

# AUSTRALIA'S FIRST PHONETICS LABORATORY, 1913: ITS FOUNDER AND ITS CONTEXT

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## ABSTRACT

This paper calls attention to evidence of a phonetics laboratory founded within the modern languages department of the University of Western Australia in Perth at the surprisingly early date of 1913. Investigation of the role of phonetics in language teaching at this period reveals a large number of early members of the IPA engaged in language teaching in Australia and suggests that for a time the IPA's Certificate examinations were effectively treated as language-teaching qualifications in Australian colleges and schools. We refer to the worldwide vogue enjoyed by phonetics laboratories in the years following 1900, and the ambitious claims advanced for their relevance in language teaching. The life, career and publications of the Perth laboratory's founder, Ebenezer F. E. Suddard (born 1878) are surveyed, and the instruments of his laboratory identified.

**Keywords:** Australia, history of phonetics, phonetics laboratory, kymograph, Suddard.

## 1. HISTORY OF PHONETICS IN AUSTRALIA

The history of phonetics in Australian universities is widely considered to begin in 1940, with the first publication from A. G. Mitchell (1911–1997) on the pronunciation of Australian English [15]. A series of increasingly sophisticated auditory-impressionistic studies followed, from Mitchell and others [16], [9]. In the mid-1960s, a phonetics laboratory was begun at the University of Sydney, equipped with the then-indispensable Kay spectrograph. Instrumental and quantitative work began to appear both from John Bernard in Sydney [6] and from G. R. Cochrane at the University of Queensland [10]. During the 1970s, an informal network of linguists and computer scientists formed itself by degrees, and with the energetic urging of Bruce Millar [14], into the Australian Speech Research Association, the antecedent of today's thriving Australasian Speech Science and Technology Association (ASSTA) which celebrated its 30th anniversary in 2018, and is hosting this congress.

The history just outlined helps explain why 1913 seems an unexpectedly early date for an Australian

phonetics laboratory. But the Perth laboratory was located in a department of modern languages, and its founder was appointed not as a speech scientist or phonetician, but as a lecturer in French and German. This serves to remind us of something easily forgotten: that a century ago the chief constituency for phonetics everywhere was among teachers of modern languages.

## 2. PHONETICS AND LANGUAGE TEACHING

Though some valuable information is given in [7] and [8], we have not found any general history of modern language teaching in Australia. But a powerful connection between phonetics and language teaching in the early years of the twentieth century is not hard to trace in Australia as in many other parts of the world.

### 2.1. The IPA

Membership records of the International Phonetic Association show that from its foundation until 1930 there were at various times no fewer than 65 members with a postal address in Australia, more than 40% of them being women. Only a few of their careers have yet been traced in any detail, but there are clear indications that the majority were language teachers, working in secondary or tertiary education—sometimes both (the boundary between the two spheres was more fluid a century ago).

Today we associate the IPA principally with the upkeep and development of its phonetic alphabet, but far more important among its original priorities was a set of revolutionary pedagogical principles for language-teaching (essentially those of the Reform Movement [13]). These ideas enthused language teachers at all levels, and directly influenced educational policies. By 1910 George Gibb Nicholson (1875–1948), a lecturer at the University of Sydney (and later the first holder of the McCaughey chair of French), was announcing in the IPA's journal *Le Maître Phonétique* that the regulations for the Senior Public Examination now included the stipulation that “candidates should learn to make phonetic transcriptions” in IPA symbols, and that annual courses in the phonetics of French and German would henceforth be offered in the

University. Now officially endorsed in the Manual of Public Examinations, Passy's *Les sons du français* [18] would, said Nicholson, become "the bible of teachers of French in New South Wales" [17].

## 2.2. The IPA Certificate examination

In 1908, building on pioneering work done by Paul Passy (1859–1940) and Wilhelm Viëtor (1850–1918), and developed by Daniel Jones (1881–1967), the IPA Council formalised a scheme for a Certificate of Proficiency in phonetics, available in the three languages French, German and English (the last continues to the present day) [4]. Alongside elementary coverage of relevant aspects of phonetic theory, the examination particularly emphasised practical skills such as ear-training dictation. Being the only formal qualification then available in phonetics, the Certificate "met a real need, signalling both knowledge of and practical ability in phonetics. This was especially important in the period before phonetics became an established subject in degree syllabuses" [4].

Several of the early members in Australia were IPA Certificate holders. Some arrived ready-qualified from Europe, others travelled in the opposite direction to perfect their French or German (or both) and gain the Certificate(s) before returning to Australia to teach. An example is Margaret Stonard Schollick (1864–1934), "the first person in Melbourne", wrote her obituarist, to go to Paris and gain the "phonetics diploma" under Passy [2]. In 1912 Miss Schollick lectured at the University of Melbourne on "the practical use of phonetics in teaching French under present conditions", and had a long career teaching in Victoria schools and at the university.

## 2.3. Experimental phonetics

The IPA did not have a complete monopoly over phonetics. From the late 1890s, the distinct faction of experimental phonetics gained a zealous following, and some of its adherents stayed aloof from the IPA. But in that approach to phonetics too, the relevance to language teaching was insisted upon [3], and by 1905 instruments such as the kymograph were described to the layman as "machinery for teaching pronunciation" [12]. Laboratories proliferated: by 1916, around 25 had been started, mostly in Europe [3].

## 3. SUDDARD

When the newly-founded University of Western Australia advertised its first post in modern languages in 1912, a well-qualified young Englishman called

Suddard submitted an application in which he stated that "[m]y speciality is pronunciation", and that experimental phonetics was his chosen "research domain". Given the backdrop which has been sketched, these statements would not have appeared surprising or disadvantageous. The new university had not set out to appoint a phonetician or acquire a laboratory, but when it selected Ebenezer F. E. Suddard as lecturer in French and German, it got them anyway.

### 3.1. Sources

The four known publications by Suddard on phonetics [20]–[23] are all contained in a volume with the Catalan title *Estudis Fonètics* published in 1917 under the editorship of Pere Barnils (1882–1933) [5]. It was the first (and only) progress report from a short-lived (1915–1918) laboratory at the University of Barcelona, where Suddard worked briefly after his time in Perth. It was these publications, especially [23], which first alerted us to the existence of the Perth laboratory, though his career in Australia also turns out to be fairly well documented in UWA archives, contemporary newspapers, and civil records.

### 3.2. Education, qualifications, testimonials

Ebenezer Francis Edward Suddard was born in London in 1878, and received an accelerated out-of-school education from his father, who was a private tutor cramming aspirants for the Royal Military College, the Civil Service, etc. When he was six, the family moved to Germany, purposely close to the French border near Metz so that the boy could acquire both languages. At nine he was given a Hanoverian governess, selected to impart her "impeccable" German accent, and at twelve he was sent to Tuscany to learn Italian. From age 17 he lived in Paris, at first studying fields as diverse as engineering and music, but eventually focusing on languages and literature. He studied at the Sorbonne and the École des Hautes Études and gained the *license* (for which he offered five languages). In 1909 he was appointed Lecturer in German and English at the University of Montpellier, under the direction of Maurice Grammont (1866–1946), who had started a phonetics laboratory there as early as 1904 [19]. But as a British national, Suddard had no prospect of promotion in a French university; this made an appointment in Australia attractive.

He applied to Perth with testimonials from an impressive range of prominent academics, among them Daniel Jones, who wrote that he knew Suddard personally, had heard him lecture, and that Suddard spoke French "exactly like a Frenchman". Walter Rippmann (1869–1947) likewise praised Suddard's

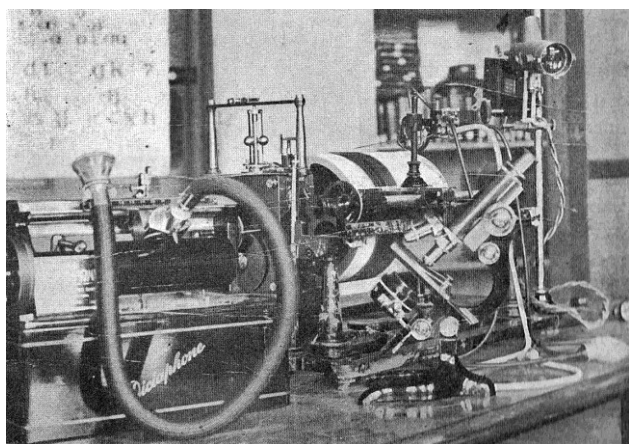
German. Grammont mentioned not only Suddard's linguistic abilities, but his competence in experimental phonetics; he thought it likely that Suddard would advance "this new science" [24].

#### 4. SUDDARD AT PERTH, 1913–1915

Suddard arrived in Perth for the university's inaugural term in March 1913 and apparently wasted no time before starting to order books and the instruments of a laboratory. He appears to have returned to Europe at least once during his tenure to purchase "phonetic apparatus", and no doubt to chivvy the instrument-makers and suppliers whose leisurely approach to fulfilling the orders he placed so frustrated him.

The collection of instruments eventually assembled in Perth is shown in Figure 1.

**Figure 1:** The instruments of the Perth laboratory, c.1915 (grouped together on one table for the photograph) [23: page 256].



At left is a Dictaphone for audio recordings, and to the right of that a large clockwork-driven horizontal kymograph by the French maker Teinturier. The Leitz microscope at front was used for detailed examination of kymograph tracings and of the grooves in cylinder- or disc- recordings. What resembles a mundane desk lamp at far right is in fact a miniature arc-lamp and optical system, also by Leitz, providing brilliant illumination for microscopy or direct inspection of the vocal tract. Faintly discernible in the background at left is a wall-chart displaying phonetic symbols. Suddard favoured the Dictaphone because of its pedal-operated pause facility, and the relative ease of repeating the playback of selected sections.

Suddard's published papers draw on his experiences in France and Spain as well as Australia and we cannot always be certain in which laboratory particular research results were obtained. But running though all his work—and perhaps reflecting his youthful interest in engineering—is a concern to understand his apparatus and determine its

limitations. He was particularly troubled by the uneven running of badly-engineered clockwork kymographs, which could produce local fluctuations in the time scale visible to the unaided eye. He made the interesting point that a measurement—a pitch determination, say—is only worth having if it is reliably more precise than a judgement made by a good ear.

He was evidently practical and dextrous. When delicate apparatus was shipped to Australia and was found to be damaged, he confidently set about repairing it himself. He modified and improved mechanisms. He experimented with different materials for the writing-points on the marking-levers. He gives us an insider's survey of the apparatus available, its makers, the prices they charged, and how much care they took when shipping their wares around the world. We can probably learn more about the techniques, makeshifts and frustrations of actually using the apparatus of this era from Suddard than from any other source.

#### 5. THE IDEAL LABORATORY

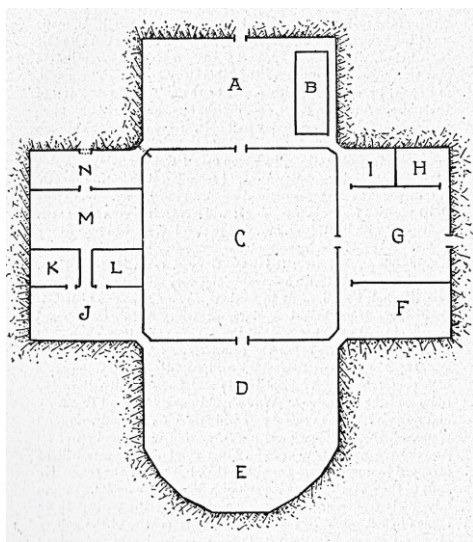
Suddard is at his most interesting, however, when he sets out his proposals for the ideal laboratory [23]. He imagines himself free of financial constraints: "The first requirement is a kymograph, or better two". As for the costly microscopes that he considered essential for making measurements, "you will need a dozen ... of various types". The laboratory will also need two phonographs, a dictating machine, two gramophones (one from HMV, the other Pathé), at least two still cameras (one is to be stereoscopic), a movie camera and projector—and so the list goes on.

His specification for the premises of the laboratory is even more fanciful. Most of the laboratories which flourished rather briefly at this time consisted at best of a single room. In Perth the entire modern languages allocation (laboratory and teaching space too) was one room in a wooden building which became intolerably hot in summer ("for three months it may be practically impossible to work"). So Suddard imagined a large airy building surrounding a central quadrangle (Figure 2), with brick or stone walls 18 inches thick, and huge sliding floor-to-ceiling windows on all sides (all equipped with outside shutters, and both Venetian blinds and blackouts inside). It has a spacious laboratory, lecture theatre and library, and various ancillary facilities such as a special-purpose photographic darkroom. Rather than a design for a laboratory, his ambitious proposal is more like the specification for an entire phonetics institute.

We can read this last paper of Suddard's as a satire on the conditions in Perth and mockery of those who

had tried to curb his spending: “Do not pay the slightest attention,” he says, “to what people may think (—remember we are still in the Dark Ages), but buy anything you think fit, in the beard of the Academic Inquisition. They would like to roast you, but if you are fortunate, you may go unscathed”. Presumably these were the same people he ridiculed for thinking that “rabbit-hutches are big enough for labs”.

**Figure 2:** The floor plan of Suddard’s ideal laboratory. The central quadrangle *C* is 70’ (21 m) on each side. *D* is the main laboratory, lit by the enormous bow window *E*. *A* is the lecture hall, with platform, *B*, while *G* is a library. The smaller rooms all have dedicated purposes [23: page 245].



But on the other hand, despite the humour, Suddard’s proposals may have had a serious purpose. The university was at first housed in inadequate wooden and corrugated iron buildings in the centre of Perth, but it was always intended that a site would be found, and a proper campus designed and built [1]. His hope may well have been to lodge an early claim on a plot at the future campus with his imaginative scheme for a beautiful and well-equipped phonetics institute. Certainly, if it had been built it would have been the finest anywhere, and might have attracted researchers from all over the world. The subsequent history of speech science could well have been rather different.

Interestingly, Daniel Jones was not long afterwards to develop an ambitious plan for his own Institute of Phonetics. It was to be on a monumental scale; had it been built it would have covered three-quarters of an acre in central London [11]. Detailed plans were drawn, and the ground-plan, with its central quadrangle and various other corresponding elements, invites comparison with Suddard’s.

Suddard has not previously been suggested as a possible influence on Jones, but we know that the two

met and talked. Besides, a copy of *Estudis Fonètics* containing Suddard’s plan was on the bookshelves in the Phonetics Department, and is still preserved at UCL.

## 6. SUDDARD AFTER PERTH

Suddard’s laboratory—“improvised in a distant part of the world” as he put it—did not last long. He had been one of only 12 foundation staff with which the university opened (8 professors and 4 lecturers, each the sole representative of their subject area). But he gained “the doubtful distinction of being the only member of the teaching staff selected by the original Senate whose appointment was not renewed at the expiration of his first term in office” [1]. The precise reason is unclear but evidence may yet come to light in UWA archives.

By March 1917 Suddard was back in Europe, and apparently out of a job. His publications of 1917 are signed off at various locations in Spain—successively Alicante, Madrid, and Granada. For the rest of his life we catch only sporadic glimpses of his whereabouts from embarkation documents and censuses. He appears to have lived for a time in Puerto Rico. The last documentary trace of him is an address in Hollywood, California in 1942, when he was 63. We have not discovered the date of his death.

His work has remained neglected for a hundred years. But he deserves to be known, if only because he worked in three of the earliest phonetics laboratories, and was personally acquainted with many of the protagonists in the field. He was almost certainly the first Briton to be paid a salary for working in a phonetics lab.

He met Daniel Jones at least as early as 1912—the very year in which efforts to create a phonetics laboratory at UCL got under way. The phonetic kymograph which was developed soon afterwards at UCL had all the features and improvements that Suddard identified as desirable. It had a horizontal drum, a powerful electric drive, good speed regulation, and was manufactured and sold by a British firm, just as Suddard had hoped.

Suddard may be forgotten, but it seems not impossible that he had some influence, nonetheless.

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