "seems to have spent his time very profitably under Wittgenstein at Cambridge during his year's leave of absence." (Grimshaw 2018, p218). Findlay later recalled that in 1939, in talking with Wittgenstein he had confessed that he had listened to Carnap in Chicago and that Wittgenstein's response was that he did not mind, except that he would "lose his milkshake" (i.e. throw-up) if "Carnap was mentioned again." (Findlay, 1985b, p.58).

course on the logical syntax of language, which I was glad to study intensely." This in particular seems very likely to have been a focus of conversation between Prior and Findlay. (Findlay,1985a, p.28).

Upon his return in 1940 from studying overseas, Findlay read a paper "Some Reactions to Recent Philosophy and Philosophers" to the Philosophy Club at Otago University (ODT, 27 April 1940, Page 17)¹² Findlay notes the growing influence of exiled German philosophers on American philosophy and how they may serve to increase interest in metaphysics in America. However, it is the report of his views on Wittgenstein which are most interest for our discussion:

"In England the philosophy of Wittgenstein, now a professor at Cambridge, was very influential at the present time. Great stress was laid on language and its relevance to philosophical issues, and the work of the philosopher lay in attempting to elucidate and solve philosophical puzzles. Wittgenstein had opened up some of the most important problems of modern philosophy and might be considered a philosopher of genius." (ODT, 27 April 1940, Page 17)

This engagement with Wittgenstein was nothing new. As early as 1934 Findlay had discussed "Modern Tendencies in Logic" in which he mentioned the new theory arising from Wittgenstein's *Tractatus* which was "was being developed by philosophical schools in Cambridge, Berlin, and Vienna". (ODT 13 June 1934, p4) Findlay had also earlier endorsed Carnap and other logicians in a debate in the New Zealand SCM journal in 1935 (the journal Prior had co-edited and was deeply involved with). In replying to an article "Thinking about Thinking' by the Presbyterian minister A.M. Richards, Findlay, in discussing what the theoretician can offer suggests the following example:

"But the theoretician can...see the universal in the particular and can detect the axioms which give structure to the interested party's position, a task which the latter can seldom do for himself. This fact becomes clear when we consider the best works on modern English speech are, I believe, written by Germans. The English speak the

¹² See: https://paperspast.natlib.govt.nz/newspapers/ODT19400427.2.135?end_date=31-12-1950&query=Findlay+philosophy+wittgenstein&snippet=true&start_date=01-01-1861&title=ODT

language and develop its creative resources, but the Germans know more of the principles that guide its development.” (Findlay, 1935, p.7 [6]).

We also know Findlay had chaired and contributed a paper to a Philosophy Club meeting on Logical Positivism at Otago University in July 1937. (ODT 27 July 1937, 3)¹³ In his paper Findlay is reported as discussing and endorsing Wittgenstein and Carnap. He concluded by discussing Popper as “the exponent of a somewhat ‘unorthodox’ variety of Logical Positivism” and raised the possibility that it “was interesting to reflect that one might now speak of a ‘Christchurch school’ of logical thought.” While Prior most probably attended this meeting¹⁴ he had left New Zealand by the time Popper came and lectured at Otago (ODT 13 May 1938, p 8) on the Logic of Science. In the report alerting readers of the ODT to this lecture, both Carnap and Wittgenstein are mentioned¹⁵.

While in ‘Sense and Sentences’, Wittgenstein is not directly referenced or named, it is clear that Wittgenstein is an influence on Prior’s thought and as discussed, this influence will have come – at least in part – via Findlay. While the number of readers of *National Education* who would have even heard of Carnap and Wisdom would be very small in number, it was more likely those interested in Philosophy in a more general way would have known who Popper was. By then, he had been at Canterbury since 1937. Just how many would have read Popper is, however, unclear. Six years later, the poet, printer and publisher Denis Glover noted to the editor of *Landfall* Charles Brasch, regarding Prior’s long review of Popper’s *The Open Society and its Enemies* published in *Landfall* 2 (June) 1947¹⁶: “and for heaven’s sake, Popper hasn’t got 100 readers in the whole

¹³ see: **A CURE FOR PHILOSOPHY** *Otago Daily Times*, Issue 23253, 27 July 1937, Page 3

[https://paperspast.natlib.govt.nz/newspapers/ODT19370727.2.13?end_date=31-12-](https://paperspast.natlib.govt.nz/newspapers/ODT19370727.2.13?end_date=31-12-1950&items_per_page=10&phrase=2&query=a+cure+for+philosophy&snippet=true&start_date=01-01-1861&title=ODT)

[1950&items_per_page=10&phrase=2&query=a+cure+for+philosophy&snippet=true&start_date=01-01-1861&title=ODT](https://paperspast.natlib.govt.nz/newspapers/ODT19370727.2.13?end_date=31-12-1950&items_per_page=10&phrase=2&query=a+cure+for+philosophy&snippet=true&start_date=01-01-1861&title=ODT)

¹⁴ The lengthy (1200 word) report in the ODT has no author but we do know that Clare Prior was regularly writing articles and reports for the ODT, especially on University matters. It is therefore very possible that Clare Prior wrote this report, and that Arthur Prior helped write it.

¹⁵ see [https://paperspast.natlib.govt.nz/newspapers/ODT19380513.2.49?end_date=31-12-](https://paperspast.natlib.govt.nz/newspapers/ODT19380513.2.49?end_date=31-12-1950&items_per_page=10&query=popper+wittgenstein&snippet=true&start_date=01-01-1861&title=ODT)

[1950&items_per_page=10&query=popper+wittgenstein&snippet=true&start_date=01-01-1861&title=ODT](https://paperspast.natlib.govt.nz/newspapers/ODT19380513.2.49?end_date=31-12-1950&items_per_page=10&query=popper+wittgenstein&snippet=true&start_date=01-01-1861&title=ODT)

¹⁶ The central argument of Prior’s review is that Popper lacks a proper logical argument and reason and while Prior can agree with the sentiment of Popper, he cannot agree with his argument. He also (p.137)

country, let alone people to read such a weighty review" (Shieff, 5 May 1947, p272, [35]). Prior's main intention in mentioning Popper is more likely to draw attention to a person he held in high esteem. Recent discoveries have made it clear that Prior and Popper conversed together on their work. Popper commented on Prior's *Can Religion be Discussed* (1942) as is evident from Prior's letters to Mary Wilkinson in 1943. Indeed, it turns out that Prior and Popper also corresponded on Prior's return to his Christian beliefs in August 1943 (see Jakobsen 2020, [20]). As with Popper, Prior does not discuss Wisdom or Carnap, but makes a reference to John Wisdom's *Interpretation and Analysis* (1931), noting that it makes a "useful study of abstractions", and Rudolf Carnap's "The Logical Syntax of Grammar" (1934, [1]). Whether Prior had used the work of Carnap or Wisdom in his M.A. work, or whether he had read their work while in Europe is difficult to tell. It speaks in favor of the latter view, though an argument from silence, that there is no record of a copy of this text being held in the Otago University Library. On the other hand, as Strobach has amply demonstrated Prior's 1937 article 'The nation and the individual' (Prior 1937, [23]) was highly influenced by John Wisdom's series of articles in *Mind* on 'Logical Constructions'. (Strobach 2015, [37]). Perhaps he knew of, at least Wisdom's *Interpretation and Analysis* before his trip to Europe in 1937. Whatever is the case, it does not make a great difference, since Prior does not in any detail discuss either Wisdom nor Carnap's work, but merely makes the reader aware of where one can study more in depth the considerations he gives on Logic in 'Sense and Sentences'.

notes that what Popper argues has already been done by C.S. Lewis in the second of his lectures on *The Abolition of Man* and that Popper's ethical thought was actually a variation of the one first developed in British ethical thought two centuries earlier by Francis Hutcheson. Prior's review essay is to be found in *Landfall* Vol. 1 no. 2 June 1947, pp.136-142. Prior had reviewed Lewis' *The Abolition of Man* in the inaugural issue of *Landfall* and in his review recommends Findlay's 'Morality by Convention' in *Mind*, April 1944. Prior's review is to be found in *Landfall* Vol.1, no.1, March 1947, pp. 63-67. The Poet and critic A.R.D. Fairburn wrote to Brasch that "the reviews are very good, except that perhaps Prior's is a shade over-specialist for a first number". see: *The letters of A.R.D. Fairburn*, selected and edited by Lauris Edmond, Oxford University Press, Auckland, 1981, p.158, [4]. However, of Prior's second review, Fairburn writes to Brasch regarding the second issue: "Prior's review- excellent too; although I would have liked to hear the (I think very important) implications of the Open Society given fuller discussion." see: *The letters of A.R.D. Fairburn*, selected and edited by Lauris Edmond, Oxford University Press, Auckland, 1981, p.164, [4].

3. The Pedagogical relevance of modern Logic

In *Sense and Sentences*, Prior stresses the relationship between the modern movement in logic which treated logic as the art of making sense¹⁷. Logic is, in many respects, simply a science of syntax, and does not, as Carnap pointed out, refer directly to objects, but merely to “sentences, terms, theories and so on.” (Carnap 1937, 277, [1]). Carnap was of course aware that logic in a sense therefore also refers to objects, i.e., logical objects such as sentences, terms and theories, but these he called ‘objects of logic’, and as such, logic is an investigation of language, as Prior points out. To the philosophers of the kind of Carnap and Wisdom, logic is identical to grammar, and Prior, while not buying into such a strong claim, after his discovery of tense-logic affirmed a close relationship between grammar and logic. It is not possible, in Prior’s article to discern a greater distinction between Wittgenstein’s idea of grammar versus that of Carnap’s. Quite likely, Prior’s own view were informed by Findlay’s view, who in 1937 argued, that Carnap and Reichenbach were the main representatives of “the work of Wittgenstein”¹⁸. The close relationship between logic and grammar should make logic a valuable topic to teach in school, and part of Prior’s errand, is to sell this to the reader. Prior first points out that “the most important single achievement of modern logic is the clear grasp it has attained of the nature of abstraction.” He relates this to what the English teacher might work with under the head of literary composition, or paraphrase. Two sentences can be equivalent as regards their sense, even though they are grammatically different from each other. In 1937 Prior had, in *Nation and the Individual*, applied that logic to argue that ‘Nation’ is a logical construction out of individuals (even if the quotation marks seem a bit odd), and in *Sense and Sentences*, he argues that “Children can readily acquire the art of replacing sentences using abstract or collective nouns by sentences using common or proper ones.” (Prior 1941, [48] [24]). As an example, he then comments as an aside in parentheses “(and when they become really expert they can be tried out with tricky ones like ‘Beauty is only skin deep’ and ‘England is a

¹⁷ Prior does not call it ‘the art of making sense’, but states “Even children can readily acquire the art of replacing sentences using abstract or collective nouns by sentences using common or proper ones.” (Prior 1941, 48).

¹⁸ see A Cure for Philosophy otago daily times, issue 23253, 27 july 1937, page 3

monarchy'). (Prior 1941, [48]). Prior thereafter focuses on the pedagogical relevance of focusing on the transformation rules of modern logic. He does so in a manner, which sounds more like a usage theory of grammar along the line of Wittgenstein, than that of Carnap, but it is however too difficult to see from the text what inspiration Prior might have had here, though as pointed out above, it is quite likely from Findlay¹⁹:

“In general, ‘grammar’ to-day considers formation-rules only, and ignores the transformation-rules which gives the formation-rules more than half their sense and purpose.” (Prior 1941,[48] [24])

Prior argues that a proper understanding of transformation rules is important for dealing with controversy thereby pointing out the pivotal role logic has for argumentation. Finally, Prior also argues that there is an important connection between mathematics and grammar. Modern logic is partly predicated on the demonstration that mathematics can be subsumed under logic, or as Prior says “mathematics ... is simply the grammar of a particular kind of language.” Students must learn how $x + 2 = 6$ is saying the same as $x = 4$, which is to know the formation-rules for forming sentences with ‘+’ and ‘=’, and they must know transformation-rules for how to derive one from the other.

4. Grammar and Metaphysics

While it does not shine through in *Sense and Sentences*, Prior eventually found himself in a camp opposed to the modern logicians who thought that grammar is identical to logic. He would however always stress the importance of grammar for doing metaphysics, and he reflected on the relationship between the two, much later, in *Changes in Events and Changes in Things*:

“It is time now to be constructive, and as a preparation for this I shall indulge in what may seem a digression,

¹⁹ We are grateful to an anonymous reviewer of this article for raising this point.

on the subject of Grammar. English philosophers who visit the United States are always asked sooner or later whether they are 'analysts'. I'm not at all sure what the answer is in my own case, but there's another word that Professor Passmore once invented to describe some English philosophers who are often called 'analysts', namely the word 'grammaticist', and that's something I wouldn't at all mind calling myself. I don't deny that there are genuine metaphysical problems, but I think you have to talk about grammar at least a little bit in order to solve most of them." (Prior [1968?] 2003, 11, [30]).

The perspective of Carnap followed the tenets set up by Russell in his atomistic project for analytic philosophy: logic is not about objects, but merely the language which we use to talk about objects. Philosophy seemed to have reached a state in which proper analysis, using the 'grammar is logic' view on logic, could dissolve metaphysical problems. Russell, for that reason, described his "principle of abstraction", discussed by Prior in *Sense and Sentences* as one that might "equally well be called the principle which dispenses with abstraction," (Russell 1914, 52, [34]). To Russell indeed, genuine philosophical problems reduce themselves, under logical analysis, to problems of logic. Prior's teacher, Findlay, while counting himself part of the analytic school of philosophy and joining forces with Russell and Moore against philosophical idealism, nonetheless disagreed with the anti-metaphysical implications of Russell's view, especially with regard to taking time seriously. He found it a weakness of Russell's formal logic, that it could not make sense of tenses. In 1933 Findlay, in his evaluation of Meinong's theory of objects, argued that there are tensed facts that must be taken seriously by any account of logic, by the following example, which he considered "fairly obvious":

"Consider the fact that my writing-table exists; this objective is certainly a fact at the present time, but it seems as certain that it was not always a fact and that it will not always be a fact. During the greater part of

the past no such object as my writing-table existed, and in the greater part of the future no such object will exist. It looks, therefore, as if certain objectives [sic] go through a period of unfactuality which has no beginning though it has an end; this is succeeded by a period which has both a beginning and an end, in which they enjoy factuality; then a second period of unfactuality commences to which there is no end.” (Findlay 1933, 77, [5])

Findlay does not give an account, in 1933, of how one can maintain the logical realism of Russell and affirm such facts. He does so however in *Relational Properties* (1936, [7]), where he argues that, distinguishing between Relations and Relational properties, tenses can be understood as a relational properties. The purpose of the distinction is to maintain that ontic commitment to past entities only follows from a relation and not from relational properties. An arrow in flight, says Findlay, “has, at any given moment of its flight, the relational properties of having been preceded by previous positions, and being about to be succeeded by other positions.” (Findlay 1936, 190, [7]) The imaginative strength of Findlay’s argument, which does not contain any formal distinction or symbols of any kind, must have intrigued Prior, who in 1936 studied under Findlay. We know, from his letters to Ursula Bethel, that he not only knew of the article, but counted it among his most valued literary possession. (Grimshaw, 2018, 113, [14]). We do indeed know, from Findlay’s autobiography, that Prior had received lectures from Findlay in what Findlay, later called “a theory of tenses”. Findlay would later sketch a manner in which tenses could be given a modal treatment in 1941, but there can be little doubt that it was A.N. Prior who in 1954 developed tense-logic, and then in the most straightforward sense

I was able to give Arthur Prior his first introduction to the history of logic and the theory of tenses, and I have since greatly admired and valued his steadfast subordination of symbolic skill to metaphysical

insight and the warm gratitude with which he has always remembered my teaching.

(Findlay 1985, 26, [11])

Prior's discovery of tense-logic lay still in the future when he wrote *Sense and Sentences*. It was however clear, that if Findlay's view on tenses should find a foothold in modern philosophy, it would have to be placed on the firm logical basis of modern logic. Findlay's view, as it is presented in *Relational Properties*, was metaphysically grounded upon the idea that "the present" contains "in the bosom", a "self-transcendent reference to what has been and what will be" (Findlay 1936, 190, [7]). The problem, from the perspective of modern logic, can be clearly seen in Carnap's statement on the liberty of logic:

"In logic there are no morals. Everyone is at liberty to build up his own logic, i.e., his own form of language, as he wishes. All that is required of him is that, if he wishes to discuss it, he must state his methods clearly, and give syntactical rules instead of philosophical arguments." (Carnap 1937, 52, [1]).

While Prior was writing *Sense and Sentences*, trying to find a road into philosophy and logic, Findlay continued his studies on time in 'Time: A treatment of some puzzles' (1941a, [9]). Commenting on Augustine's perspective on time, he seems to stumble upon a way to make sense of tenses in formal logic and writes the footnote that would eventually help Prior formulate tense-logic (Jakobsen 2021, [21]). The discovery of tense-logic constitutes, in at least three ways, a challenge to the 'grammar is logic' school.

First, contrary to the hopes of that school, Prior's discovery of tense-logic forces us to take our metaphysical commitments seriously from the very outset, concerning the nature of time. It is, for that reason, not true, that philosophical problems dissolve upon an analysis of language. We must own up to our pre-analytic commitments to the nature of time, before committing us to a tenseless or tensed perspective of time.

Second, the discovery of tense-logic brings several philosophical problems to the front, such as the problem of future contingency and philosophical problems pertaining to time and existence. Both of these problems hold a prominent place in Prior's magnum opus *Past, Present and Future* (Prior 1967, [29]).

Third and finally, Prior's discovery of tense-logic constitutes a demonstration that the anti-medieval attitude which dominated the early part of analytic philosophy, and is evident in Russell's authorship, was severely challenged by the demonstration that modern logic can take the medieval view on the truth-conditions of propositions seriously, which openly invites the problem of how to account for the truth-value of propositions that refers to non-existent entities (future, past or merely possible).

For these reasons, *Sense and Sentences* is interesting because it also seems to have expressed a stage in Prior's thinking on logic that he later came to modify, thereby distancing himself more from the anti-metaphysical tenets of analytic philosophy. In "A Statement of Temporal Realism", most likely written after the publication of *Past, Present and Future* in 1967²⁰, Prior states in his opening sentence that "Philosophy, including logic, is not primarily about language, but about the real world" (Prior 2014, 1, [31])²¹ He then adds that "It is also necessary to pay attention to the structure of our language in order to expose and eliminate philosophical 'pseudo-problems', and in order to distinguish real objects from mere 'logical construction'. (Prior 2014, 1, [31]). When Prior came to Oxford in 1956 for the John Locke Lecturers, he came with this important distinction in mind, which had helped him further the philosophical project he had first encountered in Findlay, but had later come to see how he could champion with the discovery of tense-logic. Tellingly he opened his John Locke Lecturers with the statement:

²⁰ See discussion of date in (Copeland 1996, [2]).

²¹ There is also an echo here of another statement Findlay made in his 1935 *Open Windows* commentary: "When a man enters upon a theoretical enquiry he is in no doubt effecting a change in the world, since he himself is a part of that world, and if he communicates his researches to others, he is no doubt effecting changes in them. But the theoretician is not *trying* to effect these changes: they are the consequences of his activity, not its objects." Findlay (1935, [6]), p.7

“These lecturers are the expression of a conviction that formal logic and general philosophy have more to bring to one another than is sometimes supposed.” (Prior 1957, 1, [26]).

5. Conclusion

As Peter Geach stated, Prior exhibited “a great directness and simplicity” wherein Prior just says what he thinks and why he thinks it, in plain words, with logical jargon spelled “out as one proceeds” (Geach 1970, p.187, [13]); which also meant Prior “had a remarkable skill in extracting some grains of precious truth from apparently worthless materials.” (Geach, 1970. p.186, [13]). ‘Sense and Sentences’ is an early example of this ability wherein Prior is actually as much writing for himself as for his particular audience. That is, while on the face of it ‘Sense and Sentences’ is a both a short article on the logic of grammar for fellow teachers and secondly, a philosophical announcement that he has arrived back in New Zealand, we can actually discern something more and deeper happening here. When Prior returned from Europe, he was still a pacifist and perhaps for that reason he considered spending the war-years as a teacher. This brief article was therefore also the thinking through of how to apply his philosophical reading and thought to teaching – and how to communicate it to others. But it was also an important secondary focus for Prior at this time, for his attention was still firmly set on his theological and religious study and writing (see Grimshaw 2018, 217-219, [14]). Yet as has been discussed, ‘Sense and Sentences’ also acts as a crucial realignment of Prior’s thinking, reading and writing back to philosophy that will come to bear such significant fruit in the post-war years. ‘Prior the philosopher’ was gradually emerging and would come to take on the baton from ‘Prior the theologian’ as he in the 40s turned his attention, from systematic studies of reformed theology, to studies in logic, philosophy and ethics. What finally emerged was a logician cum philosopher who was ready to challenge the then prevailing assumptions of the ‘grammar is logic school’ on analysis of metaphysical problems.

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